

1. "Collargol" pharmaceutical preparation is a colloidal solution of silver that contains a high-molecular compound. What is the function of this compound?

- a. Increases aggregate stability
- b. Increases degree of dispersion
- c. Decreases aggregate stability
- d. Induces coagulation
- e. Facilitates sedimentation

2. "Collargol" pharmaceutical preparation is a colloidal solution of silver that contains a high-molecular compound. What is the function of this compound?

- a. Increases aggregate stability
- b. Increases degree of dispersion
- c. Induces coagulation
- d. Decreases aggregate stability
- e. Facilitates sedimentation

3. "Collargol" pharmaceutical preparation is a colloidal solution of silver that contains a high-molecular compound. What is the function of this compound?

- a. Induces coagulation
- b. Decreases aggregate stability
- c. Facilitates sedimentation
- d. Increases aggregate stability
- e. Increases degree of dispersion

4. "Protargol" and "collargol" colloidal silver preparations contain protein compounds besides their active substance. What is the function of proteins in these drugs?

- a. Prevention of coagulation of the colloidal solution
- b. Increased shelf life
- c. Improved drug technology
- d. Increased bactericidal effect of silver
- e. Decreased side effects

5. "Protargol" and "collargol" colloidal silver preparations contain protein compounds besides their active substance. What is the function of proteins in these drugs?

- a. Decreased side effects
- b. Prevention of coagulation of the colloidal solution
- c. Increased bactericidal effect of silver
- d. Increased shelf life
- e. Improved drug technology

6. "Protargol" and "collargol" colloidal silver preparations contain protein compounds besides their active substance. What is the function of proteins in these drugs?

- a. Increased shelf life
- b. Increased bactericidal effect of silver
- c. Prevention of coagulation of the colloidal solution
- d. Improved drug technology
- e. Decreased side effects

7. 1 minute after a patient had been administered penicillin the patient's arterial pressure sharply dropped, pulse became thready, cold sweating and clonic convulsions began. Name this condition:

- a. Burn shock
- b. Cardiogenic shock
- c. Anaphylactic shock
- d. Septic shock
- e. Traumatic shock

8. 1 minute after a patient had been administered penicillin the patient's arterial pressure sharply dropped, pulse became thready, cold sweating and clonic convulsions began. Name this condition:

- a. Burn shock
- b. Septic shock
- c. Traumatic shock
- d. Cardiogenic shock

e. Anaphylactic shock

9. 1 minute after a patient had been administered penicillin the patient's arterial pressure sharply dropped, pulse became thready, cold sweating and clonic convulsions began. Name this condition:

- a. Traumatic shock
- b. Septic shock
- c. Cardiogenic shock

d. Anaphylactic shock

- e. Burn shock

10. A 10-year-old boy ate 0.5 kg of sweets, which exceeds his daily energy needs. As a result, the synthesis of a certain substance will activate in this child. Name this substance.

a. Glycogen

- b. Raffinose
- c. Sucrose
- d. Lactose
- e. Starch

11. A 10-year-old boy ate 0.5 kg of sweets, which exceeds his daily energy needs. As a result, the synthesis of a certain substance will activate in this child. Name this substance.

a. Glycogen

- b. Sucrose
- c. Raffinose
- d. Lactose
- e. Starch

12. A 10-year-old boy ate 0.5 kg of sweets, which exceeds his daily energy needs. As a result, the synthesis of a certain substance will activate in this child. Name this substance.

- a. Lactose

b. Glycogen

- c. Sucrose
- d. Starch
- e. Raffinose

13. A 10-year-old child has height of 178 cm and body mass of 67 kg. These presentations are caused by the functional disturbance of the:

- a. Adrenal glands
- b. Gonads

c. Pituitary gland

- d. Parathyroid glands
- e. Thyroid gland

14. A 10-year-old child has height of 178 cm and body mass of 67 kg. These presentations are caused by the functional disturbance of the:

- a. Parathyroid glands
- b. Gonads
- c. Thyroid gland
- d. Adrenal glands

e. Pituitary gland

15. A 10-year-old child has height of 178 cm and body mass of 67 kg. These presentations are caused by the functional disturbance of the:

- a. Thyroid gland
- b. Gonads
- c. Parathyroid glands

d. Pituitary gland

- e. Adrenal glands

16. A 12-year-old boy is of short stature, but his mental development corresponds with that of his age group. What hormone deficiency is the most likely to cause this pathology?

a. Somatotropin

- b. Vasopressin
- c. Oxytocin

- d. Insulin
- e. Adrenaline

17. A 12-year-old boy is of short stature, but his mental development corresponds with that of his age group. What hormone deficiency is the most likely to cause this pathology?

- a. Adrenaline
- b. Somatotropin**
- c. Insulin
- d. Vasopressin
- e. Oxytocin

18. A 12-year-old boy is of short stature, but his mental development corresponds with that of his age group. What hormone deficiency is the most likely to cause this pathology?

- a. Adrenaline
- b. Vasopressin
- c. Somatotropin**
- d. Oxytocin
- e. Insulin

19. A 13-year-old female patient, having suffered from measles, complains of dry mouth, thirst, body weight loss, polyuria; her glucose concentration in blood is 16 mmol/l. What disease can be suspected?

- a. Type I pancreatic diabetes**
- b. Steroidogenic diabetes
- c. Type II pancreatic diabetes
- d. Glycogenosis
- e. Diabetes insipidus

20. A 13-year-old female patient, having suffered from measles, complains of dry mouth, thirst, body weight loss, polyuria; her glucose concentration in blood is 16 mmol/l. What disease can be suspected?

- a. Diabetes insipidus
- b. Type I pancreatic diabetes**
- c. Type II pancreatic diabetes
- d. Glycogenosis
- e. Steroidogenic diabetes

21. A 13-year-old female patient, having suffered from measles, complains of dry mouth, thirst, body weight loss, polyuria; her glucose concentration in blood is 16 mmol/l. What disease can be suspected?

- a. Glycogenosis
- b. Diabetes insipidus
- c. Steroidogenic diabetes
- d. Type II pancreatic diabetes
- e. Type I pancreatic diabetes**

22. A 22-year-old male was stung by bees, the affected region became hyperemic and edematous. What is the leading mechanism of edema development in this patient?

- a. Increased oncotic pressure of tissue fluid
- b. Increased permeability of the capillaries**
- c. Reduced oncotic pressure of blood
- d. Decreased hydrostatic blood pressure in the capillaries
- e. Impaired lymphatic efflux

23. A 22-year-old male was stung by bees, the affected region became hyperemic and edematous. What is the leading mechanism of edema development in this patient?

- a. Increased oncotic pressure of tissue fluid
- b. Decreased hydrostatic blood pressure in the capillaries
- c. Increased permeability of the capillaries**
- d. Reduced oncotic pressure of blood
- e. Impaired lymphatic efflux

24. A 22-year-old male was stung by bees, the affected region became hyperemic and edematous.

What is the leading mechanism of edema development in this patient?

- a. Reduced oncotic pressure of blood
- b. Decreased hydrostatic blood pressure in the capillaries
- c. Increased permeability of the capillaries**
- d. Impaired lymphatic efflux
- e. Increased oncotic pressure of tissue fluid

25. A 23-year-old man came to the infectious diseases department with complaints of abdominal distension and diarrhea. He was diagnosed with lamblia. What type of leukocytosis is characteristic of this disease?

- a. Monocytic
- b. Basophilic
- c. Lymphocytic
- d. Neutrophilic
- e. Eosinophilic**

26. A 23-year-old man came to the infectious diseases department with complaints of abdominal distension and diarrhea. He was diagnosed with lamblia. What type of leukocytosis is characteristic of this disease?

- a. Neutrophilic
- b. Basophilic
- c. Monocytic
- d. Lymphocytic
- e. Eosinophilic**

27. A 23-year-old man came to the infectious diseases department with complaints of abdominal distension and diarrhea. He was diagnosed with lamblia. What type of leukocytosis is characteristic of this disease?

- a. Neutrophilic
- b. Lymphocytic
- c. Basophilic
- d. Eosinophilic**
- e. Monocytic

28. A 23-year-old patient has laryngeal diphtheria that manifests as classic clinical signs with the development of true croup. What type of inflammation is characteristic of this disease?

- a. Fibrinous**
- b. Purulent
- c. Serous
- d. Putrid
- e. Croupous

29. A 23-year-old patient has laryngeal diphtheria that manifests as classic clinical signs with the development of true croup. What type of inflammation is characteristic of this disease?

- a. Croupous
- b. Serous
- c. Putrid
- d. Purulent
- e. Fibrinous**

30. A 23-year-old patient has laryngeal diphtheria that manifests as classic clinical signs with the development of true croup. What type of inflammation is characteristic of this disease?

- a. Serous
- b. Putrid
- c. Fibrinous**
- d. Croupous
- e. Purulent

31. A 25-year-old man has an appointment with the dentist. Several minutes after his oral cavity was lavaged with furacilin (nitrofurazone) the patient developed significant labial edema. What type of allergic reaction is observed in this case?

- a. Anaphylactic**

- b. Immune complex
- c. Delayed-type hypersensitivity
- d. Stimulated
- e. Cytolytic

32. A 25-year-old man has an appointment with the dentist. Several minutes after his oral cavity was lavaged with furacilin (nitrofurazone) the patient developed significant labial edema. What type of allergic reaction is observed in this case?

a. Anaphylactic

- b. Stimulated
- c. Delayed-type hypersensitivity
- d. Cytolytic
- e. Immune complex

33. A 25-year-old man has an appointment with the dentist. Several minutes after his oral cavity was lavaged with furacilin (nitrofurazone) the patient developed significant labial edema. What type of allergic reaction is observed in this case?

- a. Delayed-type hypersensitivity
- b. Stimulated

c. Anaphylactic

- d. Cytolytic
- e. Immune complex

34. A 25-year-old-patient with the II degree thermal burns came to the doctor. Objectively: there are large blisters on the upper limbs; the blisters are filled with clear exudate consisting mostly of water and albumines with isolated leukocytes. Name this type of exudate:

- a. Fibrinous
- b. Catarrhal (mucous)
- c. Purulent

d. Serous

- e. Hemorrhagic

35. A 25-year-old-patient with the II degree thermal burns came to the doctor. Objectively: there are large blisters on the upper limbs; the blisters are filled with clear exudate consisting mostly of water and albumines with isolated leukocytes. Name this type of exudate:

- a. Fibrinous
- b. Hemorrhagic

c. Serous

- d. Catarrhal (mucous)
- e. Purulent

36. A 25-year-old-patient with the II degree thermal burns came to the doctor. Objectively: there are large blisters on the upper limbs; the blisters are filled with clear exudate consisting mostly of water and albumines with isolated leukocytes. Name this type of exudate:

- a. Purulent
- b. Fibrinous
- c. Catarrhal (mucous)

d. Serous

- e. Hemorrhagic

37. A 28-year-old man with peptic ulcer of the stomach was prescribed a drug that inhibits gastric juice secretion. Specify this drug:

- a. Duphalac (Lactulose)
- b. Ethacrynic acid
- c. Lidocaine

d. Omeprazole

- e. Fenofibrate

38. A 28-year-old man with peptic ulcer of the stomach was prescribed a drug that inhibits gastric juice secretion. Specify this drug:

- a. Ethacrynic acid
- b. Duphalac (Lactulose)

c. Omeprazole

d. Fenofibrate

e. Lidocaine

39. A 28-year-old man with peptic ulcer of the stomach was prescribed a drug that inhibits gastric juice secretion. Specify this drug:

a. Lidocaine

b. Ethacrynic acid

c. Duphalac (Lactulose)

d. Fenofibrate

e. Omeprazole

40. A 28-year-old patient has a subfebrile fever. This type of fever is observed when body temperature fluctuates within the following range:

a. $38--39^{\circ}\text{C}$

b. $39--41^{\circ}\text{C}$

c. $37--37.9^{\circ}\text{C}$

d. $36.6--37^{\circ}\text{C}$

e. Over 41°C

41. A 28-year-old patient has a subfebrile fever. This type of fever is observed when body temperature fluctuates within the following range:

a. $39--41^{\circ}\text{C}$

b. $36.6--37^{\circ}\text{C}$

c. Over 41°C

d. $37--37.9^{\circ}\text{C}$

e. $38--39^{\circ}\text{C}$

42. A 2M solution of HCl was added into the studied solution, resulting in formation of a white precipitate that dissolved when heated. What cations are present in the solution?

a. Ba^{2+}

b. Pb^{2+}

c. Ag^{+}

d. Hg^{22+}

e. Mg^{2+}

43. A 2M solution of HCl was added into the studied solution, resulting in formation of a white precipitate that dissolved when heated. What cations are present in the solution?

a. Ba^{2+}

b. Mg^{2+}

c. Pb^{2+}

d. Ag^{+}

e. Hg^{22+}

44. A 2M solution of HCl was added into the studied solution, resulting in formation of a white precipitate that dissolved when heated. What cations are present in the solution?

a. Mg^{2+}

b. Ag^{+}

c. Pb^{2+}

d. Ba^{2+}

e. Hg^{22+}

45. A 3.5-year-old child has been diagnosed with dysbacteriosis in the form of critical reduction of gram-positive anaerobic bacteria and increased number of staphylococci and yeast fungi. What preparation should be used for the correction of dysbacteriosis?

a. Coli-Proteus bacteriophage

b. Lactoglobulin

c. Colibacterin

d. Bifidumbacterin

e. Furazolidone

46. A 3.5-year-old child has been diagnosed with dysbacteriosis in the form of critical reduction of gram-positive anaerobic bacteria and increased number of staphylococci and yeast fungi. What

preparation should be used for the correction of dysbacteriosis?

- a. Furazolidone
- b. Bifidumbacterin**
- c. Lactoglobulin
- d. Coli-Proteus bacteriophage
- e. Colibacterin

47. A 3.5-year-old child has been diagnosed with dysbacteriosis in the form of critical reduction of gram-positive anaerobic bacteria and increased number of staphylococci and yeast fungi. What preparation should be used for the correction of dysbacteriosis?

- a. Lactoglobulin
- b. Bifidumbacterin**
- c. Colibacterin
- d. Furazolidone
- e. Coli-Proteus bacteriophage

48. A 30-year-old patient has been hospitalized with complaints of increased body temperature, jaundice, and hemorrhagic rash on the skin and mucosa. A few days later, the patient developed acute renal failure. Microscopy of smears stained using the Romanowsky-Giemsa technique revealed twisting bacteria with secondary coils shaped like letters S and C) What bacteria are the most likely cause of the patient's disease?

- a. Bordetella
- b. Treponema**

c. Leptospira

- d. Salmonella
- e. Borrelia

49. A 30-year-old patient has been hospitalized with complaints of increased body temperature, jaundice, and hemorrhagic rash on the skin and mucosa. A few days later, the patient developed acute renal failure. Microscopy of smears stained using the Romanowsky-Giemsa technique revealed twisting bacteria with secondary coils shaped like letters S and C) What bacteria are the most likely cause of the patient's disease?

- a. Salmonella
- b. Borrelia**

c. Leptospira

- d. Treponema
- e. Bordetella

50. A 30-year-old patient has been hospitalized with complaints of increased body temperature, jaundice, and hemorrhagic rash on the skin and mucosa. A few days later, the patient developed acute renal failure. Microscopy of smears stained using the Romanowsky-Giemsa technique revealed twisting bacteria with secondary coils shaped like letters S and C) What bacteria are the most likely cause of the patient's disease?

- a. Salmonella
- b. Borrelia**
- c. Bordetella

d. Leptospira

- e. Treponema

51. A 32-year-old man with suspected alkaloid poisoning was brought into the admission room of an emergency hospital. What should be used for gastric lavage in this case?

a. Potassium permanganate

- b. Furacilin (Nitrofurazone)
- c. Sodium chloride
- d. Unithiol (Dimercaptopropansulfonate)
- e. Magnesium sulfate

52. A 32-year-old man with suspected alkaloid poisoning was brought into the admission room of an emergency hospital. What should be used for gastric lavage in this case?

a. Potassium permanganate

- b. Unithiol (Dimercaptopropansulfonate)

- c. Furacilin (Nitrofurantoin)
- d. Sodium chloride
- e. Magnesium sulfate

53. A 32-year-old man with suspected alkaloid poisoning was brought into the admission room of an emergency hospital. What should be used for gastric lavage in this case?

- a. Sodium chloride
- b. Magnesium sulfate
- c. Unithiol (Dimercaptopropylsulfonate)
- d. Furacilin (Nitrofurantoin)

e. Potassium permanganate

54. A 33-year-old female patient, who undergoes long-term treatment due to chronic polyarthritis, complains of increased arterial pressure, adipose tissue redistribution and menstrual irregularities. What drug does the patient take?

- a. Fluocinolone acetonide
- b. Indometacin
- c. Diclofenac sodium

d. Prednisolone

e. Phenylbutazone

55. A 33-year-old female patient, who undergoes long-term treatment due to chronic polyarthritis, complains of increased arterial pressure, adipose tissue redistribution and menstrual irregularities. What drug does the patient take?

a. Indometacin

b. Prednisolone

- c. Phenylbutazone
- d. Diclofenac sodium
- e. Fluocinolone acetonide

56. A 33-year-old female patient, who undergoes long-term treatment due to chronic polyarthritis, complains of increased arterial pressure, adipose tissue redistribution and menstrual irregularities. What drug does the patient take?

- a. Phenylbutazone
- b. Fluocinolone acetonide
- c. Indometacin

d. Prednisolone

e. Diclofenac sodium

57. A 33-year-old woman was admitted into a psychiatric hospital with an anxiety disorder of neurotic origin. What drug is indicated in this case?

a. Diazepam

- b. Valerian extract
- c. Levodopa
- d. Naloxone
- e. Droperidol

58. A 33-year-old woman was admitted into a psychiatric hospital with an anxiety disorder of neurotic origin. What drug is indicated in this case?

a. Droperidol

b. Diazepam

- c. Levodopa
- d. Valerian extract
- e. Naloxone

59. A 33-year-old woman was admitted into a psychiatric hospital with an anxiety disorder of neurotic origin. What drug is indicated in this case?

- a. Levodopa
- b. Valerian extract
- c. Naloxone
- d. Droperidol
- e. Diazepam**

60. A 35-year-old woman came to a doctor with complaints of headache, insomnia, loss of appetite, abdominal pain, a fever of 39--40°C, and a rash that appeared on her abdomen. The woman was clinically diagnosed with typhoid fever. A sample of patient's blood serum was sent to a laboratory for serological testing with antibody detection. What serological test must be performed to confirm this diagnosis?

- a. Hemagglutination inhibition assay
- b. Ascoli precipitation test
- c. Wasserman complement fixation test

d. Widal agglutination test

- e. Immunofluorescence assay

61. A 35-year-old woman came to a doctor with complaints of headache, insomnia, loss of appetite, abdominal pain, a fever of 39--40°C, and a rash that appeared on her abdomen. The woman was clinically diagnosed with typhoid fever. A sample of patient's blood serum was sent to a laboratory for serological testing with antibody detection. What serological test must be performed to confirm this diagnosis?

- a. Immunofluorescence assay
- b. Ascoli precipitation test
- c. Wasserman complement fixation test

d. Widal agglutination test

- e. Hemagglutination inhibition assay

62. A 35-year-old woman came to a doctor with complaints of headache, insomnia, loss of appetite, abdominal pain, a fever of 39--40°C, and a rash that appeared on her abdomen. The woman was clinically diagnosed with typhoid fever. A sample of patient's blood serum was sent to a laboratory for serological testing with antibody detection. What serological test must be performed to confirm this diagnosis?

- a. Wasserman complement fixation test
- b. Immunofluorescence assay
- c. Hemagglutination inhibition assay
- d. Ascoli precipitation test

e. Widal agglutination test

63. A 36-year-old man has no hydrochloric acid or pepsin in his gastric juice. What is this condition called?

a. Achylia

- b. Achlorhydria
- c. Cholemia
- d. Hypochlorhydria
- e. Hyperchlorhydria

64. A 36-year-old man has no hydrochloric acid or pepsin in his gastric juice. What is this condition called?

b. Achylia

- c. Achlorhydria
- d. Hypochlorhydria
- e. Cholemia

65. A 36-year-old man has no hydrochloric acid or pepsin in his gastric juice. What is this condition called?

b. Achylia

- c. Achlorhydria
- d. Hyperchlorhydria
- e. Cholemia

66. A 40-year-old man was prescribed antibiotics as a part of the complex therapy for peptic ulcer disease of the stomach. Which of the following combinations is indicated in this case?

b. Amoxicillin + clarithromycin

- a. Levomycetin (chloramphenicol) + ampicillin

- c. Oxacillin + nalidixic acid
- d. Phenoxymethylpenicillin + lincomycin
- e. Streptomycin + benzylpenicillin

67. A 40-year-old man was prescribed antibiotics as a part of the complex therapy for peptic ulcer disease of the stomach. Which of the following combinations is indicated in this case?

- a. Phenoxymethylpenicillin + lincomycin
- b. Amoxicillin + clarithromycin**
- c. Levomycetin (chloramphenicol) + ampicillin
- d. Streptomycin + benzylpenicillin
- e. Oxacillin + nalidixic acid

68. A 40-year-old man was prescribed antibiotics as a part of the complex therapy for peptic ulcer disease of the stomach. Which of the following combinations is indicated in this case?

- a. Streptomycin + benzylpenicillin
- b. Oxacillin + nalidixic acid
- c. Phenoxymethylpenicillin + lincomycin
- d. Levomycetin (chloramphenicol) + ampicillin
- e. Amoxicillin + clarithromycin**

69. A 40-year-old man with allergic rhinitis has come to the dispensing chemist. He wants to substitute dimedrol (diphenhydramine), that he currently takes, with another antihistamine because dimedrol makes him drowsy and unable to concentrate. What drug would the dispensing chemist recommend?

- a. Aevit (Vitamins A and E)
- b. Retabolil (Nandrolone)
- c. Loratadine**
- d. Laferon (Interferon alfa-2b)
- e. Analgin (Metamizole)

70. A 40-year-old man with allergic rhinitis has come to the dispensing chemist. He wants to substitute dimedrol (diphenhydramine), that he currently takes, with another antihistamine because dimedrol makes him drowsy and unable to concentrate. What drug would the dispensing chemist recommend?

- a. Analgin (Metamizole)
- b. Laferon (Interferon alfa-2b)
- c. Aevit (Vitamins A and E)
- d. Loratadine**
- e. Retabolil (Nandrolone)

71. A 40-year-old man with allergic rhinitis has come to the dispensing chemist. He wants to substitute dimedrol (diphenhydramine), that he currently takes, with another antihistamine because dimedrol makes him drowsy and unable to concentrate. What drug would the dispensing chemist recommend?

- a. Retabolil (Nandrolone)
- b. Laferon (Interferon alfa-2b)
- c. Loratadine**
- d. Analgin (Metamizole)
- e. Aevit (Vitamins A and E)

72. A 40-year-old patient has developed polyuria (10-12 liters per day) and polydipsia induced by damage to the hypothalamo-hypophyseal tract. What hormone deficiency causes such disorders?

- a. Vasopressin**
- b. Thyrotropin
- c. Oxytocin
- d. Somatotropin
- e. Corticotropin

73. A 40-year-old patient has developed polyuria (10-12 liters per day) and polydipsia induced by damage to the hypothalamo-hypophyseal tract. What hormone deficiency causes such disorders?

- a. Oxytocin
- b. Corticotropin

- c. Thyrotropin
- d. Somatotropin

e. Vasopressin

74. A 40-year-old patient has developed polyuria (10-12 liters per day) and polydipsia induced by damage to the hypothalamo-hypophyseal tract. What hormone deficiency causes such disorders?

- a. Thyrotropin
- b. Somatotropin
- c. Corticotropin

d. Vasopressin

e. Oxytocin

75. A 40-year-old woman has been suffering from menorrhagia for a long time. Blood test: Hb- 90 g/L, erythrocytes - $3.9 \cdot 10^{12}/L$, color index - 0.69. What is the main cause of hypochromic anemia development in this case?

a. Iron loss due to bleeding

- b. Non-absorption of iron in the body
- c. Insufficient iron intake with food
- d. Increased iron consumption
- e. Vitamin B₁₂ deficiency

76. A 40-year-old woman has been suffering from menorrhagia for a long time. Blood test: Hb- 90 g/L, erythrocytes - $3.9 \cdot 10^{12}/L$, color index - 0.69. What is the main cause of hypochromic anemia development in this case?

a. Increased iron consumption

b. Iron loss due to bleeding

- c. Insufficient iron intake with food
- d. Non-absorption of iron in the body
- e. Vitamin B₁₂ deficiency

77. A 40-year-old woman has been suffering from menorrhagia for a long time. Blood test: Hb- 90 g/L, erythrocytes - $3.9 \cdot 10^{12}/L$, color index - 0.69. What is the main cause of hypochromic anemia development in this case?

a. Insufficient iron intake with food

b. Iron loss due to bleeding

- c. Increased iron consumption
- d. Vitamin B₁₂ deficiency
- e. Non-absorption of iron in the body

78. A 45-year-old man suffers from antacid gastritis. In this case, disturbed production of the following substance can be observed in the patient's stomach:

a. Hydrochloric acid

- b. Gastricsin
- c. Mucus
- d. Pepsin
- e. Intrinsic antianemic factor

79. A 45-year-old man suffers from antacid gastritis. In this case, disturbed production of the following substance can be observed in the patient's stomach:

- a. Gastricsin
- b. Pepsin
- c. Intrinsic antianemic factor

d. Hydrochloric acid

e. Mucus

80. A 45-year-old man suffers from antacid gastritis. In this case, disturbed production of the following substance can be observed in the patient's stomach:

- a. Intrinsic antianemic factor
- b. Gastricsin
- c. Mucus

d. Hydrochloric acid

e. Pepsin

81. A 45-year-old patient with rheumatoid arthritis was prescribed a glucocorticoid. Name this drug:

a. Prednisolone

b. Analgine (Metamizole)

c. Ibuprofen

d. Mefenamic acid

e. Insulin

82. A 45-year-old patient with rheumatoid arthritis was prescribed a glucocorticoid. Name this drug:

a. Insulin

b. Prednisolone

c. Mefenamic acid

d. Ibuprofen

e. Analgine (Metamizole)

83. A 45-year-old patient with rheumatoid arthritis was prescribed a glucocorticoid. Name this drug:

a. Mefenamic acid

b. Insulin

c. Ibuprofen

d. Prednisolone

e. Analgine (Metamizole)

84. A 47-year-old patient with bilateral pneumonia has a disruption of acid-base balance - compensated gaseous acidosis. What is the most probable mechanism of compensatory adaptation that maintains the patient's acid-base balance?

a. Intensified acidogenesis in kidneys

b. Vomiting

c. Decreased reabsorption of hydrogen carbonate in kidneys

d. Pulmonary hyperventilation

e. Diarrhea

85. A 47-year-old patient with bilateral pneumonia has a disruption of acid-base balance - compensated gaseous acidosis. What is the most probable mechanism of compensatory adaptation that maintains the patient's acid-base balance?

a. Diarrhea

b. Intensified acidogenesis in kidneys

c. Pulmonary hyperventilation

d. Decreased reabsorption of hydrogen carbonate in kidneys

e. Vomiting

86. A 47-year-old patient with bilateral pneumonia has a disruption of acid-base balance - compensated gaseous acidosis. What is the most probable mechanism of compensatory adaptation that maintains the patient's acid-base balance?

a. Vomiting

b. Decreased reabsorption of hydrogen carbonate in kidneys

c. Intensified acidogenesis in kidneys

d. Pulmonary hyperventilation

e. Diarrhea

87. A 48-year-old patient has been intravenously administered prednisolone solution to arrest severe attack of bronchial asthma. What group of hormonal agents does prednisolone belong to?

a. Anabolic steroids

b. Gestagenic drugs

c. Glucocorticoids

d. Estrogenic drugs

e. Mineralocorticoid

88. A 48-year-old patient has been intravenously administered prednisolone solution to arrest severe attack of bronchial asthma. What group of hormonal agents does prednisolone belong to?

a. Gestagenic drugs

b. Anabolic steroids

c. Estrogenic drugs

d. Glucocorticoids

e. Mineralocorticoid

89. A 48-year-old patient has been intravenously administered prednisolone solution to arrest severe attack of bronchial asthma. What group of hormonal agents does prednisolone belong to?

- a. Gestagenic drugs
- b. Mineralocorticoid
- c. Anabolic steroids

d. Glucocorticoids

e. Estrogenic drugs

90. A 5-year-old boy has stomachache, diarrhea with mucus and blood admixtures in the stool, and a fever of 38.0°C . Bacteriological stool test detected *Shigella flexneri*. What disease is it?

- a. Nonspecific ulcerative colitis
- b. Typhoid fever

c. Dysentery

d. Yersiniosis

e. Salmonellosis

91. A 5-year-old boy has stomachache, diarrhea with mucus and blood admixtures in the stool, and a fever of 38.0°C . Bacteriological stool test detected *Shigella flexneri*. What disease is it?

- a. Nonspecific ulcerative colitis
- b. Yersiniosis
- c. Salmonellosis

d. Dysentery

e. Typhoid fever

92. A 5-year-old boy has stomachache, diarrhea with mucus and blood admixtures in the stool, and a fever of 38.0°C . Bacteriological stool test detected *Shigella flexneri*. What disease is it?

- a. Typhoid fever
- b. Yersiniosis

c. Dysentery

d. Nonspecific ulcerative colitis

e. Salmonellosis

93. A 5-year-old child after drinking milk often develops the following symptoms: abdominal distension, spastic pain and diarrhea. These symptoms develop after 1-4 hours after single instance of taking milk. What enzymes are deficient, thus, causing the described symptomatology?

a. Maltolytic

b. Lactolytic

c. Sucrolytic

d. Fructolytic

e. Glucolytic

94. A 5-year-old child after drinking milk often develops the following symptoms: abdominal distension, spastic pain and diarrhea. These symptoms develop after 1-4 hours after single instance of taking milk. What enzymes are deficient, thus, causing the described symptomatology?

a. Maltolytic

b. Glucolytic

c. Lactolytic

d. Fructolytic

e. Sucrolytic

95. A 5-year-old child after drinking milk often develops the following symptoms: abdominal distension, spastic pain and diarrhea. These symptoms develop after 1-4 hours after single instance of taking milk. What enzymes are deficient, thus, causing the described symptomatology?

a. Sucrolytic

b. Fructolytic

c. Glucolytic

d. Maltolytic

e. Lactolytic

96. A 5-year-old child presents with abdominal distension, abdominal cramps, and diarrhea occurring 1-4 hours after drinking milk. Described symptoms are caused by the lack of enzymes that break up:

a. Lactose

- b. Fructose
- c. Sucrose
- d. Maltose
- e. Glucose

97. A 5-year-old child presents with abdominal distension, abdominal cramps, and diarrhea occurring 1-4 hours after drinking milk. Described symptoms are caused by the lack of enzymes that break up:

a. Sucrose

b. Lactose

- c. Maltose
- d. Fructose
- e. Glucose

98. A 5-year-old child presents with abdominal distension, abdominal cramps, and diarrhea occurring 1-4 hours after drinking milk. Described symptoms are caused by the lack of enzymes that break up:

a. Sucrose

b. Glucose

c. Lactose

- d. Fructose
- e. Maltose

99. A 50-year-old man with a history of alcoholic cirrhosis complains of dyspeptic disorders and bleeding from hemorrhoidal veins. Examination detects ascites and distended superficial veins of the anterior abdominal wall. What pathology is indicated by these signs?

a. Portal hypertension

- b. Intestinal obstruction
- c. Enterocolitis
- d. Peptic ulcer disease
- e. Hepatitis

100. A 50-year-old man with a history of alcoholic cirrhosis complains of dyspeptic disorders and bleeding from hemorrhoidal veins. Examination detects ascites and distended superficial veins of the anterior abdominal wall. What pathology is indicated by these signs?

- a. Intestinal obstruction
- b. Hepatitis

c. Portal hypertension

- d. Peptic ulcer disease
- e. Enterocolitis

101. A 50-year-old man with a history of alcoholic cirrhosis complains of dyspeptic disorders and bleeding from hemorrhoidal veins. Examination detects ascites and distended superficial veins of the anterior abdominal wall. What pathology is indicated by these signs?

- a. Intestinal obstruction
- b. Peptic ulcer disease
- c. Hepatitis
- d. Enterocolitis

e. Portal hypertension

102. A 52-year-old man complains of sour eructation, heartburn, nausea, epigastric pain, and constipations. What gastric secretion disorder is likely in the patient?

a. Achlorhydria

b. Hypersecretion and hyperchlorhydria

- c. Hyposecretion
- d. Hypochlorhydria
- e. Achylia

103. A 52-year-old man complains of sour eructation, heartburn, nausea, epigastric pain, and constipations. What gastric secretion disorder is likely in the patient?

a. Achlorhydria

b. Achylia

c. Hypersecretion and hyperchlorhydria

- d. Hyposecretion
- e. Hypochlorhydria

104. A 52-year-old man complains of sour eructation, heartburn, nausea, epigastric pain, and constipations. What gastric secretion disorder is likely in the patient?

- a. Achlorhydria
- b. Achylia
- c. Hyposecretion
- d. Hypersecretion and hyperchlorhydria**

- e. Hypochlorhydria

105. A 54-year-old man has requested a pharmacist's advice on drug prescription. The patient has 4-year-long history of chronic glomerulonephritis and 2-year-long history of persistent hypertension. What substance synthesized in the kidneys has important role in development of arterial hypertension?

- a. Catecholamines
- b. Renin**
- c. Nitric oxide
- d. Histamine
- e. Aldosterone

106. A 54-year-old man has requested a pharmacist's advice on drug prescription. The patient has 4-year-long history of chronic glomerulonephritis and 2-year-long history of persistent hypertension. What substance synthesized in the kidneys has important role in development of arterial hypertension?

- a. Catecholamines
- b. Aldosterone
- c. Nitric oxide
- d. Histamine
- e. Renin**

107. A 54-year-old man has requested a pharmacist's advice on drug prescription. The patient has 4-year-long history of chronic glomerulonephritis and 2-year-long history of persistent hypertension. What substance synthesized in the kidneys has important role in development of arterial hypertension?

- a. Histamine
- b. Catecholamines
- c. Renin**
- d. Nitric oxide
- e. Aldosterone

108. A 55-year-old man came to a doctor with complaints of acute pain in his big toes. Meat and wine are a permanent fixture in his diet. The doctor suspects gout. What substance must be measured in the patient's blood to confirm this diagnosis?

- a. Ketone bodies
- b. Lactate
- c. Uric acid**
- d. Urea
- e. Bilirubin

109. A 55-year-old man came to a doctor with complaints of acute pain in his big toes. Meat and wine are a permanent fixture in his diet. The doctor suspects gout. What substance must be measured in the patient's blood to confirm this diagnosis?

- a. Lactate
- b. Ketone bodies
- c. Uric acid**
- d. Bilirubin
- e. Urea

110. A 55-year-old man came to a doctor with complaints of acute pain in his big toes. Meat and wine are a permanent fixture in his diet. The doctor suspects gout. What substance must be measured in the patient's blood to confirm this diagnosis?

- a. Lactate
- b. Urea
- c. Ketone bodies

d. Uric acid

- e. Bilirubin

111. A 55-year-old man suffers from peptic ulcer disease of the stomach. What can be identified as an aggressive factor in this case?

- a. Prostaglandin E

b. Helicobacter pylori

- c. Intestinal mucosal barrier
- d. Adequate blood supply to the gastric mucosa
- e. Regeneration of the gastric mucosal epithelium

112. A 55-year-old man suffers from peptic ulcer disease of the stomach. What can be identified as an aggressive factor in this case?

- a. Regeneration of the gastric mucosal epithelium
- b. Adequate blood supply to the gastric mucosa
- c. Intestinal mucosal barrier
- d. Prostaglandin E

e. Helicobacter pylori

113. A 55-year-old man suffers from peptic ulcer disease of the stomach. What can be identified as an aggressive factor in this case?

- a. Regeneration of the gastric mucosal epithelium
- b. Intestinal mucosal barrier
- c. Prostaglandin E
- d. Adequate blood supply to the gastric mucosa

e. Helicobacter pylori

114. A 55-year-old patient was diagnosed with angina pectoris. A calcium channels blocking agent was prescribed for the treatment. Name this drug:

a. Amlodipine

- b. Atenolol
- c. Labetalol
- d. Reserpine
- e. Octadinum (Guanethidine)

115. A 55-year-old patient was diagnosed with angina pectoris. A calcium channels blocking agent was prescribed for the treatment. Name this drug:

- a. Atenolol

b. Amlodipine

- c. Reserpine
- d. Octadinum (Guanethidine)
- e. Labetalol

116. A 55-year-old patient was diagnosed with angina pectoris. A calcium channels blocking agent was prescribed for the treatment. Name this drug:

- a. Labetalol
- b. Octadinum (Guanethidine)
- c. Reserpine

d. Amlodipine

- e. Atenolol

117. A 56-year-old man with ischemic heart disease was prescribed metoprolol. What is the mechanism of action of beta-blockers in ischemic heart disease?

- a. Constriction of the coronary vessels
- b. Increase of the myocardial oxygen demand
- c. Dilation of the coronary vessels
- d. Reduction of the peripheral vessel tone

e. Reduction of the myocardial oxygen demand

118. A 56-year-old man with ischemic heart disease was prescribed metoprolol. What is the

mechanism of action of beta-blockers in ischemic heart disease?

- a. Constriction of the coronary vessels
- b. Reduction of the peripheral vessel tone
- c. Increase of the myocardial oxygen demand
- d. Reduction of the myocardial oxygen demand**
- e. Dilation of the coronary vessels

119. A 56-year-old man with ischemic heart disease was prescribed metoprolol. What is the mechanism of action of beta-blockers in ischemic heart disease?

- a. Dilation of the coronary vessels
- b. Increase of the myocardial oxygen demand
- c. Reduction of the peripheral vessel tone
- d. Reduction of the myocardial oxygen demand**
- e. Constriction of the coronary vessels

120. A 58-year-old man presents with a peripheral circulation disorder with a restricted arterial inflow, paleness of the affected area, and decrease of partial oxygen pressure in the affected area. Name this disorder:

- a. Arterial hyperemia
- b. Venous hyperemia
- c. Reperfusion syndrome
- d. Ischemia**
- e. Thrombosis

121. A 58-year-old man presents with a peripheral circulation disorder with a restricted arterial inflow, paleness of the affected area, and decrease of partial oxygen pressure in the affected area. Name this disorder:

- a. Reperfusion syndrome
- b. Ischemia**
- c. Thrombosis
- d. Venous hyperemia
- e. Arterial hyperemia

122. A 58-year-old man presents with a peripheral circulation disorder with a restricted arterial inflow, paleness of the affected area, and decrease of partial oxygen pressure in the affected area. Name this disorder:

- a. Venous hyperemia
- b. Thrombosis
- c. Reperfusion syndrome
- d. Arterial hyperemia
- e. Ischemia**

123. A 60-year-old man has depressive syndrome and glaucoma. Why is antidepressant amitriptyline contraindicated in this case?

- a. It acts as a muscarinic antagonist**
- b. It acts as an alpha-blocker
- c. It is contraindicated for elderly patients
- d. It increases blood pressure
- e. It acts as a muscarinic agonist

124. A 60-year-old man has depressive syndrome and glaucoma. Why is antidepressant amitriptyline contraindicated in this case?

- a. It acts as a muscarinic agonist
- b. It is contraindicated for elderly patients
- c. It acts as an alpha-blocker
- d. It acts as a muscarinic antagonist**
- e. It increases blood pressure

125. A 60-year-old man has depressive syndrome and glaucoma. Why is antidepressant amitriptyline contraindicated in this case?

- a. It increases blood pressure
- b. It acts as a muscarinic antagonist**

- c. It acts as a muscarinic agonist
- d. It is contraindicated for elderly patients
- e. It acts as an alpha-blocker

126. A 60-year-old man with heart failure has received a cardiotonic that is a beta_1 adrenergic agonist. Name this drug:

- a. Dobutamine**
- b. Papaverine
- c. Salbutamol
- d. Potassium aspartate and magnesium aspartate
- e. Xenical (Orlistat)

127. A 60-year-old man with heart failure has received a cardiotonic that is a beta_1 adrenergic agonist. Name this drug:

- a. Dobutamine**
- b. Potassium aspartate and magnesium aspartate
- c. Papaverine
- d. Xenical (Orlistat)
- e. Salbutamol

128. A 60-year-old man with heart failure has received a cardiotonic that is a beta_1 adrenergic agonist. Name this drug:

- a. Salbutamol
- b. Papaverine
- c. Dobutamine**
- d. Xenical (Orlistat)
- e. Potassium aspartate and magnesium aspartate

129. A 62-year-old man was hospitalized into the cardiology department in a severe condition with the diagnosis of acute myocardial infarction in the posterior wall of the left ventricle and septum, pulmonary edema. What is the primary mechanism of pulmonary edema development in this patient?

- a. Decreased alveolocapillary oxygen diffusion
- b. Pulmonary venous hypertension
- c. Hypoxemia
- d. Acute left ventricular failure**
- e. Pulmonary arterial hypertension

130. A 62-year-old man was hospitalized into the cardiology department in a severe condition with the diagnosis of acute myocardial infarction in the posterior wall of the left ventricle and septum, pulmonary edema. What is the primary mechanism of pulmonary edema development in this patient?

- a. Pulmonary arterial hypertension
- b. Acute left ventricular failure**
- c. Hypoxemia
- d. Decreased alveolocapillary oxygen diffusion
- e. Pulmonary venous hypertension

131. A 62-year-old man was hospitalized into the cardiology department in a severe condition with the diagnosis of acute myocardial infarction in the posterior wall of the left ventricle and septum, pulmonary edema. What is the primary mechanism of pulmonary edema development in this patient?

- a. Pulmonary arterial hypertension
- b. Hypoxemia
- c. Decreased alveolocapillary oxygen diffusion
- d. Acute left ventricular failure**
- e. Pulmonary venous hypertension

132. A 62-year-old woman with transmural myocardial infarction has developed heart failure. What is the pathogenetic mechanism of heart failure development in this case?

- a. Decreased mass of functioning cardiomyocytes**
- b. Myocardial reperfusion injury
- c. Pressure overload of the heart
- d. Volume overload of the heart
- e. Acute cardiac tamponade

133. A 62-year-old woman with transmural myocardial infarction has developed heart failure. What is the pathogenetic mechanism of heart failure development in this case?

- a. Acute cardiac tamponade
- b. Pressure overload of the heart
- c. Volume overload of the heart
- d. Decreased mass of functioning cardiomyocytes**
- e. Myocardial reperfusion injury

134. A 62-year-old woman with transmural myocardial infarction has developed heart failure. What is the pathogenetic mechanism of heart failure development in this case?

- a. Volume overload of the heart
- b. Pressure overload of the heart
- c. Acute cardiac tamponade
- d. Decreased mass of functioning cardiomyocytes**
- e. Myocardial reperfusion injury

135. A 65-year-old patient has been diagnosed with prostate adenoma. What adrenoblocker should he be prescribed?

- a. Nifedipine
- b. Metoprolol
- c. Atenolol
- d. Propranolol
- e. Doxazosin**

136. A 65-year-old patient has been diagnosed with prostate adenoma. What adrenoblocker should he be prescribed?

- a. Propranolol
- b. Metoprolol
- c. Doxazosin**
- d. Nifedipine
- e. Atenolol

137. A 65-year-old patient has been diagnosed with prostate adenoma. What adrenoblocker should he be prescribed?

- a. Propranolol
- b. Nifedipine
- c. Metoprolol
- d. Atenolol
- e. Doxazosin**

138. A 70-year-old man came to a doctor with complaints of enlarged hands, feet, tongue, and facial features. Examination reveals a significant increase of somatotropin levels in the patient's blood. What causes this condition in the patient?

- a. Adenohypophyseal hyperfunction**
- b. Hypothyroidism
- c. Hyperfunction of the adrenal cortex
- d. Hyperparathyroidism
- e. Adenohypophyseal hypofunction

139. A 70-year-old man came to a doctor with complaints of enlarged hands, feet, tongue, and facial features. Examination reveals a significant increase of somatotropin levels in the patient's blood. What causes this condition in the patient?

- a. Adenohypophyseal hypofunction
- b. Adenohypophyseal hyperfunction**
- c. Hyperfunction of the adrenal cortex
- d. Hyperparathyroidism
- e. Hypothyroidism

140. A 70-year-old man came to a doctor with complaints of enlarged hands, feet, tongue, and facial features. Examination reveals a significant increase of somatotropin levels in the patient's blood. What causes this condition in the patient?

- a. Hyperfunction of the adrenal cortex

- b. Adenohypophyseal hypofunction
- c. Hypothyroidism
- d. Hyperparathyroidism

e. Adenohypophyseal hyperfunction

141. A 70-year-old man with atherosclerosis complains of tinnitus both in the ears and in the head, memory deterioration, loss of working ability, and rapid fatigability. What arteries are the most affected in this man?

- a. Coronary arteries
- b. Renal arteries
- c. Intestinal arteries
- d. Lower limb arteries

e. Cerebral arteries

142. A 70-year-old man with atherosclerosis complains of tinnitus both in the ears and in the head, memory deterioration, loss of working ability, and rapid fatigability. What arteries are the most affected in this man?

- a. Intestinal arteries

b. Cerebral arteries

- c. Coronary arteries
- d. Lower limb arteries
- e. Renal arteries

143. A 70-year-old man with atherosclerosis complains of tinnitus both in the ears and in the head, memory deterioration, loss of working ability, and rapid fatigability. What arteries are the most affected in this man?

- a. Intestinal arteries
- b. Renal arteries
- c. Lower limb arteries

d. Cerebral arteries

- e. Coronary arteries

144. A 71-year-old woman with cholecystitis developed a yellow tint to her skin and mucosa. She was diagnosed with mechanical jaundice. The change in the patient's skin coloring occurred due to elevated levels of the following substance in her blood:

a. Conjugated bilirubin

- b. Unconjugated bilirubin
- c. Urobilinogen
- d. Bile acids
- e. Stercobilinogen

145. A 71-year-old woman with cholecystitis developed a yellow tint to her skin and mucosa. She was diagnosed with mechanical jaundice. The change in the patient's skin coloring occurred due to elevated levels of the following substance in her blood:

- a. Stercobilinogen

b. Conjugated bilirubin

- c. Bile acids
- d. Urobilinogen
- e. Unconjugated bilirubin

146. A 71-year-old woman with cholecystitis developed a yellow tint to her skin and mucosa. She was diagnosed with mechanical jaundice. The change in the patient's skin coloring occurred due to elevated levels of the following substance in her blood:

- a. Urobilinogen
- b. Unconjugated bilirubin
- c. Stercobilinogen

d. Conjugated bilirubin

- e. Bile acids

147. A 71-year-old woman with cholecystitis has developed mechanical jaundice. What type of arrhythmia will develop in this case?

- a. Ciliary arrhythmia

b. Sinus tachycardia

c. Sinus bradycardia

d. Extrasystole

e. Atrioventricular block

148. A 71-year-old woman with cholecystitis has developed mechanical jaundice. What type of arrhythmia will develop in this case?

a. Sinus tachycardia

b. Extrasystole

c. Sinus bradycardia

d. Ciliary arrhythmia

e. Atrioventricular block

149. A 71-year-old woman with cholecystitis has developed mechanical jaundice. What type of arrhythmia will develop in this case?

a. Sinus tachycardia

b. Extrasystole

c. Atrioventricular block

d. Ciliary arrhythmia

e. Sinus bradycardia

150. A 77-year-old man complains of shortness of breath, leg edemas, and cardiac pain. He suffers from chronic heart failure. What type of hypoxia is observed in this man?

a. Circulatory hypoxia

b. Hypoxic hypoxia

c. Respiratory hypoxia

d. Tissue hypoxia

e. Blood hypoxia

151. A 77-year-old man complains of shortness of breath, leg edemas, and cardiac pain. He suffers from chronic heart failure. What type of hypoxia is observed in this man?

a. Respiratory hypoxia

b. Circulatory hypoxia

c. Hypoxic hypoxia

d. Blood hypoxia

e. Tissue hypoxia

152. A 77-year-old man complains of shortness of breath, leg edemas, and cardiac pain. He suffers from chronic heart failure. What type of hypoxia is observed in this man?

a. Tissue hypoxia

b. Respiratory hypoxia

c. Hypoxic hypoxia

d. Blood hypoxia

e. Circulatory hypoxia

153. A 9-year-old child due to acute bronchitis developed elevated body temperature up to 38.5°C that lasted for a week and was then followed by a drop in the temperature down to 37.0°C . What mechanism is leading at the 3rd stage of fever?

a. Development of chills

b. Increased diuresis

c. Peripheral vasodilation

d. Increased respiration rate

e. Increased heat production

154. A 9-year-old child due to acute bronchitis developed elevated body temperature up to 38.5°C that lasted for a week and was then followed by a drop in the temperature down to 37.0°C . What mechanism is leading at the 3rd stage of fever?

a. Increased respiration rate

b. Development of chills

c. Peripheral vasodilation

d. Increased heat production

e. Increased diuresis

155. A 9-year-old child due to acute bronchitis developed elevated body temperature up to 38.5°C that lasted for a week and was then followed by a drop in the temperature down to 37.0°C . What mechanism is leading at the 3rd stage of fever?

- a. Increased respiration rate
- b. Increased heat production
- c. Development of chills
- d. Increased diuresis

e. Peripheral vasodilation

156. A Gram stained smear shows large oval violet cells that form pseudomycelium. Name these microorganisms:

- a. *Penicillium* fungi
- b. *Mucor* fungi
- c. Actinomycetales
- d. *Plasmodium vivax*

e. *Candida* fungi

157. A Gram stained smear shows large oval violet cells that form pseudomycelium. Name these microorganisms:

- a. *Penicillium* fungi
- b. *Mucor* fungi
- c. *Plasmodium vivax*
- d. Actinomycetales

e. *Candida* fungi

158. A Gram stained smear shows large oval violet cells that form pseudomycelium. Name these microorganisms:

- a. *Plasmodium vivax*
- b. Actinomycetales

c. *Candida* fungi

- d. *Mucor* fungi
- e. *Penicillium* fungi

159. A Poaceae plant has linear leaves with several non-branching veins that are parallel to the edge of the lamina, which indicates the following type of leaf venation:

- a. Arcuate
- b. Dichotomous
- c. Pinnate

d. Parallel

e. Palmate

160. A Poaceae plant has linear leaves with several non-branching veins that are parallel to the edge of the lamina, which indicates the following type of leaf venation:

- a. Pinnate
- b. Arcuate

c. Parallel

- d. Dichotomous
- e. Palmate

161. A Polygonaceae family plant has elongated lanceolate leaves with ochreae and brown spots on the upper surface of the leaf blade. These features are characteristic of:

- a. *Hypericum perforatum*
- b. *Polygonum aviculare*
- c. *Polygonum hydropiper*

d. *Polygonum persicaria*

e. *Leonurus quinquelobatus*

162. A Polygonaceae family plant has elongated lanceolate leaves with ochreae and brown spots on the upper surface of the leaf blade. These features are characteristic of:

a. *Leonurus quinquelobatus*

b. *Polygonum persicaria*

c. *Polygonum hydropiper*

- d. *Polygonum aviculare*
- e. *Hypericum perforatum*

163. A Polygonaceae family plant has elongated lanceolate leaves with ochreae and brown spots on the upper surface of the leaf blade. These features are characteristic of:

- a. *Polygonum hydropiper*
- b. *Hypericum perforatum*
- c. *Polygonum aviculare*

d. *Polygonum persicaria*

- e. *Leonurus quinquelobatus*

164. A bacillus was obtained from the patient's feces. The bacillus is comma-shaped, mobile, non-spore-forming, and has no capsule. On the solid alkaline medium it grows transparent colonies, on the alkaline peptone water it produces pale blue film in 6 hours. What causative agent can be suspected?

- a. *Proteus*

b. *Cholera vibrio*

- c. *Shigella*
- d. *Escherichia*
- e. *Salmonella*

165. A bacillus was obtained from the patient's feces. The bacillus is comma-shaped, mobile, non-spore-forming, and has no capsule. On the solid alkaline medium it grows transparent colonies, on the alkaline peptone water it produces pale blue film in 6 hours. What causative agent can be suspected?

- a. *Salmonella*
- b. *Shigella*
- c. *Proteus*
- d. *Escherichia*

e. *Cholera vibrio*

166. A bacillus was obtained from the patient's feces. The bacillus is comma-shaped, mobile, non-spore-forming, and has no capsule. On the solid alkaline medium it grows transparent colonies, on the alkaline peptone water it produces pale blue film in 6 hours. What causative agent can be suspected?

- a. *Shigella*

b. *Cholera vibrio*

- c. *Salmonella*
- d. *Proteus*
- e. *Escherichia*

167. A bulbous plant with specific odor has basal leaf arrangement; the leaves are cylindrical and fistulose. Its peduncle bears a simple umbel inflorescence with membranous indusium. Its fruit is a capsule. These features of the plant indicate that it belongs to the following species:

- a. *Acorus calamus*
- b. *Convallaria majalis*
- c. *Allium sativum*

d. *Allium cepa*

- e. *Agropyron repens*

168. A bulbous plant with specific odor has basal leaf arrangement; the leaves are cylindrical and fistulose. Its peduncle bears a simple umbel inflorescence with membranous indusium. Its fruit is a capsule. These features of the plant indicate that it belongs to the following species:

- a. *Allium sativum*

b. *Allium cepa*

- c. *Agropyron repens*
- d. *Acorus calamus*
- e. *Convallaria majalis*

169. A bulbous plant with specific odor has basal leaf arrangement; the leaves are cylindrical and fistulose. Its peduncle bears a simple umbel inflorescence with membranous indusium. Its fruit is a capsule. These features of the plant indicate that it belongs to the following species:

- a. *Convallaria majalis*
- b. *Allium sativum*
- c. *Agropyron repens*
- d. *Acorus calamus*

e. *Allium cepa*

170. A case of hepatitis A was registered at a school. What drug should be used for specific prevention in the children, who were in a contact with the sick classmate?

- a. Inactivated vaccine
- b. Interferon

c. Immunoglobulin

- d. Live vaccine
- e. Ribavirin

171. A case of hepatitis A was registered at a school. What drug should be used for specific prevention in the children, who were in a contact with the sick classmate?

- a. Live vaccine

b. Immunoglobulin

- c. Inactivated vaccine
- d. Ribavirin
- e. Interferon

172. A case of hepatitis A was registered at a school. What drug should be used for specific prevention in the children, who were in a contact with the sick classmate?

- a. Ribavirin
- b. Inactivated vaccine
- c. Interferon
- d. Live vaccine

e. Immunoglobulin

173. A certain dioecious plant commonly grows at the forest edge. It is a shrub with thorned sprouts. Its fruit is a round black coenocarpous drupe (pyrenarium) with 3-4 seeds. Name this plant:

a. *Rhamnus cathartica*

- b. *Crataegus sanguinea*
- c. *Rosa canina*
- d. *Hippophae rhamnoides*
- e. *Sambucus nigra*

174. A certain dioecious plant commonly grows at the forest edge. It is a shrub with thorned sprouts. Its fruit is a round black coenocarpous drupe (pyrenarium) with 3-4 seeds. Name this plant:

a. *Rhamnus cathartica*

- b. *Sambucus nigra*
- c. *Crataegus sanguinea*
- d. *Hippophae rhamnoides*
- e. *Rosa canina*

175. A certain dioecious plant commonly grows at the forest edge. It is a shrub with thorned sprouts. Its fruit is a round black coenocarpous drupe (pyrenarium) with 3-4 seeds. Name this plant:

- a. *Crataegus sanguinea*
- b. *Hippophae rhamnoides*
- c. *Rosa canina*

d. *Rhamnus cathartica*

- e. *Sambucus nigra*

176. A certain drug is a first-line antituberculosis agent. Its possible side effects include polyneuritis, hepatotoxicity, mental disorders, and allergic reactions. Name this drug.

- a. Atropine
- b. Clotrimazole

c. Isoniazid

- d. Meloxicam
- e. Adrenaline hydrochloride

177. A certain drug is a first-line antituberculosis agent. Its possible side effects include polyneuritis,

hepatotoxicity, mental disorders, and allergic reactions. Name this drug.

a. Clotrimazole

b. Isoniazid

c. Adrenaline hydrochloride

d. Meloxicam

e. Atropine

178. A certain drug is a first-line antituberculosis agent. Its possible side effects include polyneuritis, hepatotoxicity, mental disorders, and allergic reactions. Name this drug.

a. Clotrimazole

b. Adrenaline hydrochloride

c. Isoniazid

d. Atropine

e. Meloxicam

179. A certain herbaceous plant grows on the meadows of the Carpathian Mountains. It has orange anthodium inflorescences, upright stem, and a rosette of basal leaves. Name this plant:

a. Arnica montana

b. Calendula officinalis

c. Echinacea purpurea

d. Cychorium intybus

e. Centaurea cyanus

180. A certain herbaceous plant grows on the meadows of the Carpathian Mountains. It has orange anthodium inflorescences, upright stem, and a rosette of basal leaves. Name this plant:

a. Cychorium intybus

b. Calendula officinalis

c. Centaurea cyanus

d. Echinacea purpurea

e. Arnica montana

181. A certain herbaceous plant grows on the meadows of the Carpathian Mountains. It has orange anthodium inflorescences, upright stem, and a rosette of basal leaves. Name this plant:

a. Echinacea purpurea

b. Centaurea cyanus

c. Calendula officinalis

d. Arnica montana

e. Cychorium intybus

182. A certain infection leads to fetus malformation if a pregnant woman is affected. What vaccine should be used for prevention of this infection?

a. Rubella virus vaccine

b. Poliovirus vaccine

c. Mumps vaccine

d. Antirabic vaccine

e. Influenza virus vaccine

183. A certain infection leads to fetus malformation if a pregnant woman is affected. What vaccine should be used for prevention of this infection?

a. Antirabic vaccine

b. Influenza virus vaccine

c. Poliovirus vaccine

d. Mumps vaccine

e. Rubella virus vaccine

184. A certain infection leads to fetus malformation if a pregnant woman is affected. What vaccine should be used for prevention of this infection?

a. Antirabic vaccine

b. Poliovirus vaccine

c. Rubella virus vaccine

d. Mumps vaccine

e. Influenza virus vaccine

185. A certain meristematic tissue is located in the vascular bundles of the stem between the secondary phloem and the secondary xylem. What type of meristematic tissue is it?

a. Dermatogen

b. Cambium

c. Pericycle

d. Procambium

e. Phellogen

186. A certain meristematic tissue is located in the vascular bundles of the stem between the secondary phloem and the secondary xylem. What type of meristematic tissue is it?

a. Dermatogen

b. Cambium

c. Procambium

d. Phellogen

e. Pericycle

187. A certain meristematic tissue is located in the vascular bundles of the stem between the secondary phloem and the secondary xylem. What type of meristematic tissue is it?

a. Pericycle

b. Phellogen

c. Cambium

d. Procambium

e. Dermatogen

188. A certain part of the primary structure of a root has cells with Casparian strips, impregnated with suberin. What tissue of the primary structure of a root contains these cells?

a. Epiblem

b. Mesodermis

c. Endodermis

d. Pericycle

e. Exodermis

189. A certain part of the primary structure of a root has cells with Casparian strips, impregnated with suberin. What tissue of the primary structure of a root contains these cells?

a. Mesodermis

b. Pericycle

c. Endodermis

d. Exodermis

e. Epiblem

190. A certain part of the primary structure of a root has cells with Casparian strips, impregnated with suberin. What tissue of the primary structure of a root contains these cells?

a. Pericycle

b. Mesodermis

c. Endodermis

d. Exodermis

e. Epiblem

191. A certain perennial alkaloid-containing plant is widely used in medicine. It has the following features: pinnately dissected leaves with light green upper surface and bluish lower surface; regular bisexual flowers with double perianth, attached to long peduncles, located in the axils of narrow sharp bracts, and clustered together in umbel inflorescences; the fruit is a siliquiform capsule; the plant produces an orange milky sap. These biological features are characteristic of:

a. *Atropa belladonna*

b. *Chelidonium majus*

c. *Vinca minor*

d. *Papaver somniferum*

e. *Datura stramonium*

192. A certain perennial alkaloid-containing plant is widely used in medicine. It has the following features: pinnately dissected leaves with light green upper surface and bluish lower surface; regular bisexual flowers with double perianth, attached to long peduncles, located in the axils of narrow sharp

bracts, and clustered together in umbel inflorescences; the fruit is a siliquiform capsule; the plant produces an orange milky sap. These biological features are characteristic of:

- a. *Papaver somniferum*
- b. *Atropa belladonna*
- c. *Vinca minor*
- d. *Datura stramonium*

e. *Chelidonium majus*

193. A certain perennial alkaloid-containing plant is widely used in medicine. It has the following features: pinnately dissected leaves with light green upper surface and bluish lower surface; regular bisexual flowers with double perianth, attached to long peduncles, located in the axils of narrow sharp bracts, and clustered together in umbel inflorescences; the fruit is a siliquiform capsule; the plant produces an orange milky sap. These biological features are characteristic of:

- a. *Papaver somniferum*
- b. *Vinca minor*
- c. *Atropa belladonna*

d. *Chelidonium majus*

e. *Datura stramonium*

194. A certain reaction is successfully used for rapid diagnostics of many bacterial, viral, protozoal, and fungal diseases, as well as for detection of pathogens in the environment, food, and water. This reaction is based on the principle of repeated copying of a specific DNA segment or a single gene, using the DNA polymerase enzyme. Name this reaction:

- a. Enzyme-linked immunosorbent assay
- b. Radioimmunoassay

c. Polymerase chain reaction

d. Immunofluorescence reaction

e. Enzyme-marked antibody reaction

195. A certain reaction is successfully used for rapid diagnostics of many bacterial, viral, protozoal, and fungal diseases, as well as for detection of pathogens in the environment, food, and water. This reaction is based on the principle of repeated copying of a specific DNA segment or a single gene, using the DNA polymerase enzyme. Name this reaction:

- a. Enzyme-marked antibody reaction
- b. Enzyme-linked immunosorbent assay
- c. Radioimmunoassay

d. Polymerase chain reaction

e. Immunofluorescence reaction

196. A certain reaction is successfully used for rapid diagnostics of many bacterial, viral, protozoal, and fungal diseases, as well as for detection of pathogens in the environment, food, and water. This reaction is based on the principle of repeated copying of a specific DNA segment or a single gene, using the DNA polymerase enzyme. Name this reaction:

- a. Immunofluorescence reaction
- b. Enzyme-marked antibody reaction
- c. Enzyme-linked immunosorbent assay
- d. Radioimmunoassay

e. Polymerase chain reaction

197. A characteristic reaction between sodium sulfide and the salts of an unknown cation has produced a white precipitate. What cation was it?

- a. Lead
- b. Mercury

c. Zinc

d. Magnesium

e. Copper

198. A characteristic reaction between sodium sulfide and the salts of an unknown cation has produced a white precipitate. What cation was it?

- a. Magnesium
- b. Lead

- c. Copper
- d. Mercury

e. Zinc

199. A characteristic reaction between sodium sulfide and the salts of an unknown cation has produced a white precipitate. What cation was it?

- a. Mercury
- b. Magnesium

c. Zinc

- d. Copper
- e. Lead

200. A chemical analytical laboratory uses a reaction with dimethylglyoxime to identify nickel cations. What will be the color of the precipitate that forms as a result of this reaction?

- a. Blue
- b. Green

c. Red

- d. White
- e. Yellow

201. A chemical analytical laboratory uses a reaction with dimethylglyoxime to identify nickel cations. What will be the color of the precipitate that forms as a result of this reaction?

- a. Green
- b. Yellow

c. Red

- d. Blue
- e. White

202. A chemical analytical laboratory uses a reaction with dimethylglyoxime to identify nickel cations. What will be the color of the precipitate that forms as a result of this reaction?

- a. White
- b. Green
- c. Yellow

d. Red

- e. Blue

203. A chemist-analyst must determine the quantitative content of hydrochloric acid in a mixture that contains nitric acid. What titrimetric method of analysis can be used for this purpose?

a. Argentometry

- b. Complexonometry
- c. Iodometry
- d. Acid-base titration
- e. Permanganatometry

204. A chemist-analyst must determine the quantitative content of hydrochloric acid in a mixture that contains nitric acid. What titrimetric method of analysis can be used for this purpose?

- a. Permanganatometry
- b. Iodometry
- c. Acid-base titration

d. Argentometry

- e. Complexonometry

205. A chemist-analyst must determine the quantitative content of hydrochloric acid in a mixture that contains nitric acid. What titrimetric method of analysis can be used for this purpose?

- a. Permanganatometry
- b. Iodometry
- c. Acid-base titration
- d. Complexonometry

e. Argentometry

206. A chemist-analyst performs a qualitative analysis of group IV cations. Why is a 3% hydrogen peroxide solution added in the process?

- a. Conversion of ions to a higher degree of oxidation

- b. Formation of colored compounds
- c. Conversion of ions to a lower degree of oxidation
- d. Sediment formation
- e. Gas removal

207. A chemist-analyst performs a qualitative analysis of group IV cations. Why is a 3% hydrogen peroxide solution added in the process?

- a. Formation of colored compounds
- b. Conversion of ions to a lower degree of oxidation
- c. Sediment formation

d. Conversion of ions to a higher degree of oxidation

- e. Gas removal

208. A chemist-analyst performs a qualitative analysis of group IV cations. Why is a 3% hydrogen peroxide solution added in the process?

- a. Sediment formation
- b. Conversion of ions to a lower degree of oxidation
- c. Formation of colored compounds
- d. Gas removal

e. Conversion of ions to a higher degree of oxidation

209. A chemotherapeutic agent has bactericidal effect against streptococci, staphylococci, bacilli, and clostridia. According to its action spectrum this drug belongs to the following group:

- a. Antiviral agents

b. Broad spectrum antibacterial agents

- c. Broad spectrum antifungal agents
- d. Narrow spectrum antibacterial agents
- e. Antituberculous agents

210. A chemotherapeutic agent has bactericidal effect against streptococci, staphylococci, bacilli, and clostridia. According to its action spectrum this drug belongs to the following group:

- a. Broad spectrum antifungal agents

b. Broad spectrum antibacterial agents

- c. Antituberculous agents
- d. Narrow spectrum antibacterial agents
- e. Antiviral agents

211. A chemotherapeutic agent has bactericidal effect against streptococci, staphylococci, bacilli, and clostridia. According to its action spectrum this drug belongs to the following group:

- a. Broad spectrum antifungal agents
- b. Narrow spectrum antibacterial agents
- c. Antituberculous agents
- d. Antiviral agents

e. Broad spectrum antibacterial agents

212. A child diagnosed with rheumatism was hospitalized. What microorganisms cause this disease?

a. Streptococci

- b. Staphylococci
- c. Meningococci
- d. Enterococci
- e. Pneumococci

213. A child diagnosed with rheumatism was hospitalized. What microorganisms cause this disease?

- a. Enterococci

b. Streptococci

- c. Staphylococci
- d. Meningococci
- e. Pneumococci

214. A child diagnosed with rheumatism was hospitalized. What microorganisms cause this disease?

- a. Staphylococci
- b. Pneumococci
- c. Streptococci**

- d. Meningococci
- e. Enterococci

215. A child had been administered antidiphtheric serum. What resistance was formed in the child?

- a. Active
- b. Physiological
- c. Primary
- d. Pathological

e. Passive

216. A child had been administered antidiphtheric serum. What resistance was formed in the child?

- a. Pathological
- b. Active

c. Passive

- d. Physiological
- e. Primary

217. A child had been administered antidiphtheric serum. What resistance was formed in the child?

- a. Pathological
- b. Primary
- c. Active

d. Passive

- e. Physiological

218. A child has been hospitalised with scalded skin syndrome. Staphylococcus aureus was detected in blisters. What virulence factor causes exfoliation and necrosis of epidermis?

a. Exfoliative toxin

- b. Hemolysin
- c. Enterotoxin
- d. Hyaluronidase
- e. Toxic shock syndrome toxin

219. A child has been hospitalised with scalded skin syndrome. Staphylococcus aureus was detected in blisters. What virulence factor causes exfoliation and necrosis of epidermis?

- a. Enterotoxin
- b. Hemolysin
- c. Toxic shock syndrome toxin
- d. Hyaluronidase

e. Exfoliative toxin

220. A child has been hospitalised with scalded skin syndrome. Staphylococcus aureus was detected in blisters. What virulence factor causes exfoliation and necrosis of epidermis?

- a. Toxic shock syndrome toxin
- b. Enterotoxin
- c. Hyaluronidase

d. Exfoliative toxin

- e. Hemolysin

221. A child presents with increased nervous excitability, spontaneous tetany attacks, dry skin, brittle nails and hair, and subcutaneous calcifications in the area of the auricles. What hormone is deficient in this case, causing the described changes?

a. Parathyroid hormone

- b. Progesterone
- c. Oxytocin
- d. Vasopressin
- e. Thyroid hormones

222. A child presents with increased nervous excitability, spontaneous tetany attacks, dry skin, brittle nails and hair, and subcutaneous calcifications in the area of the auricles. What hormone is deficient in this case, causing the described changes?

- a. Thyroid hormones
- b. Progesterone
- c. Oxytocin

d. Vasopressin

e. Parathyroid hormone

223. A child presents with increased nervous excitability, spontaneous tetany attacks, dry skin, brittle nails and hair, and subcutaneous calcifications in the area of the auricles. What hormone is deficient in this case, causing the described changes?

a. Vasopressin

b. Progesterone

c. Thyroid hormones

d. Oxytocin

e. Parathyroid hormone

224. A child that attends a day care center fell ill with measles. What is used to prevent this disease in the contact persons?

a. Measles vaccine

b. Immunostimulants

c. Sulfanilamides

d. Measles immunoglobulin

e. Antibiotics

225. A child that attends a day care center fell ill with measles. What is used to prevent this disease in the contact persons?

a. Sulfanilamides

b. Measles immunoglobulin

c. Measles vaccine

d. Immunostimulants

e. Antibiotics

226. A child that attends a day care center fell ill with measles. What is used to prevent this disease in the contact persons?

a. Sulfanilamides

b. Measles vaccine

c. Immunostimulants

d. Antibiotics

e. Measles immunoglobulin

227. A child with mental retardation is diagnosed with cretinism. What hormone deficiency is the main factor in the development of nervous system dysfunction in this disease?

a. Catecholamines

b. Estrogens

c. Androgens

d. Glucocorticoids

e. Thyroid hormones

228. A child with mental retardation is diagnosed with cretinism. What hormone deficiency is the main factor in the development of nervous system dysfunction in this disease?

a. Glucocorticoids

b. Androgens

c. Catecholamines

d. Estrogens

e. Thyroid hormones

229. A child with mental retardation is diagnosed with cretinism. What hormone deficiency is the main factor in the development of nervous system dysfunction in this disease?

a. Glucocorticoids

b. Catecholamines

c. Thyroid hormones

d. Estrogens

e. Androgens

230. A colloidal solution emits a matte glow, when light passes through it, due to the light scattering on the colloidal particles as a result of diffraction. Name this physical phenomenon:

a. Coagulation

- b. Syneresis
- c. Sedimentation

d. Opalescence

- e. Intramolecular diffraction

231. A colloidal solution emits a matte glow, when light passes through it, due to the light scattering on the colloidal particles as a result of diffraction. Name this physical phenomenon:

- a. Intramolecular diffraction

b. Opalescence

- c. Sedimentation
- d. Coagulation
- e. Syneresis

232. A colloidal solution emits a matte glow, when light passes through it, due to the light scattering on the colloidal particles as a result of diffraction. Name this physical phenomenon:

- a. Sedimentation
- b. Intramolecular diffraction

c. Opalescence

- d. Coagulation
- e. Syneresis

233. A colloidal system can be purified using filtration under excess pressure through a semipermeable membrane. Name this purification method.

- a. Dialysis
- b. Diffusion

c. Ultrafiltration

- d. Filtration
- e. Electrodialysis

234. A colloidal system can be purified using filtration under excess pressure through a semipermeable membrane. Name this purification method.

- a. Diffusion
- b. Dialysis
- c. Filtration

d. Ultrafiltration

- e. Electrodialysis

235. A colloidal system can be purified using filtration under excess pressure through a semipermeable membrane. Name this purification method.

- a. Filtration
- b. Dialysis
- c. Diffusion

d. Ultrafiltration

- e. Electrodialysis

236. A diagnostic feature important for correct identification of pine species is the number of needles on the short shoots (brachyblasts). *Pinus sylvestris* has the following number of needles on its short shoots:

- a. 8

b. 2

- c. 3
- d. Many
- e. 5

237. A diagnostic feature important for correct identification of pine species is the number of needles on the short shoots (brachyblasts). *Pinus sylvestris* has the following number of needles on its short shoots:

- a. 8
- b. 3
- c. 5

d. 2

- e. Many

238. A diagnostic feature important for correct identification of pine species is the number of needles on the short shoots (brachyblasts). *Pinus sylvestris* has the following number of needles on its short shoots:

- a. 8
- b. Many
- c. 3
- d. 2**
- e. 5

239. A diagnostic features of which family is the presence of giants or a flower tube?

- a. Beech trees
- b. Solanaceae
- c. Rose**
- d. Celery
- e. Heather

240. A diagnostic features of which family is the presence of giants or a flower tube?

- a. Heather
- b. Rose**

- c. Solanaceae
- d. Celery
- e. Beech trees

241. A diagnostic features of which family is the presence of giants or a flower tube?

- a. Heather
- b. Celery
- c. Beech trees
- d. Solanaceae

e. Rose

242. A dispensing chemist performs identification of pharmaceutical substance using ultraviolet spectrophotometry. The specialist obtains the graph of optical density to wavelength ratio, which is called:

- a. Calibration curve
- b. Emission spectrum
- c. Light absorbtion curve**
- d. Titration curve
- e. Logarithmic curve

243. A dispensing chemist performs identification of pharmaceutical substance using ultraviolet spectrophotometry. The specialist obtains the graph of optical density to wavelength ratio, which is called:

- a. Titration curve
- b. Calibration curve
- c. Light absorbtion curve**
- d. Logarithmic curve
- e. Emission spectrum

244. A dispensing chemist performs identification of pharmaceutical substance using ultraviolet spectrophotometry. The specialist obtains the graph of optical density to wavelength ratio, which is called:

- a. Titration curve
- b. Logarithmic curve
- c. Calibration curve
- d. Light absorbtion curve**
- e. Emission spectrum

245. A dissected flower has numerous stamens that are united by the stamen filaments into several bundles. What is this type of androecium?

- a. Polyadelphous**
- b. Didynamous
- c. Monadelphous

- d. Diadelphous
- e. Tetradynamous

246. A dissected flower has numerous stamens that are united by the stamen filaments into several bundles. What is this type of androecium?

- a. Didynamous
- b. Diadelphous

c. Polyadelphous

- d. Monadelphous
- e. Tetradynamous

247. A dithizone solution was added into the studied alkaline solution of cations that belong to the IV analytical group. As a result, a compound formed that was coloring not only the organic but also the aqueous phase in red. What cations are present in the solution, as indicated by this analytical effect?

a. Al^{3+}

b. Zn^{2+}

- c. Cr^{3+}
- d. Fe^{3+}
- e. Bi^{3+}

248. A dithizone solution was added into the studied alkaline solution of cations that belong to the IV analytical group. As a result, a compound formed that was coloring not only the organic but also the aqueous phase in red. What cations are present in the solution, as indicated by this analytical effect?

a. Al^{3+}

b. Cr^{3+}

c. Zn^{2+}

- d. Bi^{3+}
- e. Fe^{3+}

249. A dithizone solution was added into the studied alkaline solution of cations that belong to the IV analytical group. As a result, a compound formed that was coloring not only the organic but also the aqueous phase in red. What cations are present in the solution, as indicated by this analytical effect?

a. Fe^{3+}

b. Cr^{3+}

c. Bi^{3+}

d. Al^{3+}

e. Zn^{2+}

250. A diuretic should be prescribed for treatment of cerebral edema. What drug is to be administered?

a. Furosemide

- b. Caffeine and sodium benzoate
- c. Spironolactone
- d. Diacarb (Acetazolamide)
- e. Hydrochlorothiazide

251. A diuretic should be prescribed for treatment of cerebral edema. What drug is to be administered?

a. Furosemide

- b. Diacarb (Acetazolamide)
- c. Caffeine and sodium benzoate
- d. Spironolactone
- e. Hydrochlorothiazide

252. A diuretic should be prescribed for treatment of cerebral edema. What drug is to be administered?

- a. Hydrochlorothiazide
- b. Diacarb (Acetazolamide)
- c. Spironolactone

d. Furosemide

e. Caffeine and sodium benzoate

253. A doctor has prescribed a nonsteroidal anti-inflammatory drug to relieve inflammation and pain

syndrome. Name this drug:

- a. Calcium chloride
- b. Prednisolone
- c. Loratadine
- d. Diclofenac sodium**
- e. Glibenclamide

254. A doctor has prescribed a nonsteroidal anti-inflammatory drug to relieve inflammation and pain syndrome. Name this drug:

- a. Glibenclamide
- b. Diclofenac sodium**
- c. Loratadine
- d. Calcium chloride
- e. Prednisolone

255. A doctor has prescribed a nonsteroidal anti-inflammatory drug to relieve inflammation and pain syndrome. Name this drug:

- a. Loratadine
- b. Calcium chloride
- c. Glibenclamide
- d. Diclofenac sodium**
- e. Prednisolone

256. A doctor has prescribed an adrenocortical hormone drug for a patient with bronchial asthma. Specify this drug.

- a. Prednisolone**
- b. Atropine sulfate
- c. Loratadine
- d. Diclofenac sodium
- e. Salbutamol

257. A doctor has prescribed an adrenocortical hormone drug for a patient with bronchial asthma. Specify this drug.

- a. Prednisolone**
- b. Loratadine
- c. Salbutamol
- d. Atropine sulfate
- e. Diclofenac sodium

258. A doctor has prescribed an adrenocortical hormone drug for a patient with bronchial asthma. Specify this drug.

- a. Atropine sulfate
- b. Prednisolone**
- c. Salbutamol
- d. Diclofenac sodium
- e. Loratadine

259. A doctor has prescribed metoprolol to a person with essential hypertension. As a result of abrupt cessation of treatment, the patient's blood pressure increased. What pathological condition did the patient develop?

- a. Withdrawal syndrome**
- b. Idiosyncrasy
- c. Allergic reaction
- d. Drug allergy
- e. Pharmacotoxic response

260. A doctor has prescribed metoprolol to a person with essential hypertension. As a result of abrupt cessation of treatment, the patient's blood pressure increased. What pathological condition did the patient develop?

- a. Allergic reaction
- b. Idiosyncrasy
- c. Pharmacotoxic response

d. Withdrawal syndrome

e. Drug allergy

261. A doctor has prescribed metoprolol to a person with essential hypertension. As a result of abrupt cessation of treatment, the patient's blood pressure increased. What pathological condition did the patient develop?

- a. Idiosyncrasy
- b. Pharmacotoxic response
- c. Drug allergy
- d. Allergic reaction

e. Withdrawal syndrome

262. A doctor has prescribed the patient a dopamine precursor for treatment of Parkinson's disease. After administration of this drug, the patient's mobility and mental processes improved and the ability to concentrate was restored. The maximum effect was observed after a month of treatment. Name this drug:

- a. Cyclodol (Trihexyphenidyl)
- b. Midantan (Amantadine)
- c. Selegiline
- d. Bromocriptine

e. Levodopa

263. A doctor has prescribed the patient a dopamine precursor for treatment of Parkinson's disease. After administration of this drug, the patient's mobility and mental processes improved and the ability to concentrate was restored. The maximum effect was observed after a month of treatment. Name this drug:

- a. Midantan (Amantadine)
- b. Cyclodol (Trihexyphenidyl)
- c. Selegiline

d. Levodopa

e. Bromocriptine

264. A doctor has prescribed the patient a dopamine precursor for treatment of Parkinson's disease. After administration of this drug, the patient's mobility and mental processes improved and the ability to concentrate was restored. The maximum effect was observed after a month of treatment. Name this drug:

- a. Midantan (Amantadine)
- b. Selegiline
- c. Cyclodol (Trihexyphenidyl)
- d. Bromocriptine

e. Levodopa

265. A doctor needs to prescribe the patient a drug for replacement therapy after thyroidectomy. What drug would you recommend?

a. Thiamazole

b. L-thyroxine

- c. Prednisolone
- d. Parathyroidin
- e. Insulin

266. A doctor needs to prescribe the patient a drug for replacement therapy after thyroidectomy. What drug would you recommend?

- a. Thiamazole
- b. Parathyroidin
- c. Insulin

d. L-thyroxine

e. Prednisolone

267. A doctor needs to prescribe the patient a drug for replacement therapy after thyroidectomy. What drug would you recommend?

- a. Thiamazole
- b. Prednisolone

- c. Insulin
- d. Parathyroidin

e. L-thyroxine

268. A doctor prescribed diazepam to a patient with anxiety disorders. What pharmacological effect of the drug is the cause of such a prescription?

a. Antianginal

b. Anxiolytic

- c. Anticonvulsant
- d. Anti-inflammatory
- e. Hypotensive

269. A doctor prescribed diazepam to a patient with anxiety disorders. What pharmacological effect of the drug is the cause of such a prescription?

- a. Hypotensive
- b. Anticonvulsant
- c. Anti-inflammatory
- d. Antianginal

e. Anxiolytic

270. A doctor prescribed metoprolol to a patient, which helped to lower the patient's blood pressure. This drug belongs to the following pharmacological group:

a. Beta-blockers

- b. Sympatholytics
- c. Nicotinic antagonists
- d. Alpha-blockers
- e. Muscarinic antagonists

271. A doctor prescribed metoprolol to a patient, which helped to lower the patient's blood pressure. This drug belongs to the following pharmacological group:

- a. Alpha-blockers
- b. Sympatholytics
- c. Nicotinic antagonists
- d. Muscarinic antagonists

e. Beta-blockers

272. A doctor prescribed metoprolol to a patient, which helped to lower the patient's blood pressure. This drug belongs to the following pharmacological group:

- a. Muscarinic antagonists
- b. Alpha-blockers
- c. Nicotinic antagonists
- d. Sympatholytics

e. Beta-blockers

273. A doctor prescribed nitrazepam to a patient complaining of insomnia. This drug has a hypnotic effect, because it interacts with certain receptors. Name these receptors.

- a. Adrenoceptors
- b. Histamine receptors
- c. Cholinergic receptors

d. Benzodiazepine receptors

e. Serotonin receptors

274. A doctor prescribed nitrazepam to a patient complaining of insomnia. This drug has a hypnotic effect, because it interacts with certain receptors. Name these receptors.

- a. Serotonin receptors
- b. Adrenoceptors
- c. Histamine receptors
- d. Cholinergic receptors

e. Benzodiazepine receptors

275. A doctor prescribed nitrazepam to a patient complaining of insomnia. This drug has a hypnotic effect, because it interacts with certain receptors. Name these receptors.

- a. Serotonin receptors

- b. Cholinergic receptors
- c. Adrenoceptors
- d. Histamine receptors

e. Benzodiazepine receptors

276. A drug solution sterilized by means of boiling was tested for sterility. Inoculation on Kitt-Tarozzi medium revealed clostridia. Clostridia survived the boiling because they are:

a. Spore-formers

- b. Anaerobic
- c. Acid-fast
- d. Prototrophic
- e. Thermophilic

277. A drug solution sterilized by means of boiling was tested for sterility. Inoculation on Kitt-Tarozzi medium revealed clostridia. Clostridia survived the boiling because they are:

a. Spore-formers

- b. Thermophilic
- c. Prototrophic
- d. Acid-fast
- e. Anaerobic

278. A drug solution sterilized by means of boiling was tested for sterility. Inoculation on Kitt-Tarozzi medium revealed clostridia. Clostridia survived the boiling because they are:

- a. Prototrophic
- b. Anaerobic
- c. Acid-fast

d. Spore-formers

- e. Thermophilic

279. A factory that produces biopreparations adds a 0.3--0.4% formalin solution to a bacterial exotoxin. After that, in 3--4 weeks, a medicine is obtained. This medicine is used for specific disease prevention. What vaccines are made this way?

a. Genetically engineered vaccines

b. Anatoxin vaccines

- c. Chemical vaccines
- d. Inactivated vaccines
- e. Live vaccines

280. A factory that produces biopreparations adds a 0.3--0.4% formalin solution to a bacterial exotoxin. After that, in 3--4 weeks, a medicine is obtained. This medicine is used for specific disease prevention. What vaccines are made this way?

- a. Genetically engineered vaccines
- b. Chemical vaccines
- c. Inactivated vaccines
- d. Live vaccines

e. Anatoxin vaccines

281. A factory that produces biopreparations adds a 0.3--0.4% formalin solution to a bacterial exotoxin. After that, in 3--4 weeks, a medicine is obtained. This medicine is used for specific disease prevention. What vaccines are made this way?

a. Inactivated vaccines

b. Anatoxin vaccines

- c. Chemical vaccines
- d. Genetically engineered vaccines
- e. Live vaccines

282. A female patient asked a pharmacist to recommend her a drug for headache with antiplatelet effect. Specify this drug:

a. Acetylsalicylic acid

- b. Promedol
- c. Tramadol
- d. Codeine phosphate

e. Fentanyl

283. A female patient asked a pharmacist to recommend her a drug for headache with antiplatelet effect. Specify this drug:

a. Codeine phosphate

b. Acetylsalicylic acid

c. Tramadol

d. Fentanyl

e. Promedol

284. A female patient asked a pharmacist to recommend her a drug for headache with antiplatelet effect. Specify this drug:

a. Fentanyl

b. Acetylsalicylic acid

c. Tramadol

d. Codeine phosphate

e. Promedol

285. A female patient was prescribed loratadine to treat her allergic dermatitis caused by bee sting. What is the mechanism of the drug's antiallergic action?

a. Inhibition of histamine H1 receptors

b. Antiserotonin activity

c. Block of leukotriene D4 receptors

d. Decrease of leukotriene release

e. Inhibition of histamine H2 receptors

286. A female patient was prescribed loratadine to treat her allergic dermatitis caused by bee sting. What is the mechanism of the drug's antiallergic action?

a. Antiserotonin activity

b. Block of leukotriene D4 receptors

c. Inhibition of histamine H2 receptors

d. Inhibition of histamine H1 receptors

e. Decrease of leukotriene release

287. A female patient was prescribed loratadine to treat her allergic dermatitis caused by bee sting. What is the mechanism of the drug's antiallergic action?

a. Inhibition of histamine H2 receptors

b. Decrease of leukotriene release

c. Antiserotonin activity

d. Inhibition of histamine H1 receptors

e. Block of leukotriene D4 receptors

288. A female patient with mycoplasmal pneumonia was prescribed doxycycline. What group of antibiotics does this drug belong to?

a. Tetracyclines

b. Macrolides

c. Cephalosporines

d. Penicillines

e. Lincosamides

289. A female patient with mycoplasmal pneumonia was prescribed doxycycline. What group of antibiotics does this drug belong to?

a. Lincosamides

b. Macrolides

c. Penicillines

d. Cephalosporines

e. Tetracyclines

290. A female patient with mycoplasmal pneumonia was prescribed doxycycline. What group of antibiotics does this drug belong to?

a. Macrolides

b. Cephalosporines

c. Tetracyclines

- d. Lincosamides
- e. Penicillines

291. A female student with a cold has been prescribed an antipyretic medication. Specify this drug:

- a. Ascorbic acid
- b. Cyanocobalamin
- c. Famotidine

d. Paracetamol

- e. Oxytocin

292. A female student with a cold has been prescribed an antipyretic medication. Specify this drug:

- a. Cyanocobalamin
- b. Famotidine

c. Paracetamol

- d. Ascorbic acid
- e. Oxytocin

293. A female student with a cold has been prescribed an antipyretic medication. Specify this drug:

- a. Famotidine
- b. Cyanocobalamin

c. Paracetamol

- d. Ascorbic acid
- e. Oxytocin

294. A fibrinolysis inhibitor was used to stop postpartum bleeding. Name this drug.

- a. Calcium chloride
- b. Nettle leaves

c. Aminocaproic acid

- d. Thrombin
- e. Hemostatic sponge

295. A fibrinolysis inhibitor was used to stop postpartum bleeding. Name this drug.

- a. Nettle leaves

b. Aminocaproic acid

- c. Calcium chloride
- d. Thrombin
- e. Hemostatic sponge

296. A fibrinolysis inhibitor was used to stop postpartum bleeding. Name this drug.

- a. Thrombin

b. Aminocaproic acid

- c. Nettle leaves
- d. Calcium chloride
- e. Hemostatic sponge

297. A food plant of Polygonaceae family is being studied. The plant has reddish stalk, cordate-sagittate leaves, its fruit is a trihedral nutlet. Name this plant:

- a. Persicaria bistorta
- b. Persicaria hydropiper
- c. Rumex confertus

d. Fagopyrum esculentum

- e. Polygonum aviculare

298. A food plant of Polygonaceae family is being studied. The plant has reddish stalk, cordate-sagittate leaves, its fruit is a trihedral nutlet. Name this plant:

- a. Persicaria hydropiper

b. Fagopyrum esculentum

- c. Rumex confertus
- d. Persicaria bistorta
- e. Polygonum aviculare

299. A food plant of Polygonaceae family is being studied. The plant has reddish stalk, cordate-sagittate leaves, its fruit is a trihedral nutlet. Name this plant:

- a. Rumex confertus

b. *Persicaria hydropiper*

c. ***Fagopyrum esculentum***

d. *Persicaria bistorta*

e. *Polygonum aviculare*

300. A fruit consists of overgrown conic red pulpy hypanthium and proper carpels - small nuciform achenes recessed in the fruit pulp. This type of fruit belongs to:

a. ***Fragaria vesca***

b. *Pyrus communis*

c. *Aronia melanocarpa*

d. *Rubus idaeus*

e. *Rosa canina*

301. A fruit consists of overgrown conic red pulpy hypanthium and proper carpels - small nuciform achenes recessed in the fruit pulp. This type of fruit belongs to:

a. *Rubus idaeus*

b. ***Fragaria vesca***

c. *Pyrus communis*

d. *Aronia melanocarpa*

e. *Rosa canina*

302. A fruit consists of overgrown conic red pulpy hypanthium and proper carpels - small nuciform achenes recessed in the fruit pulp. This type of fruit belongs to:

a. *Rubus idaeus*

b. *Aronia melanocarpa*

c. *Pyrus communis*

d. *Rosa canina*

e. ***Fragaria vesca***

303. A fruit is a capsule with oblate light brown smooth glossy seeds that mucify when moistened. This fruit belongs to:

a. ***Linum usitatissimum***

b. *Hypericum perforatum*

c. *Digitalis purpurea*

d. *Ledum palustre*

e. *Linaria vulgaris*

304. A fruit is a capsule with oblate light brown smooth glossy seeds that mucify when moistened. This fruit belongs to:

a. *Ledum palustre*

b. *Linaria vulgaris*

c. ***Linum usitatissimum***

d. *Digitalis purpurea*

e. *Hypericum perforatum*

305. A fruit is a capsule with oblate light brown smooth glossy seeds that mucify when moistened. This fruit belongs to:

a. *Linaria vulgaris*

b. *Digitalis purpurea*

c. *Hypericum perforatum*

d. ***Linum usitatissimum***

e. *Ledum palustre*

306. A fruit tree of Rosaceae family has short thorny shoots; the fruit is a distinctively-shaped pome with stone cells in its pulp. Name this plant:

a. *Prunus armeniaca*

b. *Prunus spinosa*

c. *Malus sylvestris*

d. ***Pyrus communis***

e. *Cerasus vulgaris*

307. A fruit tree of Rosaceae family has short thorny shoots; the fruit is a distinctively-shaped pome with stone cells in its pulp. Name this plant:

- a. *Prunus spinosa*
- b. *Pyrus communis***
- c. *Cerasus vulgaris*
- d. *Prunus armeniaca*
- e. *Malus sylvestris*

308. A fruit tree of Rosaceae family has short thorny shoots; the fruit is a distinctively-shaped pome with stone cells in its pulp. Name this plant:

- a. *Prunus spinosa*
- b. *Cerasus vulgaris*
- c. *Malus sylvestris*
- d. *Prunus armeniaca*
- e. *Pyrus communis***

309. A gastric tea contains small oval brown lignified cone-shaped plant parts up to 1.5 cm in length that can be identified as:

- a. Aggregate fruits of alnus**
- b. Berry-like juniper cones
- c. Cypress cones
- d. *Platycladus orientalis* cones
- e. Larch cones

310. A gastric tea contains small oval brown lignified cone-shaped plant parts up to 1.5 cm in length that can be identified as:

- a. Aggregate fruits of alnus**
- b. Larch cones
- c. *Platycladus orientalis* cones
- d. Cypress cones
- e. Berry-like juniper cones

311. A girl with type 1 diabetes mellitus has developed chronic kidney failure. What complication of diabetes is the cause of diabetic nephropathy in this case?

- a. Microangiopathy**
- b. Retinopathy
- c. Fetopathy
- d. Macroangiopathy
- e. Neuropathy

312. A girl with type 1 diabetes mellitus has developed chronic kidney failure. What complication of diabetes is the cause of diabetic nephropathy in this case?

- a. Fetopathy
- b. Macroangiopathy
- c. Microangiopathy**
- d. Retinopathy
- e. Neuropathy

313. A girl with type 1 diabetes mellitus has developed chronic kidney failure. What complication of diabetes is the cause of diabetic nephropathy in this case?

- a. Macroangiopathy
- b. Microangiopathy**
- c. Neuropathy
- d. Fetopathy
- e. Retinopathy

314. A group of tourists set off for a hiking tour into the mountains. Two hours after the departure, some of them developed tachycardia and shortness of breath, which indicates hypoxia. What type of hypoxia is the cause of these disorders?

- a. Hemic hypoxia
- b. Hypoxic hypoxia**
- c. Respiratory hypoxia
- d. Tissue hypoxia
- e. Circulatory hypoxia

315. A group of tourists set off for a hiking tour into the mountains. Two hours after the departure, some of them developed tachycardia and shortness of breath, which indicates hypoxia. What type of hypoxia is the cause of these disorders?

- a. Hemic hypoxia
- b. Tissue hypoxia
- c. Respiratory hypoxia
- d. Hypoxic hypoxia**
- e. Circulatory hypoxia

316. A herbaceous plant of Malvaceae family has expectorant and coating properties. The plant has pale pink flowers gathered into apical panicles and schizocarpous fruit, which means it belongs to the following species:

- a. *Plantago psyllium*
- b. *Tussilago farfara*
- c. *Thymus serpyllum*
- d. *Plantago major*

e. *Althaea officinalis*

317. A herbaceous plant of Malvaceae family has expectorant and coating properties. The plant has pale pink flowers gathered into apical panicles and schizocarpous fruit, which means it belongs to the following species:

- a. *Thymus serpyllum*
- b. *Plantago major*

c. *Althaea officinalis*

- d. *Tussilago farfara*
- e. *Plantago psyllium*

318. A herbaceous plant of Malvaceae family has expectorant and coating properties. The plant has pale pink flowers gathered into apical panicles and schizocarpous fruit, which means it belongs to the following species:

- a. *Tussilago farfara*
- b. *Plantago major*
- c. *Plantago psyllium*
- d. *Thymus serpyllum*

e. *Althaea officinalis*

319. A hospitalised patient was diagnosed with immunity deficiency that resulted in low resistance against viral infection. What cells are most probably deficient?

- a. B-lymphocytes
- b. Fibroblasts
- c. Macrophages
- d. Neutrophils

e. T-lymphocytes

320. A hospitalised patient was diagnosed with immunity deficiency that resulted in low resistance against viral infection. What cells are most probably deficient?

- a. B-lymphocytes
- b. Macrophages
- c. Neutrophils

d. T-lymphocytes

- e. Fibroblasts

321. A hospitalised patient was diagnosed with immunity deficiency that resulted in low resistance against viral infection. What cells are most probably deficient?

- a. Macrophages

b. T-lymphocytes

- c. Neutrophils
- d. B-lymphocytes
- e. Fibroblasts

322. A laboratory has conducted a soil study to identify the causative agents of an anaerobic infection. Spore-forming is a characteristic feature of these bacteria. What staining technique can be

used to detect spores?

a. Morozov stain

b. Neisser stain

c. Ozheshko stain

d. Romanowsky-Giemsa stain

e. Burri-Gins stain

323. A laboratory has conducted a soil study to identify the causative agents of an anaerobic infection. Spore-forming is a characteristic feature of these bacteria. What staining technique can be used to detect spores?

a. Morozov stain

b. Romanowsky-Giemsa stain

c. Ozheshko stain

d. Neisser stain

e. Burri-Gins stain

324. A laboratory has conducted a soil study to identify the causative agents of an anaerobic infection. Spore-forming is a characteristic feature of these bacteria. What staining technique can be used to detect spores?

a. Neisser stain

b. Morozov stain

c. Ozheshko stain

d. Burri-Gins stain

e. Romanowsky-Giemsa stain

325. A laboratory has received a sample of copper(II) sulfate pentahydrate. Choose the method for quantification of copper(II) in copper sulfate.

a. Alkalimetry

b. Iodometry

c. Argentometry

d. Permanganatometry

e. Acidimetry

326. A laboratory has received a sample of copper(II) sulfate pentahydrate. Choose the method for quantification of copper(II) in copper sulfate.

a. Permanganatometry

b. Alkalimetry

c. Acidimetry

d. Argentometry

e. Iodometry

327. A laboratory has received a sample of copper(II) sulfate pentahydrate. Choose the method for quantification of copper(II) in copper sulfate.

a. Permanganatometry

b. Argentometry

c. Alkalimetry

d. Iodometry

e. Acidimetry

328. A laboratory received a food product that had been taken from the focus of food poisoning and presumably contained botulinum toxin. To identify the type of toxin, the neutralization reaction must be performed on white mice. What biological product is used in this reaction?

a. Allergen

b. Antibacterial serum

c. Diagnosticum

d. Antitoxic serum

e. Normal serum

329. A laboratory received a food product that had been taken from the focus of food poisoning and presumably contained botulinum toxin. To identify the type of toxin, the neutralization reaction must be performed on white mice. What biological product is used in this reaction?

a. Normal serum

b. Antitoxic serum

- c. Allergen
- d. Diagnosticum
- e. Antibacterial serum

330. A laboratory received a food product that had been taken from the focus of food poisoning and presumably contained botulinum toxin. To identify the type of toxin, the neutralization reaction must be performed on white mice. What biological product is used in this reaction?

- a. Normal serum
- b. Diagnosticum
- c. Allergen
- d. Antibacterial serum

e. Antitoxic serum

331. A laboratory received ethanol and methanol. What reaction can be used to distinguish between these two substances?

- a. Formation of a chelate complex with copper hydroxide

b. Iodoform test ($I_2 + NaOH$)

- c. Oxidation (CrO_3, H_2SO_4)
- d. Reaction with halogen anhydrides of inorganic acids
- e. Beilstein test

332. A laboratory received ethanol and methanol. What reaction can be used to distinguish between these two substances?

- a. Formation of a chelate complex with copper hydroxide
- b. Oxidation (CrO_3, H_2SO_4)
- c. Beilstein test
- d. Reaction with halogen anhydrides of inorganic acids

e. Iodoform test ($I_2 + NaOH$)

333. A laboratory received ethanol and methanol. What reaction can be used to distinguish between these two substances?

- a. Reaction with halogen anhydrides of inorganic acids
- b. Oxidation (CrO_3, H_2SO_4)
- c. Formation of a chelate complex with copper hydroxide

d. Iodoform test ($I_2 + NaOH$)

- e. Beilstein test

334. A man came to a doctor complaining of a severe joint pain. Urinalysis shows increased levels of uric acid, which indicates:

- a. Increased activity of fatty acid beta- oxidation

b. Intensive breakdown of purine nucleotides

- c. Increased synthesis of ketone bodies
- d. Increased glycogenolysis activity
- e. Increased glycolysis activity

335. A man came to a doctor complaining of a severe joint pain. Urinalysis shows increased levels of uric acid, which indicates:

- a. Increased glycolysis activity
- b. Increased activity of fatty acid beta- oxidation
- c. Increased synthesis of ketone bodies

d. Intensive breakdown of purine nucleotides

- e. Increased glycogenolysis activity

336. A man came to a doctor complaining of a severe joint pain. Urinalysis shows increased levels of uric acid, which indicates:

- a. Increased glycolysis activity
- b. Increased glycogenolysis activity
- c. Increased activity of fatty acid beta- oxidation

d. Intensive breakdown of purine nucleotides

- e. Increased synthesis of ketone bodies

337. A man has acute glomerulonephritis. Because of oliguria, water retention is observed in his body.

What abnormality of the total blood volume is most likely to be detected in this patient?

- a. Oligocythemic normovolemia
- b. Simple hypovolemia
- c. Oligocythemic hypervolemia**
- d. Polycythemic hypervolemia
- e. Simple hypervolemia

338. A man has acute glomerulonephritis. Because of oliguria, water retention is observed in his body. What abnormality of the total blood volume is most likely to be detected in this patient?

- a. Simple hypervolemia
- b. Polycythemic hypervolemia
- c. Oligocythemic normovolemia
- d. Oligocythemic hypervolemia**
- e. Simple hypovolemia

339. A man has acute glomerulonephritis. Because of oliguria, water retention is observed in his body. What abnormality of the total blood volume is most likely to be detected in this patient?

- a. Simple hypovolemia
- b. Polycythemic hypervolemia
- c. Oligocythemic normovolemia
- d. Oligocythemic hypervolemia**
- e. Simple hypervolemia

340. A man has been hospitalized into the intensive care unit in a severe condition after carbon monoxide poisoning. What substance has formed in this case, causing the severe condition in the patient?

- a. Methemoglobin
- b. Carbhemo-globin
- c. Fetal hemoglobin
- d. Oxyhemoglobin
- e. Carboxyhemoglobin**

341. A man has been hospitalized into the intensive care unit in a severe condition after carbon monoxide poisoning. What substance has formed in this case, causing the severe condition in the patient?

- a. Methemoglobin
- b. Carbhemo-globin
- c. Oxyhemoglobin
- d. Fetal hemoglobin
- e. Carboxyhemoglobin**

342. A man has been hospitalized into the intensive care unit in a severe condition after carbon monoxide poisoning. What substance has formed in this case, causing the severe condition in the patient?

- a. Oxyhemoglobin
- b. Carboxyhemoglobin**
- c. Fetal hemoglobin
- d. Carbhemo-globin
- e. Methemoglobin

343. A man presents with signs of albinism: blonde hair, extreme photosensitivity, impaired vision. What amino acid metabolism is disturbed in the patient?

- a. Histidine
- b. Proline
- c. Valine
- d. Tyrosine**
- e. Methionine

344. A man presents with signs of albinism: blonde hair, extreme photosensitivity, impaired vision. What amino acid metabolism is disturbed in the patient?

- a. Methionine
- b. Tyrosine**

- c. Valine
- d. Histidine
- e. Proline

345. A man presents with signs of albinism: blonde hair, extreme photosensitivity, impaired vision. What amino acid metabolism is disturbed in the patient?

- a. Proline
- b. Valine

c. Tyrosine

- d. Methionine
- e. Histidine

346. A man suffers from cholelithiasis. What medicine should he be prescribed for biliary colic relief?

- a. Bisacodyl

b. Magnesium sulfate

- c. Pancreatin
- d. Almagel (Algeldrate + magnesium hydroxide)
- e. Contrykal (Aprotinin)

347. A man suffers from cholelithiasis. What medicine should he be prescribed for biliary colic relief?

- a. Contrykal (Aprotinin)
- b. Pancreatin
- c. Bisacodyl
- d. Almagel (Algeldrate + magnesium hydroxide)

e. Magnesium sulfate

348. A man suffers from cholelithiasis. What medicine should he be prescribed for biliary colic relief?

- a. Pancreatin
- b. Bisacodyl

c. Magnesium sulfate

- d. Almagel (Algeldrate + magnesium hydroxide)
- e. Contrykal (Aprotinin)

349. A man was brought into the admission room with complaints of problematic breathing, salivation, spastic abdominal pain, diarrhea, dizziness, and deteriorating visual acuity. He was diagnosed with a poisoning caused by organophosphorus compounds. What medicines should be included into the pathogenetic therapy in this case?

a. Atropine sulfate and dipyroxime (trimedoxime bromide)

- b. Tetacin-calcium (sodium calcium edetate) and unithiol (dimercaptopropansulfonate)
- c. Glucose and bemegride
- d. Sodium thiosulfate and bemegride
- e. Nalorphine hydrochloride and bemegride

350. A man was brought into the admission room with complaints of problematic breathing, salivation, spastic abdominal pain, diarrhea, dizziness, and deteriorating visual acuity. He was diagnosed with a poisoning caused by organophosphorus compounds. What medicines should be included into the pathogenetic therapy in this case?

- a. Glucose and bemegride

b. Atropine sulfate and dipyroxime (trimedoxime bromide)

- c. Sodium thiosulfate and bemegride
- d. Nalorphine hydrochloride and bemegride
- e. Tetacin-calcium (sodium calcium edetate) and unithiol (dimercaptopropansulfonate)

351. A man was brought into the admission room with complaints of problematic breathing, salivation, spastic abdominal pain, diarrhea, dizziness, and deteriorating visual acuity. He was diagnosed with a poisoning caused by organophosphorus compounds. What medicines should be included into the pathogenetic therapy in this case?

- a. Glucose and bemegride
- b. Sodium thiosulfate and bemegride

c. Atropine sulfate and dipyroxime (trimedoxime bromide)

- d. Tetacin-calcium (sodium calcium edetate) and unithiol (dimercaptopropansulfonate)
- e. Nalorphine hydrochloride and bemegride

352. A man with Trichomonas urethritis was prescribed an imidazole derivative for treatment. Name this drug:

- a. Metronidazole
- b. Azithromycin
- c. Furacilin (Nitrofurantoin)
- d. Ciprofloxacin
- e. Nitroxoline

353. A man with Trichomonas urethritis was prescribed an imidazole derivative for treatment. Name this drug:

- a. Metronidazole
- b. Furacilin (Nitrofurantoin)
- c. Nitroxoline
- d. Azithromycin
- e. Ciprofloxacin

354. A man with Trichomonas urethritis was prescribed an imidazole derivative for treatment. Name this drug:

- a. Nitroxoline
- b. Metronidazole
- c. Ciprofloxacin
- d. Furacilin (Nitrofurantoin)
- e. Azithromycin

355. A man with allergic dermatitis and disturbed sleep came to a doctor. What antihistamine would be optimal in this case?

- a. Ampicillin
- b. Loratadine
- c. Enterosgel (Polymethylsiloxane polyhydrate)
- d. Dimedrol (Diphenhydramine)
- e. Dexamethasone

356. A man with allergic dermatitis and disturbed sleep came to a doctor. What antihistamine would be optimal in this case?

- a. Enterosgel (Polymethylsiloxane polyhydrate)
- b. Dexamethasone
- c. Loratadine
- d. Ampicillin
- e. Dimedrol (Diphenhydramine)

357. A man with gout has a significant increase in blood levels of uric acid. Uric acid is an end product of the metabolism of:

- a. Albumins
- b. Fatty acids
- c. Purine bases
- d. Triglycerides
- e. Globulins

358. A man with gout has a significant increase in blood levels of uric acid. Uric acid is an end product of the metabolism of:

- a. Fatty acids
- b. Globulins
- c. Albumins
- d. Triglycerides
- e. Purine bases

359. A man with gout has a significant increase in blood levels of uric acid. Uric acid is an end product of the metabolism of:

- a. Fatty acids
- b. Globulins
- c. Triglycerides
- d. Albumins

e. Purine bases

360. A man with left ventricular heart failure and signs of developing pulmonary edema was brought into an emergency hospital. What is the primary pathogenetic mechanism of the developed edema in this case?

- a. Membranogenic
- b. Lymphogenic
- c. Colloidal-osmotic

d. Hydrodynamic

- e. Toxic

361. A man with left ventricular heart failure and signs of developing pulmonary edema was brought into an emergency hospital. What is the primary pathogenetic mechanism of the developed edema in this case?

- a. Toxic

b. Hydrodynamic

- c. Lymphogenic
- d. Membranogenic
- e. Colloidal-osmotic

362. A man with left ventricular heart failure and signs of developing pulmonary edema was brought into an emergency hospital. What is the primary pathogenetic mechanism of the developed edema in this case?

- a. Toxic
- b. Colloidal-osmotic
- c. Membranogenic

d. Hydrodynamic

- e. Lymphogenic

363. A man with signs of glomerulonephritis came to a hospital. What pathological components in his urine indicate the increased permeability of the glomerular membrane?

- a. Pus
- b. Acetone

c. Protein

- d. Bilirubin
- e. Glucose

364. A man with signs of glomerulonephritis came to a hospital. What pathological components in his urine indicate the increased permeability of the glomerular membrane?

- a. Pus
- b. Acetone

c. Protein

- d. Glucose
- e. Bilirubin

365. A man with signs of glomerulonephritis came to a hospital. What pathological components in his urine indicate the increased permeability of the glomerular membrane?

- a. Pus
- b. Glucose
- c. Bilirubin
- d. Acetone

e. Protein

366. A melliferous tree has heart-shaped leaves and dichasial cyme inflorescences with winged perianth. This plant is:

a. Tilia cordata

- b. Aronia melanocarpa
- c. Robinia pseudoacacia
- d. Quercus robur
- e. Aesculus hippocastanus

367. A melliferous tree has heart-shaped leaves and dichasial cyme inflorescences with winged perianth. This plant is:

- a. Quercus robur
- b. Robinia pseudoacacia
- c. Aesculus hippocastanus
- d. Aronia melanocarpa

e. Tilia cordata

368. A melliferous tree has heart-shaped leaves and dichasial cyme inflorescences with winged perianth. This plant is:

- a. Robinia pseudoacacia
- b. Quercus robur

c. Tilia cordata

- d. Aronia melanocarpa
- e. Aesculus hippocastanus

369. A miner, who was trapped under a rock pile, developed crush syndrome and signs of hepatic coma. Hyperammonemia was detected in his blood. What process has caused the increase in the ammonia levels in the patient's blood?

- a. Gluconeogenesis
- b. Bilirubin catabolism
- c. Hydroxylation of amino acids
- d. Glycolysis

e. Deamination of amino acids

370. A miner, who was trapped under a rock pile, developed crush syndrome and signs of hepatic coma. Hyperammonemia was detected in his blood. What process has caused the increase in the ammonia levels in the patient's blood?

- a. Glycolysis
- b. Bilirubin catabolism
- c. Hydroxylation of amino acids
- d. Gluconeogenesis

e. Deamination of amino acids

371. A miner, who was trapped under a rock pile, developed crush syndrome and signs of hepatic coma. Hyperammonemia was detected in his blood. What process has caused the increase in the ammonia levels in the patient's blood?

- a. Glycolysis
- b. Hydroxylation of amino acids

c. Deamination of amino acids

- d. Bilirubin catabolism
- e. Gluconeogenesis

372. A modern drug that inhibits the HMG-CoA reductase enzyme and reduces cholesterol synthesis was received by a pharmacy chain. Name this drug.

a. Atorvastatin

- b. Lisinopril
- c. Enalapril
- d. Furosemide
- e. Hydrochlorothiazide

373. A modern drug that inhibits the HMG-CoA reductase enzyme and reduces cholesterol synthesis was received by a pharmacy chain. Name this drug.

- a. Hydrochlorothiazide
- b. Enalapril
- c. Furosemide
- d. Lisinopril

e. Atorvastatin

374. A modern drug that inhibits the HMG-CoA reductase enzyme and reduces cholesterol synthesis was received by a pharmacy chain. Name this drug.

- a. Lisinopril

b. Atorvastatin

- c. Hydrochlorothiazide

- d. Enalapril
- e. Furosemide

375. A mother with a 6-year-old child came to a local pediatrician. She complains that her child has sore throat and problems with breathing. The doctor suspects laryngeal diphtheria. What external breathing disorder can develop with such localization of the disease?

- a. Biot respiration
- b. Slow, deep, with labored expiration
- c. Cheyne-Stokes respiration
- d. Slow, deep, with labored inspiration**

e. Rapid, shallow

376. A mother with a 6-year-old child came to a local pediatrician. She complains that her child has sore throat and problems with breathing. The doctor suspects laryngeal diphtheria. What external breathing disorder can develop with such localization of the disease?

- a. Rapid, shallow
- b. Cheyne-Stokes respiration
- c. Slow, deep, with labored expiration
- d. Biot respiration

e. Slow, deep, with labored inspiration

377. A mother with a 6-year-old child came to a local pediatrician. She complains that her child has sore throat and problems with breathing. The doctor suspects laryngeal diphtheria. What external breathing disorder can develop with such localization of the disease?

- a. Slow, deep, with labored expiration
- b. Slow, deep, with labored inspiration**
- c. Cheyne-Stokes respiration
- d. Rapid, shallow
- e. Biot respiration

378. A mushroom picker, who accidentally ate death cap mushroom, has been hospitalised. Death cap toxin - alpha-amanitine - inhibits RNA-polymerase II in eukaryotes. What process requires this enzyme?

- a. Recognition
- b. Translation
- c. Reparation
- d. Transcription**
- e. Replication

379. A mushroom picker, who accidentally ate death cap mushroom, has been hospitalised. Death cap toxin - alpha-amanitine - inhibits RNA-polymerase II in eukaryotes. What process requires this enzyme?

- a. Reparation
- b. Recognition
- c. Transcription**
- d. Translation
- e. Replication

380. A mushroom picker, who accidentally ate death cap mushroom, has been hospitalised. Death cap toxin - alpha-amanitine - inhibits RNA-polymerase II in eukaryotes. What process requires this enzyme?

- a. Translation
- b. Recognition
- c. Reparation
- d. Replication
- e. Transcription**

381. A narcological department has received a man diagnosed with morphinism. The doctor notes decreased pharmacological activity of morphine. Name the phenomenon, when drug effectiveness is decreased after its repeated administration:

- a. Functional cumulation
- b. Material cumulation

c. Summation

d. Tolerance

e. Antagonism

382. A narcological department has received a man diagnosed with morphinism. The doctor notes decreased pharmacological activity of morphine. Name the phenomenon, when drug effectiveness is decreased after its repeated administration:

a. Summation

b. Antagonism

c. Tolerance

d. Functional cumulation

e. Material cumulation

383. A narcological department has received a man diagnosed with morphinism. The doctor notes decreased pharmacological activity of morphine. Name the phenomenon, when drug effectiveness is decreased after its repeated administration:

a. Summation

b. Functional cumulation

c. Antagonism

d. Tolerance

e. Material cumulation

384. A pathological process in the blood serum has caused increased ammonia levels. What is the main way of toxic ammonia neutralization?

a. Urea synthesis

b. Alanine synthesis

c. Ammonium salt synthesis

d. Glycine synthesis

e. Uric acid synthesis

385. A pathological process in the blood serum has caused increased ammonia levels. What is the main way of toxic ammonia neutralization?

a. Alanine synthesis

b. Ammonium salt synthesis

c. Glycine synthesis

d. Urea synthesis

e. Uric acid synthesis

386. A pathological process in the blood serum has caused increased ammonia levels. What is the main way of toxic ammonia neutralization?

a. Alanine synthesis

b. Uric acid synthesis

c. Urea synthesis

d. Glycine synthesis

e. Ammonium salt synthesis

387. A patient at the gastroenterological department presents with disturbed digestion of proteins, which is why the activation of the decay of proteins can be observed in the patient's large intestine. What compound forms in a large amount under these conditions?

a. Putrescine

b. Glycerine

c. Cholesterol

d. Glycogen

e. Glucose

388. A patient at the gastroenterological department presents with disturbed digestion of proteins, which is why the activation of the decay of proteins can be observed in the patient's large intestine. What compound forms in a large amount under these conditions?

a. Putrescine

b. Glycogen

c. Glycerine

d. Cholesterol

e. Glucose

389. A patient at the gastroenterological department presents with disturbed digestion of proteins, which is why the activation of the decay of proteins can be observed in the patient's large intestine. What compound forms in a large amount under these conditions?

a. Cholesterol

b. Glucose

c. Glycerine

d. Putrescine

e. Glycogen

390. A patient came to the pharmacy to obtain a drug that contains pancreatic enzymes and can be taken for chronic pancreatitis. What drug would be recommended by the dispensing chemist?

a. Gordox (Aprotinin)

b. Omeprazole

c. Pancreatine

d. Triamcinolone

e. Pirenzepine

391. A patient came to the pharmacy to obtain a drug that contains pancreatic enzymes and can be taken for chronic pancreatitis. What drug would be recommended by the dispensing chemist?

a. Gordox (Aprotinin)

b. Pirenzepine

c. Omeprazole

d. Pancreatine

e. Triamcinolone

392. A patient came to the pharmacy to obtain a drug that contains pancreatic enzymes and can be taken for chronic pancreatitis. What drug would be recommended by the dispensing chemist?

a. Pirenzepine

b. Triamcinolone

c. Gordox (Aprotinin)

d. Omeprazole

e. Pancreatine

393. A patient came to the pharmacy to obtain an antidiarrheal agent. What drug would be recommended by the dispensing chemist?

a. Loperamide

b. Anesthesin (Benzocaine)

c. Dicaine (Tetracaine)

d. Ranitidine

e. Picolax (Sodium picosulfate)

394. A patient came to the pharmacy to obtain an antidiarrheal agent. What drug would be recommended by the dispensing chemist?

a. Dicaine (Tetracaine)

b. Ranitidine

c. Loperamide

d. Picolax (Sodium picosulfate)

e. Anesthesin (Benzocaine)

395. A patient came to the pharmacy to obtain an antidiarrheal agent. What drug would be recommended by the dispensing chemist?

a. Ranitidine

b. Anesthesin (Benzocaine)

c. Dicaine (Tetracaine)

d. Picolax (Sodium picosulfate)

e. Loperamide

396. A patient complains of a girdling epigastric pain. Examination reveals increased diastase levels in the patient's urine and undigested fat in the stool. These signs are the most characteristic of the following pathology:

a. Acute pancreatitis

- b. Infectious hepatitis
- c. Acute appendicitis
- d. Gastritis
- e. Enterocolitis

397. A patient complains of a girdling epigastric pain. Examination reveals increased diastase levels in the patient's urine and undigested fat in the stool. These signs are the most characteristic of the following pathology:

a. Acute pancreatitis

- b. Infectious hepatitis
- c. Enterocolitis
- d. Acute appendicitis
- e. Gastritis

398. A patient complains of a girdling epigastric pain. Examination reveals increased diastase levels in the patient's urine and undigested fat in the stool. These signs are the most characteristic of the following pathology:

- a. Acute appendicitis
- b. Infectious hepatitis
- c. Gastritis
- d. Enterocolitis

e. Acute pancreatitis

399. A patient complains of increased urine 24-hour volume and thirst. Laboratory analysis detects acetone and high levels of sugar in his urine. What hormone secretion is disturbed, leading to these changes?

- a. Aldosterone
- b. Testosterone

c. Insulin

- d. Glucagon
- e. Vasopressin

400. A patient complains of increased urine 24-hour volume and thirst. Laboratory analysis detects acetone and high levels of sugar in his urine. What hormone secretion is disturbed, leading to these changes?

- a. Aldosterone
- b. Testosterone

c. Insulin

- d. Vasopressin
- e. Glucagon

401. A patient complains of increased urine 24-hour volume and thirst. Laboratory analysis detects acetone and high levels of sugar in his urine. What hormone secretion is disturbed, leading to these changes?

- a. Testosterone
- b. Glucagon
- c. Aldosterone
- d. Vasopressin

e. Insulin

402. A patient complains of low body temperature, weight gain, inertness, and drowsiness. T4 and T3 levels are decreased in his blood plasma. These signs are characteristic of the following pathology:

- a. Albinism
- b. Phenylketonuria

c. Myxedema

- d. Diabetes mellitus
- e. Pellagra

403. A patient complains of low body temperature, weight gain, inertness, and drowsiness. T4 and T3 levels are decreased in his blood plasma. These signs are characteristic of the following pathology:

- a. Diabetes mellitus
- b. Albinism

c. Phenylketonuria

d. Myxedema

e. Pellagra

404. A patient complains of low body temperature, weight gain, inertness, and drowsiness. T4 and T3 levels are decreased in his blood plasma. These signs are characteristic of the following pathology:

a. Diabetes mellitus

b. Phenylketonuria

c. Myxedema

d. Albinism

e. Pellagra

405. A patient complains of maldigestion of nutrients and intestinal bloating. The doctor suspects acute pancreatitis and has ordered a diastase (alpha-amylase) activity test to confirm this diagnosis. Activity of this enzyme can be measured based on the breakdown of:

a. Starch

b. Cellulose

c. Collagen

d. Albumin

e. Chitin

406. A patient complains of maldigestion of nutrients and intestinal bloating. The doctor suspects acute pancreatitis and has ordered a diastase (alpha-amylase) activity test to confirm this diagnosis. Activity of this enzyme can be measured based on the breakdown of:

a. Albumin

b. Cellulose

c. Starch

d. Collagen

e. Chitin

407. A patient complains of maldigestion of nutrients and intestinal bloating. The doctor suspects acute pancreatitis and has ordered a diastase (alpha-amylase) activity test to confirm this diagnosis. Activity of this enzyme can be measured based on the breakdown of:

a. Albumin

b. Collagen

c. Cellulose

d. Starch

e. Chitin

408. A patient consulted a doctor about sunburns, decreased visual acuity. His hair, skin and eyes are not pigmented. He has been diagnosed with albinism. The patient presents with the following enzyme deficiency:

a. Arginase

b. Histidine decarboxylase

c. Hexokinase

d. Tyrosinase

e. Carbonic anhydrase

409. A patient consulted a doctor about sunburns, decreased visual acuity. His hair, skin and eyes are not pigmented. He has been diagnosed with albinism. The patient presents with the following enzyme deficiency:

a. Carbonic anhydrase

b. Tyrosinase

c. Hexokinase

d. Histidine decarboxylase

e. Arginase

410. A patient consulted a doctor about sunburns, decreased visual acuity. His hair, skin and eyes are not pigmented. He has been diagnosed with albinism. The patient presents with the following enzyme deficiency:

a. Carbonic anhydrase

b. Hexokinase

c. Arginase

d. Tyrosinase

e. Histidine decarboxylase

411. A patient developed a hemorrhage caused by a long-term use of neodicumarin (ethyl biscoumacetate). What neodicumarin antagonist must be used in this case?

a. Vicasol (Menadione)

b. Aminocaproic acid

c. Etamsylate

d. Ascorbic acid

e. Fibrinogen

412. A patient developed a hemorrhage caused by a long-term use of neodicumarin (ethyl biscoumacetate). What neodicumarin antagonist must be used in this case?

a. Aminocaproic acid

b. Vicasol (Menadione)

c. Ascorbic acid

d. Fibrinogen

e. Etamsylate

413. A patient developed a hemorrhage caused by a long-term use of neodicumarin (ethyl biscoumacetate). What neodicumarin antagonist must be used in this case?

a. Aminocaproic acid

b. Etamsylate

c. Fibrinogen

d. Ascorbic acid

e. Vicasol (Menadione)

414. A patient developed a keloid scar at the site of skin inflammation. This condition is associated with an abnormal course of a certain stage of inflammation. Name this stage.

a. Exudation

b. Primary alteration

c. Secondary alteration

d. Proliferation

e. Progression

415. A patient developed a keloid scar at the site of skin inflammation. This condition is associated with an abnormal course of a certain stage of inflammation. Name this stage.

a. Secondary alteration

b. Exudation

c. Progression

d. Proliferation

e. Primary alteration

416. A patient developed a keloid scar at the site of skin inflammation. This condition is associated with an abnormal course of a certain stage of inflammation. Name this stage.

a. Secondary alteration

b. Progression

c. Exudation

d. Primary alteration

e. Proliferation

417. A patient developed an atrioventricular block. What drug is indicated in this case?

a. Anaprilin (Propranolol)

b. Atropine

c. Clophelin (Clonidine)

d. Pirenzepine

e. Metoprolol

418. A patient developed an atrioventricular block. What drug is indicated in this case?

a. Anaprilin (Propranolol)

b. Clophelin (Clonidine)

c. Pirenzepine

d. Atropine

e. Metoprolol

419. A patient developed an atrioventricular block. What drug is indicated in this case?

a. Clonidine (Clonidine)

b. Anaprilin (Propranolol)

c. Atropine

d. Metoprolol

e. Pirenzepine

420. A patient developed anaphylactic shock after administration of lidocaine. What antibodies cause the development of this allergic reaction?

a. IgE

b. IgG

c. IgA

d. IgD

e. IgM

421. A patient developed anaphylactic shock after administration of lidocaine. What antibodies cause the development of this allergic reaction?

a. IgE

b. IgM

c. IgD

d. IgA

e. IgG

422. A patient developed anaphylactic shock after administration of lidocaine. What antibodies cause the development of this allergic reaction?

a. IgG

b. IgE

c. IgA

d. IgD

e. IgM

423. A patient developed candidiasis caused by long-term antibiotic treatment. What drug should be used in this case to eliminate candidiasis?

a. Rubomycin (Daunorubicin)

b. Nystatin

c. Fumagillin

d. Interferon

e. Sulfadimezin (Sulfadimidine)

424. A patient developed candidiasis caused by long-term antibiotic treatment. What drug should be used in this case to eliminate candidiasis?

a. Rubomycin (Daunorubicin)

b. Interferon

c. Fumagillin

d. Nystatin

e. Sulfadimezin (Sulfadimidine)

425. A patient developed candidiasis caused by long-term antibiotic treatment. What drug should be used in this case to eliminate candidiasis?

a. Sulfadimezin (Sulfadimidine)

b. Nystatin

c. Rubomycin (Daunorubicin)

d. Fumagillin

e. Interferon

426. A patient developed neuritis of the facial nerve after 5 months of anti-tuberculosis treatment. What drug has caused this side effect?

a. Benzylpenicillin sodium

b. Isoniazid

c. Ceftriaxone

- d. Rifampicin
- e. Sodium para-aminosalicylate

427. A patient developed neuritis of the facial nerve after 5 months of anti-tuberculosis treatment. What drug has caused this side effect?

a. Rifampicin

b. Isoniazid

c. Ceftriaxone

d. Benzylpenicillin sodium

e. Sodium para-aminosalicylate

428. A patient developed neuritis of the facial nerve after 5 months of anti-tuberculosis treatment. What drug has caused this side effect?

a. Rifampicin

b. Ceftriaxone

c. Sodium para-aminosalicylate

d. Benzylpenicillin sodium

e. Isoniazid

429. A patient diagnosed with viral hepatitis developed ascites, jaundice, itching, leg edemas, and dyspnea. What type of jaundice is observed in the patient?

a. Hemolytic

b. Mechanical

c. Parenchymatous

d. Suprahepatic

e. Obstructive

430. A patient diagnosed with viral hepatitis developed ascites, jaundice, itching, leg edemas, and dyspnea. What type of jaundice is observed in the patient?

a. Mechanical

b. Suprahepatic

c. Parenchymatous

d. Obstructive

e. Hemolytic

431. A patient diagnosed with viral hepatitis developed ascites, jaundice, itching, leg edemas, and dyspnea. What type of jaundice is observed in the patient?

a. Obstructive

b. Parenchymatous

c. Mechanical

d. Hemolytic

e. Suprahepatic

432. A patient has a gallstone lodged in the common bile duct, which blocks bile supply to the intestine. What digestive process will be disturbed in this case?

a. Carbohydrate absorption

b. Protein digestion

c. Carbohydrate digestion

d. Protein absorption

e. Fat digestion

433. A patient has a gallstone lodged in the common bile duct, which blocks bile supply to the intestine. What digestive process will be disturbed in this case?

a. Protein absorption

b. Carbohydrate digestion

c. Fat digestion

d. Carbohydrate absorption

e. Protein digestion

434. A patient has a gallstone lodged in the common bile duct, which blocks bile supply to the intestine. What digestive process will be disturbed in this case?

a. Protein absorption

b. Carbohydrate digestion

- c. Protein digestion
- d. Carbohydrate absorption

e. Fat digestion

435. A patient has acute pancreatitis. What is the leading link in the pathogenesis of this disease?

a. Early activation of trypsin and elastase

- b. Disturbed trophism of exocrine pancreatocytes
- c. Arterial hypertension
- d. Autoallergy
- e. Atherosclerosis of pancreatic vessels

436. A patient has acute pancreatitis. What is the leading link in the pathogenesis of this disease?

- a. Atherosclerosis of pancreatic vessels
- b. Arterial hypertension

c. Early activation of trypsin and elastase

- d. Autoallergy
- e. Disturbed trophism of exocrine pancreatocytes

437. A patient has acute pancreatitis. What is the leading link in the pathogenesis of this disease?

- a. Disturbed trophism of exocrine pancreatocytes
- b. Autoallergy
- c. Atherosclerosis of pancreatic vessels

d. Early activation of trypsin and elastase

- e. Arterial hypertension

438. A patient has asked the dispensing chemist to recommend him a drug that can increase the endurance of an organism in adverse environmental conditions. The chemist recommended the following:

- a. Camomile flowers infusion
- b. Calendula tincture
- c. Oak bark decoction

d. Schisandra tincture

- e. Eucalyptus tincture

439. A patient has asked the dispensing chemist to recommend him a drug that can increase the endurance of an organism in adverse environmental conditions. The chemist recommended the following:

- a. Eucalyptus tincture
- b. Camomile flowers infusion
- c. Calendula tincture

d. Schisandra tincture

- e. Oak bark decoction

440. A patient has asked the dispensing chemist to recommend him a drug that can increase the endurance of an organism in adverse environmental conditions. The chemist recommended the following:

- a. Oak bark decoction
- b. Camomile flowers infusion
- c. Calendula tincture

d. Schisandra tincture

- e. Eucalyptus tincture

441. A patient has been diagnosed with bronchial asthma. Specify the drug that can be administered for asphyxiation:

a. Salbutamol

- b. Anapriline
- c. Acetylcysteine
- d. Paracetamol
- e. Diclofenac sodium

442. A patient has been diagnosed with bronchial asthma. Specify the drug that can be administered for asphyxiation:

a. Salbutamol

- b. Diclofenac sodium
- c. Paracetamol
- d. Acetylcysteine
- e. Anapriline

443. A patient has been diagnosed with bronchial asthma. Specify the drug that can be administered for asphyxiation:

- a. Paracetamol
- b. Anapriline

c. Salbutamol

- d. Diclofenac sodium
- e. Acetylcysteine

444. A patient has been diagnosed with ischemic heart disease with high cholesterol levels. What drug should be included into the patient's treatment regimen?

a. Atorvastatin

- b. Hydrochlorothiazide
- c. Diclofenac sodium
- d. Fentanyl
- e. Celecoxib

445. A patient has been diagnosed with ischemic heart disease with high cholesterol levels. What drug should be included into the patient's treatment regimen?

a. Celecoxib

b. Atorvastatin

- c. Hydrochlorothiazide
- d. Fentanyl
- e. Diclofenac sodium

446. A patient has been diagnosed with ischemic heart disease with high cholesterol levels. What drug should be included into the patient's treatment regimen?

a. Celecoxib

b. Fentanyl

- c. Hydrochlorothiazide
- d. Diclofenac sodium

e. Atorvastatin

447. A patient has been hospitalised with diagnosis of diabetes mellitus I type. Decreased rate of oxaloacetate forming is one of the metabolic changes present in the patient. What metabolic process is disrupted as a result?

a. Cholesterol synthesis

b. Citric acid cycle

- c. Glycolysis
- d. Urea synthesis
- e. Glycogen mobilization

448. A patient has been hospitalised with diagnosis of diabetes mellitus I type. Decreased rate of oxaloacetate forming is one of the metabolic changes present in the patient. What metabolic process is disrupted as a result?

a. Cholesterol synthesis

b. Urea synthesis

c. Citric acid cycle

- d. Glycogen mobilization
- e. Glycolysis

449. A patient has been hospitalised with diagnosis of diabetes mellitus I type. Decreased rate of oxaloacetate forming is one of the metabolic changes present in the patient. What metabolic process is disrupted as a result?

a. Cholesterol synthesis

b. Urea synthesis

c. Citric acid cycle

d. Glycolysis

e. Glycogen mobilization

450. A patient has been hospitalized into the infectious diseases department of a regional hospital with the provisional diagnosis of typhoid fever. What serological reaction must be carried out to confirm the diagnosis?

- a. Elek test
- b. Wright reaction
- c. Wassermann reaction

d. Widal test

e. Huddleson reaction

451. A patient has been hospitalized into the infectious diseases department of a regional hospital with the provisional diagnosis of typhoid fever. What serological reaction must be carried out to confirm the diagnosis?

- a. Wassermann reaction
- b. Huddleson reaction
- c. Elek test

d. Widal test

e. Wright reaction

452. A patient has been hospitalized into the infectious diseases department of a regional hospital with the provisional diagnosis of typhoid fever. What serological reaction must be carried out to confirm the diagnosis?

a. Wright reaction

b. Widal test

- c. Wassermann reaction
- d. Huddleson reaction
- e. Elek test

453. A patient has been hospitalized with signs of ascites. The doctor prescribed the patient spironolactone to enhance the diuretic effect of hydrochlorothiazide. What effect does this drug have apart from the diuretic effect?

a. Potassium-sparing

- b. Analgesic
- c. Antispasmodic
- d. Irritant
- e. Sedative

454. A patient has been hospitalized with signs of ascites. The doctor prescribed the patient spironolactone to enhance the diuretic effect of hydrochlorothiazide. What effect does this drug have apart from the diuretic effect?

- a. Analgesic
- b. Antispasmodic

c. Potassium-sparing

- d. Irritant
- e. Sedative

455. A patient has been hospitalized with signs of ascites. The doctor prescribed the patient spironolactone to enhance the diuretic effect of hydrochlorothiazide. What effect does this drug have apart from the diuretic effect?

- a. Irritant
- b. Antispasmodic

c. Potassium-sparing

- d. Analgesic
- e. Sedative

456. A patient has been hospitalized with the provisional diagnosis of gas gangrene, caused by spore-forming anaerobes. What nutrient medium must be used for inoculation of the material, obtained from the patient, to isolate a pure culture and confirm the diagnosis?

a. Kitt-Tarozzi medium

- b. Meat-peptone agar, meat-peptone broth
- c. Egg yolk-salt agar

- d. Levin medium
- e. Endo medium

457. A patient has been hospitalized with the provisional diagnosis of gas gangrene, caused by spore-forming anaerobes. What nutrient medium must be used for inoculation of the material, obtained from the patient, to isolate a pure culture and confirm the diagnosis?

- a. Levin medium
- b. Egg yolk-salt agar
- c. Endo medium
- d. Meat-peptone agar, meat-peptone broth

e. Kitt-Tarozzi medium

458. A patient has been hospitalized with the provisional diagnosis of gas gangrene, caused by spore-forming anaerobes. What nutrient medium must be used for inoculation of the material, obtained from the patient, to isolate a pure culture and confirm the diagnosis?

- a. Meat-peptone agar, meat-peptone broth
- b. Endo medium
- c. Egg yolk-salt agar

d. Kitt-Tarozzi medium

- e. Levin medium

459. A patient has been prescribed drug with antibacterial effect on tuberculosis mycobacteria. What drug is used in tuberculosis treatment and is pyridoxine antivitamin?

a. Isoniazid

- b. Streptomycin
- c. Heparin
- d. Sulfanilamide
- e. Trimethoprim/sulfamethoxazole (Co-trimoxazole)

460. A patient has been prescribed drug with antibacterial effect on tuberculosis mycobacteria. What drug is used in tuberculosis treatment and is pyridoxine antivitamin?

- a. Streptomycin
- b. Trimethoprim/sulfamethoxazole (Co-trimoxazole)
- c. Heparin

d. Isoniazid

- e. Sulfanilamide

461. A patient has been prescribed drug with antibacterial effect on tuberculosis mycobacteria. What drug is used in tuberculosis treatment and is pyridoxine antivitamin?

- a. Sulfanilamide

b. Isoniazid

- c. Streptomycin
- d. Heparin
- e. Trimethoprim/sulfamethoxazole (Co-trimoxazole)

462. A patient has been prescribed oral drug to treat diarrhea. In accordance with the WHO and Pharmacopoeia requirements 1 g (ml) of drug can contain the following number of microorganisms:

- a. 10 bacteria and no mold fungi
- b. 1000 bacteria and 200 mold fungi
- c. No bacteria and no mold fungi
- d. 100 bacteria and 10 mold fungi

e. 1000 bacteria and 100 mold fungi

463. A patient has been prescribed oral drug to treat diarrhea. In accordance with the WHO and Pharmacopoeia requirements 1 g (ml) of drug can contain the following number of microorganisms:

- a. 1000 bacteria and 200 mold fungi
- b. 100 bacteria and 10 mold fungi
- c. 10 bacteria and no mold fungi
- d. No bacteria and no mold fungi

e. 1000 bacteria and 100 mold fungi

464. A patient has been prescribed oral drug to treat diarrhea. In accordance with the WHO and Pharmacopoeia requirements 1 g (ml) of drug can contain the following number of microorganisms:

- a. No bacteria and no mold fungi
- b. 1000 bacteria and 100 mold fungi**
- c. 1000 bacteria and 200 mold fungi
- d. 100 bacteria and 10 mold fungi
- e. 10 bacteria and no mold fungi

465. A patient has been provisionally diagnosed with diabetes mellitus. What erythrocyte protein needs to be measured in this case to assess the glycemia levels in the patient?

- a. Bence-Jones protein
- b. C-reactive protein
- c. gamma-globulin
- d. Glycated hemoglobin**
- e. alpha₂-globulin

466. A patient has been provisionally diagnosed with diabetes mellitus. What erythrocyte protein needs to be measured in this case to assess the glycemia levels in the patient?

- a. alpha₂-globulin
- b. C-reactive protein
- c. gamma-globulin
- d. Glycated hemoglobin**
- e. Bence-Jones protein

467. A patient has been provisionally diagnosed with diabetes mellitus. What erythrocyte protein needs to be measured in this case to assess the glycemia levels in the patient?

- a. gamma-globulin
- b. Glycated hemoglobin**
- c. alpha₂-globulin
- d. Bence-Jones protein
- e. C-reactive protein

468. A patient has been receiving Theophylline (inhibitor of cyclic adenosine monophosphate phosphodiesterase) for a week. What hormone can increase its action due to such treatment and cause hyperglycemia as the result?

- a. Estradiol
- b. Testosterone
- c. Insulin
- d. Glucagon**
- e. Aldosterone

469. A patient has been receiving Theophylline (inhibitor of cyclic adenosine monophosphate phosphodiesterase) for a week. What hormone can increase its action due to such treatment and cause hyperglycemia as the result?

- a. Insulin
- b. Glucagon**
- c. Aldosterone
- d. Testosterone
- e. Estradiol

470. A patient has been receiving Theophylline (inhibitor of cyclic adenosine monophosphate phosphodiesterase) for a week. What hormone can increase its action due to such treatment and cause hyperglycemia as the result?

- a. Testosterone
- b. Aldosterone
- c. Insulin
- d. Glucagon**
- e. Estradiol

471. A patient has bradycardia, moderate hypotension, decreased basal metabolism, and edemas. What disorder is the likely cause of these signs?

- a. Adrenal hypofunction
- b. Hypothyroidism**
- c. Hyperparathyroidism

- d. Hyperthyroidism
- e. Hypoparathyroidism

472. A patient has bradycardia, moderate hypotension, decreased basal metabolism, and edemas. What disorder is the likely cause of these signs?

- a. Hyperthyroidism
- b. Hyperparathyroidism
- c. Hypoparathyroidism

d. Hypothyroidism

- e. Adrenal hypofunction

473. A patient has developed an allergic skin reaction in the form of urticaria after using an antibiotic to treat pneumonia. What antihistamine is indicated in this case?

a. Loratadine

- b. Ranitidine
- c. Tannin
- d. Prednisolone
- e. Raunatine (Rauwolfia alkaloids)

474. A patient has developed an allergic skin reaction in the form of urticaria after using an antibiotic to treat pneumonia. What antihistamine is indicated in this case?

- a. Ranitidine
- b. Tannin
- c. Raunatine (Rauwolfia alkaloids)
- d. Prednisolone

e. Loratadine

475. A patient has developed an allergic skin reaction in the form of urticaria after using an antibiotic to treat pneumonia. What antihistamine is indicated in this case?

- a. Tannin
- b. Prednisolone
- c. Ranitidine

d. Loratadine

- e. Raunatine (Rauwolfia alkaloids)

476. A patient has developed anemia against the background of nonspecific ulcerative colitis. In the blood, there are hypochromia, micro- and anisocytosis, and poikilocytosis. What type of anemia can be suspected in this case?

a. Iron deficiency

- b. Sideroblastic
- c. Hemolytic
- d. Aplastic
- e. B₁₂ and folate deficiency

477. A patient has developed anemia against the background of nonspecific ulcerative colitis. In the blood, there are hypochromia, micro- and anisocytosis, and poikilocytosis. What type of anemia can be suspected in this case?

- a. B₁₂ and folate deficiency
- b. Aplastic
- c. Sideroblastic
- d. Hemolytic

e. Iron deficiency

478. A patient has developed anemia against the background of nonspecific ulcerative colitis. In the blood, there are hypochromia, micro- and anisocytosis, and poikilocytosis. What type of anemia can be suspected in this case?

- a. Sideroblastic
- b. B₁₂ and folate deficiency

c. Iron deficiency

- d. Aplastic
- e. Hemolytic

479. A patient has developed anuria due to a severe blood loss (40% of blood volume). What is the

leading mechanism of anuria development in this case?

a. Decreased hydrostatic pressure in the glomerular capillaries

b. Decreased pressure in the glomerular capsule

c. Increased pressure in the glomerular capsule

d. Decreased number of functional glomeruli

e. Increased oncotic blood pressure

480. A patient has developed anuria due to a severe blood loss (40% of blood volume). What is the leading mechanism of anuria development in this case?

a. Decreased pressure in the glomerular capsule

b. Increased pressure in the glomerular capsule

c. Decreased number of functional glomeruli

d. Decreased hydrostatic pressure in the glomerular capillaries

e. Increased oncotic blood pressure

481. A patient has developed anuria due to a severe blood loss (40% of blood volume). What is the leading mechanism of anuria development in this case?

a. Increased pressure in the glomerular capsule

b. Increased oncotic blood pressure

c. Decreased hydrostatic pressure in the glomerular capillaries

d. Decreased pressure in the glomerular capsule

e. Decreased number of functional glomeruli

482. A patient has developed anuria. Blood pressure is 50/20 mm Hg. What process of uropoiesis was disturbed resulting in acute decrease of urine output?

a. Facultative reabsorption

b. Glomerular filtration

c. -

d. Tubular secretion

e. Obligate reabsorption

483. A patient has developed anuria. Blood pressure is 50/20 mm Hg. What process of uropoiesis was disturbed resulting in acute decrease of urine output?

a. Facultative reabsorption

b. Obligate reabsorption

c. Glomerular filtration

d. Tubular secretion

e. -

484. A patient has developed anuria. Blood pressure is 50/20 mm Hg. What process of uropoiesis was disturbed resulting in acute decrease of urine output?

a. Tubular secretion

b. Glomerular filtration

c. Facultative reabsorption

d. -

e. Obligate reabsorption

485. A patient has developed intestinal disbacteriosis after his long-term taking of antibiotics. What drugs should be prescribed to restore microflora up to normal amount?

a. Antifungal agents

b. Interferon

c. Cephalosporines

d. Eubiotics

e. Sulfanilamides

486. A patient has developed intestinal disbacteriosis after his long-term taking of antibiotics. What drugs should be prescribed to restore microflora up to normal amount?

a. Cephalosporines

b. Interferon

c. Sulfanilamides

d. Antifungal agents

e. Eubiotics

487. A patient has developed intestinal disbacteriosis after his long-term taking of antibiotics. What drugs should be prescribed to restore microflora up to normal amount?

- a. Interferon
- b. Eubiotics**
- c. Sulfanilamides
- d. Antifungal agents
- e. Cephalosporines

488. A patient has developed megaloblastic anemia on a background of alcoholic hepatocirrhosis. The main cause of anemia in this patient is the following vitamin deficiency:

- a. Biotin
- b. Pantothenic acid
- c. Folic acid**
- d. Lipoic acid
- e. Thiamin

489. A patient has developed megaloblastic anemia on a background of alcoholic hepatocirrhosis. The main cause of anemia in this patient is the following vitamin deficiency:

- a. Lipoic acid
- b. Thiamin
- c. Pantothenic acid
- d. Folic acid**
- e. Biotin

490. A patient has developed megaloblastic anemia on a background of alcoholic hepatocirrhosis. The main cause of anemia in this patient is the following vitamin deficiency:

- a. Thiamin
- b. Lipoic acid
- c. Pantothenic acid
- d. Folic acid**
- e. Biotin

491. A patient has marked allergic symptoms: rashes on the body, facial edema, itching. This condition is associated with an increase in formation of a certain biogenic amine. Name this biogenic amine.

- a. Cadaverine
- b. Histamine**
- c. Indican
- d. Putrescine
- e. GABA

492. A patient has marked allergic symptoms: rashes on the body, facial edema, itching. This condition is associated with an increase in formation of a certain biogenic amine. Name this biogenic amine.

- a. Cadaverine
- b. Putrescine
- c. GABA
- d. Indican
- e. Histamine**

493. A patient has marked allergic symptoms: rashes on the body, facial edema, itching. This condition is associated with an increase in formation of a certain biogenic amine. Name this biogenic amine.

- a. Indican
- b. Putrescine
- c. GABA
- d. Histamine**
- e. Cadaverine

494. A patient has mucosal dryness and mesopic vision disorder. What vitamin deficiency causes these symptoms?

- a. A**

- b. C
- c. E
- d. P
- e. D

495. A patient has mucosal dryness and mesopic vision disorder. What vitamin deficiency causes these symptoms?

- a. A
- b. D
- c. C
- d. P
- e. E

496. A patient has mucosal dryness and mesopic vision disorder. What vitamin deficiency causes these symptoms?

- a. A
- b. E
- c. D
- d. C
- e. P

497. A patient has periodic urticaria that manifests as blisters that the patient develops on the skin after eating red fish. The patient has been diagnosed with anaphylactic allergic reaction. In this case, an increase in the titer of a certain immunoglobulin would be detected. Name this immunoglobulin.

- a. IgE
- b. IgM
- c. IgD
- d. IgG
- e. IgA

498. A patient has periodic urticaria that manifests as blisters that the patient develops on the skin after eating red fish. The patient has been diagnosed with anaphylactic allergic reaction. In this case, an increase in the titer of a certain immunoglobulin would be detected. Name this immunoglobulin.

- a. IgD
- b. IgG
- c. IgE
- d. IgA
- e. IgM

499. A patient has periodic urticaria that manifests as blisters that the patient develops on the skin after eating red fish. The patient has been diagnosed with anaphylactic allergic reaction. In this case, an increase in the titer of a certain immunoglobulin would be detected. Name this immunoglobulin.

- a. IgG
- b. IgA
- c. IgE
- d. IgD
- e. IgM

500. A patient has pulmonary edema. What drug must be prescribed in this case to reduce the volume of circulating blood?

- a. Magnesium sulfate
- b. Aminazine (Chlorpromazine)
- c. Nitroglycerin
- d. Furosemide
- e. Metoprolol

501. A patient has pulmonary edema. What drug must be prescribed in this case to reduce the volume of circulating blood?

- a. Nitroglycerin
- b. Aminazine (Chlorpromazine)
- c. Furosemide
- d. Metoprolol

e. Magnesium sulfate

502. A patient has pulmonary edema. What drug must be prescribed in this case to reduce the volume of circulating blood?

- a. Nitroglycerin
- b. Aminazine (Chlorpromazine)
- c. Magnesium sulfate

d. Furosemide

e. Metoprolol

503. A patient has thyrotoxicosis. What drug should be prescribed to this patient to suppress the synthesis of thyroid hormones?

- a. L-thyroxine
- b. Thyroidin
- c. Parathyroidin
- d. Antistrumin (Potassium iodide)

e. Mercazolil (Thiamazole)

504. A patient has thyrotoxicosis. What drug should be prescribed to this patient to suppress the synthesis of thyroid hormones?

- a. Parathyroidin
- b. L-thyroxine

c. Mercazolil (Thiamazole)

d. Thyroidin

e. Antistrumin (Potassium iodide)

505. A patient has thyrotoxicosis. What drug should be prescribed to this patient to suppress the synthesis of thyroid hormones?

- a. Thyroidin
- b. Parathyroidin
- c. L-thyroxine

d. Mercazolil (Thiamazole)

e. Antistrumin (Potassium iodide)

506. A patient has toxic pulmonary edema. What drug must be used for emergency aid in this case?

a. Mannitol

- b. Indapamide
- c. Spironolactone
- d. Diacarb (Acetazolamide)
- e. Hydrochlorothiazide

507. A patient has toxic pulmonary edema. What drug must be used for emergency aid in this case?

a. Diacarb (Acetazolamide)

b. Mannitol

- c. Spironolactone
- d. Indapamide
- e. Hydrochlorothiazide

508. A patient has toxic pulmonary edema. What drug must be used for emergency aid in this case?

- a. Hydrochlorothiazide
- b. Indapamide
- c. Spironolactone

d. Mannitol

e. Diacarb (Acetazolamide)

509. A patient in a state of psychosis was prescribed the following antipsychotic:

a. Cyclodol (Trihexyphenidyl)

b. Aminazine (Chlorpromazine)

- c. Phenobarbital
- d. Caffeine
- e. Diazepam

510. A patient in a state of psychosis was prescribed the following antipsychotic:

a. Cyclodol (Trihexyphenidyl)

- b. Phenobarbital
- c. Caffeine
- d. Diazepam

e. Aminazine (Chlorpromazine)

511. A patient in a state of psychosis was prescribed the following antipsychotic:

a. Diazepam

b. Aminazine (Chlorpromazine)

- c. Caffeine
- d. Cyclodol (Trihexyphenidyl)
- e. Phenobarbital

512. A patient in the state of ketoacidotic coma presents with loud rapid respiration: labored expiration with tension of expiratory muscles occurs after deep inspiration. Name this type of pathologic respiration:

- a. Biot's
- b. Gasping

c. Kussmaul's

- d. Cheyne-Stokes'
- e. Stenotic

513. A patient in the state of ketoacidotic coma presents with loud rapid respiration: labored expiration with tension of expiratory muscles occurs after deep inspiration. Name this type of pathologic respiration:

- a. Cheyne-Stokes'
- b. Gasping

c. Kussmaul's

- d. Stenotic
- e. Biot's

514. A patient in the state of ketoacidotic coma presents with loud rapid respiration: labored expiration with tension of expiratory muscles occurs after deep inspiration. Name this type of pathologic respiration:

- a. Stenotic
- b. Biot's

c. Kussmaul's

- d. Gasping
- e. Cheyne-Stokes'

515. A patient is being consulted by the family doctor. He asks what role cholesterol plays in the body. The doctor explains that cholesterol is a constituent part of the cell membranes and is necessary for synthesis of various substances, among which there are following hormones:

- a. Amino acid derivatives
- b. Peptide hormones
- c. Protein hormones

d. Steroid hormones

e. Eicosanoids

516. A patient is being consulted by the family doctor. He asks what role cholesterol plays in the body. The doctor explains that cholesterol is a constituent part of the cell membranes and is necessary for synthesis of various substances, among which there are following hormones:

- a. Peptide hormones
- b. Eicosanoids
- c. Amino acid derivatives

d. Steroid hormones

e. Protein hormones

517. A patient is being consulted by the family doctor. He asks what role cholesterol plays in the body. The doctor explains that cholesterol is a constituent part of the cell membranes and is necessary for synthesis of various substances, among which there are following hormones:

- a. Protein hormones
- b. Peptide hormones

c. Steroid hormones

d. Amino acid derivatives

e. Eicosanoids

518. A patient is diagnosed with acute pancreatitis. For diagnostic purpose it is necessary to measure the activity of the following enzyme in the patient's blood:

a. Aldolase

b. Creatine kinase

c. Amylase

d. LDH

e. Pepsin

519. A patient is diagnosed with acute pancreatitis. For diagnostic purpose it is necessary to measure the activity of the following enzyme in the patient's blood:

a. Aldolase

b. LDH

c. Creatine kinase

d. Amylase

e. Pepsin

520. A patient is diagnosed with acute pancreatitis. For diagnostic purpose it is necessary to measure the activity of the following enzyme in the patient's blood:

a. Creatine kinase

b. Aldolase

c. Amylase

d. LDH

e. Pepsin

521. A patient is pale, has goose bumps and chills. What stage of fever is it characteristic of?

a. Continuous fever

b. Temperature decrease

c. Latent stage

d. Temperature increase

e. Compensation

522. A patient is pale, has goose bumps and chills. What stage of fever is it characteristic of?

a. Latent stage

b. Continuous fever

c. Temperature decrease

d. Temperature increase

e. Compensation

523. A patient is pale, has goose bumps and chills. What stage of fever is it characteristic of?

a. Temperature decrease

b. Compensation

c. Continuous fever

d. Temperature increase

e. Latent stage

524. A patient presents with inflammation of the nasal mucosa: redness, edema, profuse mucus discharge from the nasal passages. This clinical presentation corresponds with the following stage of inflammation:

a. Exudation

b. Alteration

c. Proliferation

d. Immunologic

e. Biochemical

525. A patient presents with inflammation of the nasal mucosa: redness, edema, profuse mucus discharge from the nasal passages. This clinical presentation corresponds with the following stage of inflammation:

a. Exudation

b. Biochemical

- c. Immunologic
- d. Proliferation
- e. Alteration

526. A patient presents with inflammation of the nasal mucosa: redness, edema, profuse mucus discharge from the nasal passages. This clinical presentation corresponds with the following stage of inflammation:

- a. Proliferation
- b. Immunologic
- c. Biochemical

d. Exudation

- e. Alteration

527. A patient presents with intestinal obstruction and a decrease in the bactericidal effect of gastric juice, which contributes to the growth of putrefactive microflora. In this case, increased excretion of a certain substance can be observed in urine. Name this substance.

a. Indican

- b. Glucose
- c. Lactic acid
- d. Creatine
- e. Protein

528. A patient presents with intestinal obstruction and a decrease in the bactericidal effect of gastric juice, which contributes to the growth of putrefactive microflora. In this case, increased excretion of a certain substance can be observed in urine. Name this substance.

- a. Glucose

b. Indican

- c. Creatine
- d. Protein
- e. Lactic acid

529. A patient presents with intestinal obstruction and a decrease in the bactericidal effect of gastric juice, which contributes to the growth of putrefactive microflora. In this case, increased excretion of a certain substance can be observed in urine. Name this substance.

- a. Glucose
- b. Protein
- c. Creatine
- d. Lactic acid

e. Indican

530. A patient presents with persistent fever, with the difference between evening and morning temperature not exceeding 1°C What type of fever curve is present in this patient?

a. Continuous

- b. Hectic
- c. Remittent
- d. Recurrent
- e. Intermittent

531. A patient presents with persistent fever, with the difference between evening and morning temperature not exceeding 1°C What type of fever curve is present in this patient?

- a. Intermittent

b. Continuous

- c. Recurrent
- d. Hectic
- e. Remittent

532. A patient presents with persistent fever, with the difference between evening and morning temperature not exceeding 1°C What type of fever curve is present in this patient?

- a. Remittent
- b. Recurrent

c. Continuous

- d. Hectic

e. Intermittent

533. A patient presents with temperature $38.5-39.5^{\circ}\text{C}$, nausea, vomiting, and stomachache. Poisoning with salts of heavy metals is diagnosed. What drug should be prescribed as an antidote in this case?

a. Unithiol

b. Validol (Menthyl isovalerate)

c. Phenolphthalein

d. Pentazocine

e. Bromhexine

534. A patient presents with temperature $38.5-39.5^{\circ}\text{C}$, nausea, vomiting, and stomachache. Poisoning with salts of heavy metals is diagnosed. What drug should be prescribed as an antidote in this case?

a. Phenolphthalein

b. Pentazocine

c. Unithiol

d. Validol (Menthyl isovalerate)

e. Bromhexine

535. A patient presents with temperature $38.5-39.5^{\circ}\text{C}$, nausea, vomiting, and stomachache. Poisoning with salts of heavy metals is diagnosed. What drug should be prescribed as an antidote in this case?

a. Phenolphthalein

b. Validol (Menthyl isovalerate)

c. Unithiol

d. Bromhexine

e. Pentazocine

536. A patient suffers from Down's disease that manifests as mental retardation, shortness of stature, pathologically short fingers and toes, and eyes with mongoloid slant. Karyotype analysis revealed trisomy 21. What group of diseases does this pathology belong to?

a. Chromosomal disorders

b. Fetopathy

c. Blastopathy

d. Molecular genetic disease

e. Gametopathy

537. A patient suffers from Down's disease that manifests as mental retardation, shortness of stature, pathologically short fingers and toes, and eyes with mongoloid slant. Karyotype analysis revealed trisomy 21. What group of diseases does this pathology belong to?

a. Chromosomal disorders

b. Molecular genetic disease

c. Fetopathy

d. Gametopathy

e. Blastopathy

538. A patient suffers from Down's disease that manifests as mental retardation, shortness of stature, pathologically short fingers and toes, and eyes with mongoloid slant. Karyotype analysis revealed trisomy 21. What group of diseases does this pathology belong to?

a. Gametopathy

b. Molecular genetic disease

c. Fetopathy

d. Chromosomal disorders

e. Blastopathy

539. A patient suffers from block of cytochrome oxidase enzyme caused by cyanide poisoning. What type of hypoxia is developed in this case?

a. Tissue

b. Circulatory

c. Stagnant

d. Respiratory

e. Hemic

540. A patient suffers from block of cytochrome oxidase enzyme caused by cyanide poisoning. What type of hypoxia is developed in this case?

a. Tissue

b. Respiratory

c. Hemic

d. Circulatory

e. Stagnant

541. A patient suffers from block of cytochrome oxidase enzyme caused by cyanide poisoning. What type of hypoxia is developed in this case?

a. Hemic

b. Stagnant

c. Respiratory

d. Circulatory

e. Tissue

542. A patient suffers from hyperchromic B₁₂-deficiency anemia. What vitamin preparation should be prescribed in this case?

a. Retinol acetate

b. Cyanocobalamin

c. Vicasol (Menadione)

d. Thiamine chloride

e. Riboflavin

543. A patient suffers from hyperchromic B₁₂-deficiency anemia. What vitamin preparation should be prescribed in this case?

a. Retinol acetate

b. Riboflavin

c. Thiamine chloride

d. Vicasol (Menadione)

e. Cyanocobalamin

544. A patient suffers from hyperchromic B₁₂-deficiency anemia. What vitamin preparation should be prescribed in this case?

a. Riboflavin

b. Thiamine chloride

c. Retinol acetate

d. Cyanocobalamin

e. Vicasol (Menadione)

545. A patient undergoes chemotherapy with 5-fluorouracil that is a competitive inhibitor of thymidilate synthase. What process is inhibited by this drug?

a. Thymidine monophosphate synthesis

b. Purine nucleotides disintegration

c. Glucose synthesis

d. Adenosine triphosphate synthesis

e. Purine nucleotides salvage

546. A patient undergoes chemotherapy with 5-fluorouracil that is a competitive inhibitor of thymidilate synthase. What process is inhibited by this drug?

a. Adenosine triphosphate synthesis

b. Thymidine monophosphate synthesis

c. Glucose synthesis

d. Purine nucleotides salvage

e. Purine nucleotides disintegration

547. A patient undergoes chemotherapy with 5-fluorouracil that is a competitive inhibitor of thymidilate synthase. What process is inhibited by this drug?

a. Glucose synthesis

b. Purine nucleotides salvage

c. Purine nucleotides disintegration

d. Thymidine monophosphate synthesis

e. Adenosine triphosphate synthesis

548. A patient was admitted to a hospital in a state of hypoglycemic coma. It occurs at the following level of blood glucose:

a. 2,5 mmol/l or less

- b. 3,3 mmol/l
- c. 4,5 mmol/l
- d. 5,5 mmol/l
- e. 4,0 mmol/l

549. A patient was admitted to a hospital in a state of hypoglycemic coma. It occurs at the following level of blood glucose:

a. 4,0 mmol/l

b. 2,5 mmol/l or less

- c. 5,5 mmol/l
- d. 4,5 mmol/l
- e. 3,3 mmol/l

550. A patient was admitted to a hospital in a state of hypoglycemic coma. It occurs at the following level of blood glucose:

- a. 4,5 mmol/l
- b. 3,3 mmol/l
- c. 5,5 mmol/l

d. 2,5 mmol/l or less

e. 4,0 mmol/l

551. A patient was found to have a tumor of the pancreatic head, which is accompanied by the impaired patency of the common bile duct. Blood test will reveal an increase in the following substance level:

- a. Hemoglobin
- b. Urea

c. Bilirubin

- d. Adrenaline
- e. Insulin

552. A patient was found to have a tumor of the pancreatic head, which is accompanied by the impaired patency of the common bile duct. Blood test will reveal an increase in the following substance level:

- a. Hemoglobin
- b. Urea

c. Bilirubin

- d. Insulin
- e. Adrenaline

553. A patient was found to have a tumor of the pancreatic head, which is accompanied by the impaired patency of the common bile duct. Blood test will reveal an increase in the following substance level:

- a. Urea
- b. Adrenaline
- c. Hemoglobin
- d. Insulin

e. Bilirubin

554. A patient was prescribed doxycycline hydrochloride for etiopathogenetic treatment of an infectious process. In this case the patient should be warned about the following side effect:

a. Photosensitization

- b. Peripheral edemas
- c. Arterial hypertension
- d. Uricosuria
- e. Hypercapnia

555. A patient was prescribed doxycycline hydrochloride for etiopathogenetic treatment of an

infectious process. In this case the patient should be warned about the following side effect:

- a. Arterial hypertension
- b. Uricosuria
- c. Peripheral edemas
- d. Photosensitization**

e. Hypercapnia

556. A patient was prescribed doxycycline hydrochloride for etiopathogenetic treatment of an infectious process. In this case the patient should be warned about the following side effect:

a. Uricosuria

b. Photosensitization

- c. Hypercapnia
- d. Peripheral edemas
- e. Arterial hypertension

557. A patient was prescribed losartan for treatment of arterial hypertension. What mechanism of action does this drug have?

a. Inhibition of angiotensin-converting enzyme

b. Angiotensin-receptor blockade

- c. Inhibition of phosphodiesterase
- d. Calcium channel blockade
- e. Activation of central alpha-adrenoceptors

558. A patient was prescribed losartan for treatment of arterial hypertension. What mechanism of action does this drug have?

a. Inhibition of phosphodiesterase

b. Angiotensin-receptor blockade

- c. Calcium channel blockade
- d. Activation of central alpha-adrenoceptors
- e. Inhibition of angiotensin-converting enzyme

559. A patient was prescribed losartan for treatment of arterial hypertension. What mechanism of action does this drug have?

- a. Inhibition of phosphodiesterase
- b. Inhibition of angiotensin-converting enzyme

c. Angiotensin-receptor blockade

- d. Calcium channel blockade
- e. Activation of central alpha-adrenoceptors

560. A patient was taken to a hospital with acute food poisoning caused by home-made canned mushrooms. The product analysis revealed some microorganisms that develop only in the absence of oxygen. What microorganisms caused the poisoning?

- a. Capnophiles
- b. Obligate aerobes

c. Obligate anaerobes

- d. Microaerophiles
- e. Facultative anaerobes

561. A patient was taken to a hospital with acute food poisoning caused by home-made canned mushrooms. The product analysis revealed some microorganisms that develop only in the absence of oxygen. What microorganisms caused the poisoning?

- a. Facultative anaerobes
- b. Microaerophiles
- c. Obligate aerobes
- d. Capnophiles

e. Obligate anaerobes

562. A patient was taken to a hospital with acute food poisoning caused by home-made canned mushrooms. The product analysis revealed some microorganisms that develop only in the absence of oxygen. What microorganisms caused the poisoning?

- a. Obligate aerobes
- b. Capnophiles

c. Obligate anaerobes

d. Microaerophiles

e. Facultative anaerobes

563. A patient was urgently brought to the infectious diseases hospital. The patient developed severe neurologic disorders 4 hours after he had eaten canned fish. A filtrate was prepared from the remains of this food product and given intraperitoneally to a guinea pig. 3 hours later the animal died. What disease can be suspected?

a. Salmonellosis

b. Q fever

c. Botulism

d. Typhoid fever

e. Brucellosis

564. A patient was urgently brought to the infectious diseases hospital. The patient developed severe neurologic disorders 4 hours after he had eaten canned fish. A filtrate was prepared from the remains of this food product and given intraperitoneally to a guinea pig. 3 hours later the animal died. What disease can be suspected?

a. Salmonellosis

b. Typhoid fever

c. Botulism

d. Q fever

e. Brucellosis

565. A patient was urgently brought to the infectious diseases hospital. The patient developed severe neurologic disorders 4 hours after he had eaten canned fish. A filtrate was prepared from the remains of this food product and given intraperitoneally to a guinea pig. 3 hours later the animal died. What disease can be suspected?

a. Typhoid fever

b. Botulism

c. Salmonellosis

d. Q fever

e. Brucellosis

566. A patient who had been suffering from peptic ulcer disease of the stomach for a long time has cachexia, pallor, weakness, loss of appetite, and aversion to meat products. Biopsy of the gastric mucosa detected cellular anaplasia. What pathology can be characterized by such symptoms?

a. Malignant gastric tumor

b. Ulcer penetration

c. Benign gastric tumor

d. Gastric polyposis

e. Hypertrophic gastritis

567. A patient who had been suffering from peptic ulcer disease of the stomach for a long time has cachexia, pallor, weakness, loss of appetite, and aversion to meat products. Biopsy of the gastric mucosa detected cellular anaplasia. What pathology can be characterized by such symptoms?

a. Benign gastric tumor

b. Malignant gastric tumor

c. Hypertrophic gastritis

d. Gastric polyposis

e. Ulcer penetration

568. A patient who had been suffering from peptic ulcer disease of the stomach for a long time has cachexia, pallor, weakness, loss of appetite, and aversion to meat products. Biopsy of the gastric mucosa detected cellular anaplasia. What pathology can be characterized by such symptoms?

a. Hypertrophic gastritis

b. Ulcer penetration

c. Benign gastric tumor

d. Gastric polyposis

e. Malignant gastric tumor

569. A patient who was receiving an indirect anticoagulant, warfarin, has taken acetylsalicylic acid to

treat elevated body temperature. This combination of drugs is dangerous due to increased risk of:

- a. Hemorrhage
- b. Osteoporosis
- c. Neurotoxicity
- d. Dysbiosis
- e. Cardiotoxicity

570. A patient who was receiving an indirect anticoagulant, warfarin, has taken acetylsalicylic acid to treat elevated body temperature. This combination of drugs is dangerous due to increased risk of:

- a. Cardiotoxicity
- b. Dysbiosis

c. Hemorrhage

- d. Osteoporosis
- e. Neurotoxicity

571. A patient who was receiving an indirect anticoagulant, warfarin, has taken acetylsalicylic acid to treat elevated body temperature. This combination of drugs is dangerous due to increased risk of:

- a. Dysbiosis

b. Hemorrhage

- c. Osteoporosis
- d. Cardiotoxicity
- e. Neurotoxicity

572. A patient with a cranial trauma has regularly recurring epileptiform seizures. In this case, disturbed metabolism of a certain biogenic amine can be observed. Name this biogenic amine.

- a. Adrenaline

b. GABA

- c. Cadaverine
- d. Putrescine
- e. Indole

573. A patient with a cranial trauma has regularly recurring epileptiform seizures. In this case, disturbed metabolism of a certain biogenic amine can be observed. Name this biogenic amine.

- a. Indole
- b. Putrescine

c. GABA

- d. Cadaverine
- e. Adrenaline

574. A patient with a cranial trauma has regularly recurring epileptiform seizures. In this case, disturbed metabolism of a certain biogenic amine can be observed. Name this biogenic amine.

- a. Putrescine

b. GABA

- c. Adrenaline
- d. Indole
- e. Cadaverine

575. A patient with a diagnosis of drug poisoning has been admitted to a resuscitation department. The patient is in grave condition. Respiration is rapid, superficial, with periods of apnea (Biot's respiration). What was the main cause of the development of periodic breathing in the patient?

- a. Diminished chest mobility

b. Inhibition of the respiratory center function

- c. Pulmonary dysfunction
- d. Impaired function of the neuromuscular system
- e. Impaired function of spinal cord motoneurons

576. A patient with a diagnosis of drug poisoning has been admitted to a resuscitation department. The patient is in grave condition. Respiration is rapid, superficial, with periods of apnea (Biot's respiration). What was the main cause of the development of periodic breathing in the patient?

- a. Impaired function of spinal cord motoneurons

b. Inhibition of the respiratory center function

- c. Diminished chest mobility

- d. Pulmonary dysfunction
- e. Impaired function of the neuromuscular system

577. A patient with a diagnosis of drug poisoning has been admitted to a resuscitation department. The patient is in grave condition. Respiration is rapid, superficial, with periods of apnea (Biot's respiration). What was the main cause of the development of periodic breathing in the patient?

- a. Pulmonary dysfunction
- b. Impaired function of the neuromuscular system
- c. Impaired function of spinal cord motoneurons
- d. Diminished chest mobility

e. Inhibition of the respiratory center function

578. A patient with a hypertensive crisis was administered magnesium sulfate, which resulted in a sharp drop of the patient's blood pressure. What drug can be used in this case to eliminate the side effects of magnesium sulfate?

- a. Potassium chloride
- b. Calcium chloride**
- c. Trilon B (EDTA disodium salt)
- d. Sodium sulfate
- e. Sodium bromide

579. A patient with a hypertensive crisis was administered magnesium sulfate, which resulted in a sharp drop of the patient's blood pressure. What drug can be used in this case to eliminate the side effects of magnesium sulfate?

- a. Potassium chloride
- b. Trilon B (EDTA disodium salt)
- c. Sodium sulfate

d. Calcium chloride

e. Sodium bromide

580. A patient with a hypertensive crisis was administered magnesium sulfate, which resulted in a sharp drop of the patient's blood pressure. What drug can be used in this case to eliminate the side effects of magnesium sulfate?

- a. Sodium sulfate
- b. Sodium bromide
- c. Potassium chloride

d. Calcium chloride

e. Trilon B (EDTA disodium salt)

581. A patient with a joint disorder was prescribed an ointment that contains as its active substance a certain glycosaminoglycan that is the most important component of cartilage. Name this glycosaminoglycan:

- a. Glycogen
- b. Chondroitin sulfate**
- c. Arabinose
- d. Starch
- e. Heparin

582. A patient with a joint disorder was prescribed an ointment that contains as its active substance a certain glycosaminoglycan that is the most important component of cartilage. Name this glycosaminoglycan:

- a. Glycogen
- b. Heparin
- c. Arabinose

d. Chondroitin sulfate

e. Starch

583. A patient with a joint disorder was prescribed an ointment that contains as its active substance a certain glycosaminoglycan that is the most important component of cartilage. Name this glycosaminoglycan:

- a. Heparin
- b. Glycogen

- c. Starch
- d. Arabinose

e. Chondroitin sulfate

584. A patient with a malignant tumor suffers from significant weight loss and exhaustion, caused by a certain substance that inhibits the hunger center and stimulates catabolism. Name this substance.

- a. Glucagon
- b. Insulin

c. Cachexin

- d. Aldosterone
- e. Somatotropin

585. A patient with a malignant tumor suffers from significant weight loss and exhaustion, caused by a certain substance that inhibits the hunger center and stimulates catabolism. Name this substance.

- a. Glucagon
- b. Somatotropin
- c. Insulin
- d. Aldosterone

e. Cachexin

586. A patient with a malignant tumor suffers from significant weight loss and exhaustion, caused by a certain substance that inhibits the hunger center and stimulates catabolism. Name this substance.

- a. Insulin

b. Cachexin

- c. Glucagon
- d. Somatotropin
- e. Aldosterone

587. A patient with a small cut on the palm came to the dispensing chemist. What antiseptic would be advisable in this case?

a. Hydrogen peroxide

- b. Flemoxin (Amoxicillin)
- c. Lidocaine hydrochloride
- d. Ketoconazole
- e. Doxycycline hydrochloride

588. A patient with a small cut on the palm came to the dispensing chemist. What antiseptic would be advisable in this case?

- a. Doxycycline hydrochloride

b. Hydrogen peroxide

- c. Flemoxin (Amoxicillin)
- d. Lidocaine hydrochloride
- e. Ketoconazole

589. A patient with a small cut on the palm came to the dispensing chemist. What antiseptic would be advisable in this case?

- a. Ketoconazole
- b. Doxycycline hydrochloride
- c. Lidocaine hydrochloride
- d. Flemoxin (Amoxicillin)

e. Hydrogen peroxide

590. A patient with acute cardiac failure was prescribed an adrenoceptor agonist. Name this drug:

- a. Corglycon (Convallariae glycoside)
- b. Metoprolol
- c. Digoxin

d. Dobutamine

- e. Salbutamol

591. A patient with acute cardiac failure was prescribed an adrenoceptor agonist. Name this drug:

- a. Metoprolol
- b. Corglycon (Convallariae glycoside)
- c. Salbutamol

d. Digoxin

e. Dobutamine

592. A patient with acute cardiac failure was prescribed an adrenoceptor agonist. Name this drug:

a. Metoprolol

b. Digoxin

c. Corglycon (Convallariae glycoside)

d. Salbutamol

e. Dobutamine

593. A patient with acute cardiac infarction was undergoing anticoagulant therapy with inhibitor of antithrombin III that prevents intravascular blood clotting. Name the compound with anticoagulating effect:

a. Chondroitin sulfate

b. Heparin

c. Hyaluronic acid

d. Tetracycline

e. Histamine

594. A patient with acute cardiac infarction was undergoing anticoagulant therapy with inhibitor of antithrombin III that prevents intravascular blood clotting. Name the compound with anticoagulating effect:

a. Histamine

b. Hyaluronic acid

c. Tetracycline

d. Heparin

e. Chondroitin sulfate

595. A patient with acute myocardial infarction received anticoagulation therapy. What compound will have anticoagulation effect?

a. Chondroitin sulfate

b. Keratan sulfate

c. Heparin

d. Dermatan sulfate

e. Hyaluronic acid

596. A patient with acute myocardial infarction received anticoagulation therapy. What compound will have anticoagulation effect?

a. Dermatan sulfate

b. Keratan sulfate

c. Heparin

d. Chondroitin sulfate

e. Hyaluronic acid

597. A patient with acute myocardial infarction received anticoagulation therapy. What compound will have anticoagulation effect?

a. Hyaluronic acid

b. Chondroitin sulfate

c. Heparin

d. Dermatan sulfate

e. Keratan sulfate

598. A patient with acute renal failure in the polyuria stage has azotemia that not only did not decrease, but continues to deteriorate. What caused polyuria in this case?

a. Increased filtration

b. Decreased reabsorption

c. Increased secretion

d. Decreased filtration

e. Increased reabsorption

599. A patient with acute renal failure in the polyuria stage has azotemia that not only did not decrease, but continues to deteriorate. What caused polyuria in this case?

a. Increased reabsorption

b. Increased secretion

c. Decreased reabsorption

d. Increased filtration

e. Decreased filtration

600. A patient with acute renal failure in the polyuria stage has azotemia that not only did not decrease, but continues to deteriorate. What caused polyuria in this case?

a. Increased secretion

b. Increased filtration

c. Decreased reabsorption

d. Decreased filtration

e. Increased reabsorption

601. A patient with allergic dermatitis came to the hospital. What anti-inflammatory and anti-allergic drug must be prescribed in this case?

a. Ethamide

b. Insulin

c. Retabolil (Nandrolone)

d. Prednisolone

e. Oxytocin

602. A patient with allergic dermatitis came to the hospital. What anti-inflammatory and anti-allergic drug must be prescribed in this case?

a. Retabolil (Nandrolone)

b. Prednisolone

c. Ethamide

d. Insulin

e. Oxytocin

603. A patient with allergic dermatitis came to the hospital. What anti-inflammatory and anti-allergic drug must be prescribed in this case?

a. Retabolil (Nandrolone)

b. Ethamide

c. Prednisolone

d. Oxytocin

e. Insulin

604. A patient with arterial hypertension has been taking a beta-adrenergic blocker for a long time. When his condition improved he abruptly stopped taking the drug, which resulted in sharp elevation of his blood pressure. Name this type of therapy complication:

a. Bradycardia

b. Drug tolerance

c. Dysbiosis

d. Withdrawal syndrome

e. Bronchospasm

605. A patient with arterial hypertension has been taking a beta-adrenergic blocker for a long time. When his condition improved he abruptly stopped taking the drug, which resulted in sharp elevation of his blood pressure. Name this type of therapy complication:

a. Drug tolerance

b. Bradycardia

c. Withdrawal syndrome

d. Bronchospasm

e. Dysbiosis

606. A patient with arterial hypertension has been taking a beta-adrenergic blocker for a long time. When his condition improved he abruptly stopped taking the drug, which resulted in sharp elevation of his blood pressure. Name this type of therapy complication:

a. Drug tolerance

b. Bronchospasm

c. Bradycardia

d. Dysbiosis

e. Withdrawal syndrome

607. A patient with arthritis of the knee had been prescribed a certain drug for pain management. With time this drug provoked development of peptic ulcer disease of the stomach in this patient.

Name this drug:

a. Fentanyl

b. Diclofenac sodium

c. Diazepam

d. Novocaine

e. Phenobarbital

608. A patient with arthritis of the knee had been prescribed a certain drug for pain management. With time this drug provoked development of peptic ulcer disease of the stomach in this patient.

Name this drug:

a. Fentanyl

b. Diazepam

c. Novocaine

d. Phenobarbital

e. Diclofenac sodium

609. A patient with arthritis of the knee had been prescribed a certain drug for pain management. With time this drug provoked development of peptic ulcer disease of the stomach in this patient.

Name this drug:

a. Phenobarbital

b. Fentanyl

c. Diazepam

d. Novocaine

e. Diclofenac sodium

610. A patient with atherosclerosis was prescribed an antiatherosclerotic agent. Name this drug:

a. Fenofibrate

b. Dexamethasone

c. Piracetam

d. Ascorbic acid

e. Butadion (Phenylbutazone)

611. A patient with atherosclerosis was prescribed an antiatherosclerotic agent. Name this drug:

a. Dexamethasone

b. Fenofibrate

c. Ascorbic acid

d. Butadion (Phenylbutazone)

e. Piracetam

612. A patient with atherosclerosis was prescribed an antiatherosclerotic agent. Name this drug:

a. Piracetam

b. Butadion (Phenylbutazone)

c. Ascorbic acid

d. Dexamethasone

e. Fenofibrate

613. A patient with bronchial asthma and pulmonary emphysema presents with dyspnea, sensation of lack of air. What type of hypoxia does this patient have?

a. Respiratory

b. Circulatory

c. Hemic

d. Exogenic

e. Tissue

614. A patient with bronchial asthma and pulmonary emphysema presents with dyspnea, sensation of lack of air. What type of hypoxia does this patient have?

a. Circulatory

b. Respiratory

c. Hemic

- d. Tissue
- e. Exogenic

615. A patient with bronchial asthma and pulmonary emphysema presents with dyspnea, sensation of lack of air. What type of hypoxia does this patient have?

- a. Tissue
- b. Hemic
- c. Respiratory**
- d. Exogenic
- e. Circulatory

616. A patient with bronchial asthma had been prescribed salbutamol, which led to disappearance of bronchospasm symptoms. It happened due to stimulation of:

- a. beta_2-adrenoreceptors**
- b. beta_1-adrenoreceptors
- c. Muscarinic acetylcholine receptors
- d. Acetylcholine synthesis
- e. alpha_1-adrenoreceptors

617. A patient with bronchial asthma had been prescribed salbutamol, which led to disappearance of bronchospasm symptoms. It happened due to stimulation of:

- a. alpha_1-adrenoreceptors**
- b. beta_2-adrenoreceptors**
- c. Muscarinic acetylcholine receptors
- d. beta_1-adrenoreceptors
- e. Acetylcholine synthesis

618. A patient with bronchial asthma had been prescribed salbutamol, which led to disappearance of bronchospasm symptoms. It happened due to stimulation of:

- a. beta_1-adrenoreceptors
- b. Muscarinic acetylcholine receptors
- c. Acetylcholine synthesis
- d. beta_2-adrenoreceptors**
- e. alpha_1-adrenoreceptors

619. A patient with bronchial asthma was prescribed a drug to stop an attack of the disease. The drug's mechanism of action is based on stimulation of beta_2-adrenergic receptors primarily. Name this drug:

- a. Clophelin (Clonidine)
- b. Epinephrine hydrochloride
- c. Isadrine (Isoprenaline)
- d. Droperidol
- e. Salbutamol**

620. A patient with bronchial asthma was prescribed a drug to stop an attack of the disease. The drug's mechanism of action is based on stimulation of beta_2-adrenergic receptors primarily. Name this drug:

- a. Epinephrine hydrochloride
- b. Clophelin (Clonidine)
- c. Salbutamol**
- d. Droperidol
- e. Isadrine (Isoprenaline)

621. A patient with bronchial asthma was prescribed a drug to stop an attack of the disease. The drug's mechanism of action is based on stimulation of beta_2-adrenergic receptors primarily. Name this drug:

- a. Isadrine (Isoprenaline)
- b. Droperidol
- c. Salbutamol**
- d. Clophelin (Clonidine)
- e. Epinephrine hydrochloride

622. A patient with bronchial asthma was prescribed a drug with the mechanism of action that is

primarily based on the stimulation of beta₂ adrenergic receptors. Name this drug:

a. Salbutamol

- b. Adrenaline hydrochloride
- c. Droperidol
- d. Clonidine
- e. Isadrine (Isoprenaline)

623. A patient with bronchial asthma was prescribed a drug with the mechanism of action that is primarily based on the stimulation of beta₂ adrenergic receptors. Name this drug:

- a. Adrenaline hydrochloride
- b. Isadrine (Isoprenaline)
- c. Clonidine
- d. Droperidol

e. Salbutamol

624. A patient with bronchial asthma was prescribed a drug with the mechanism of action that is primarily based on the stimulation of beta₂ adrenergic receptors. Name this drug:

- a. Droperidol
- b. Adrenaline hydrochloride
- c. Clonidine
- d. Isadrine (Isoprenaline)

e. Salbutamol

625. A patient with bronchitis was taking doxycycline hydrochloride. What side effects can develop in the patient after the patient has been taking this drug for some time?

- a. Euphoria, tolerance
- b. Hypotension, vertigo

c. Diarrhea, hepatitis

- d. Withdrawal, dependence
- e. Hypertension, arrhythmia

626. A patient with bronchitis was taking doxycycline hydrochloride. What side effects can develop in the patient after the patient has been taking this drug for some time?

- a. Hypertension, arrhythmia
- b. Withdrawal, dependence

c. Diarrhea, hepatitis

- d. Euphoria, tolerance
- e. Hypotension, vertigo

627. A patient with bronchitis was taking doxycycline hydrochloride. What side effects can develop in the patient after the patient has been taking this drug for some time?

- a. Hypotension, vertigo
- b. Hypertension, arrhythmia

c. Diarrhea, hepatitis

- d. Withdrawal, dependence
- e. Euphoria, tolerance

628. A patient with chronic constipation has been prescribed bisacodyl. After 3 weeks of treatment, the patient noticed a reduction of laxative effect. This is caused by the development of the following side-effect:

a. Habituation

- b. Dysbacteriosis
- c. Sensibilization
- d. Cumulation
- e. Dependence

629. A patient with chronic constipation has been prescribed bisacodyl. After 3 weeks of treatment, the patient noticed a reduction of laxative effect. This is caused by the development of the following side-effect:

- a. Cumulation
- b. Dependence
- c. Sensibilization

d. Habituation

e. Dysbacteriosis

630. A patient with chronic constipation has been prescribed bisacodyl. After 3 weeks of treatment, the patient noticed a reduction of laxative effect. This is caused by the development of the following side-effect:

a. Sensibilization

b. Habituation

c. Dysbacteriosis

d. Dependence

e. Cumulation

631. A patient with current coronary heart disease who has had two myocardial infarctions of left ventricular wall presents with bubbling breathing and dyspnea. Pulmonary auscultation reveals moist crackles. What kind of heart failure is it?

a. Compensated

b. Subcompensated

c. Left ventricular

d. Combined

e. Right ventricular

632. A patient with current coronary heart disease who has had two myocardial infarctions of left ventricular wall presents with bubbling breathing and dyspnea. Pulmonary auscultation reveals moist crackles. What kind of heart failure is it?

a. Right ventricular

b. Subcompensated

c. Left ventricular

d. Compensated

e. Combined

633. A patient with current coronary heart disease who has had two myocardial infarctions of left ventricular wall presents with bubbling breathing and dyspnea. Pulmonary auscultation reveals moist crackles. What kind of heart failure is it?

a. Subcompensated

b. Left ventricular

c. Combined

d. Compensated

e. Right ventricular

634. A patient with diabetes mellitus presents with thirst, polyuria, and dry skin and mucosa. These signs are caused by the elevated levels of the following substance in the patient's blood:

a. Adrenaline

b. Glucose

c. Cholesterol

d. Phenylalanine

e. Urates (uric acid salts)

635. A patient with diabetes mellitus presents with thirst, polyuria, and dry skin and mucosa. These signs are caused by the elevated levels of the following substance in the patient's blood:

a. Phenylalanine

b. Cholesterol

c. Adrenaline

d. Urates (uric acid salts)

e. Glucose

636. A patient with diabetes mellitus presents with thirst, polyuria, and dry skin and mucosa. These signs are caused by the elevated levels of the following substance in the patient's blood:

a. Urates (uric acid salts)

b. Cholesterol

c. Glucose

d. Adrenaline

e. Phenylalanine

637. A patient with epilepsy was prescribed sodium valproate. What is the mechanism of action of this drug?

- a. Stimulation of alpha-adrenergic receptors
- b. Increasing GABA levels in the brain**
- c. Stimulation of opioid receptors
- d. Stimulation of beta-adrenergic receptors
- e. Stimulation of butyrylcholinesterase activity

638. A patient with epilepsy was prescribed sodium valproate. What is the mechanism of action of this drug?

- a. Stimulation of beta-adrenergic receptors
- b. Stimulation of butyrylcholinesterase activity
- c. Increasing GABA levels in the brain**
- d. Stimulation of opioid receptors
- e. Stimulation of alpha-adrenergic receptors

639. A patient with epilepsy was prescribed sodium valproate. What is the mechanism of action of this drug?

- a. Stimulation of butyrylcholinesterase activity
- b. Stimulation of opioid receptors
- c. Stimulation of alpha-adrenergic receptors
- d. Stimulation of beta-adrenergic receptors
- e. Increasing GABA levels in the brain**

640. A patient with essential hypertension has been prescribed a drug with an antianginal, hypotensive, and antiarrhythmic effect. Name this drug.

- a. Metoprolol**
- b. Clonidine
- c. Fenoterol
- d. Epinephrine
- e. Dopamine hydrochloride

641. A patient with essential hypertension has been prescribed a drug with an antianginal, hypotensive, and antiarrhythmic effect. Name this drug.

- a. Epinephrine
- b. Clonidine
- c. Metoprolol**
- d. Fenoterol
- e. Dopamine hydrochloride

642. A patient with essential hypertension has been prescribed a drug with an antianginal, hypotensive, and antiarrhythmic effect. Name this drug.

- a. Epinephrine
- b. Dopamine hydrochloride
- c. Metoprolol**
- d. Clonidine
- e. Fenoterol

643. A patient with essential hypertension has elevated plasma renin levels. What pharmacological group of medicines is preferable in the treatment of this patient?

- a. ACE inhibitors**
- b. Diuretics
- c. Alpha-blockers
- d. Calcium ion antagonists
- e. Sympatholytics

644. A patient with essential hypertension has elevated plasma renin levels. What pharmacological group of medicines is preferable in the treatment of this patient?

- a. Alpha-blockers
- b. Calcium ion antagonists
- c. Sympatholytics
- d. Diuretics

e. ACE inhibitors

645. A patient with essential hypertension has elevated plasma renin levels. What pharmacological group of medicines is preferable in the treatment of this patient?

- a. Diuretics
- b. Alpha-blockers
- c. Sympatholytics
- d. Calcium ion antagonists

e. ACE inhibitors

646. A patient with essential hypertension is prescribed captopril. What is the mechanism of action of this drug?

- a. Angiotensin II receptor block
- b. Inhibition of angiotensin-converting enzyme activity**
- c. Slow calcium channel block
- d. alpha-adrenoceptor block
- e. beta-adrenoceptor block

647. A patient with essential hypertension is prescribed captopril. What is the mechanism of action of this drug?

- a. Slow calcium channel block
- b. Angiotensin II receptor block
- c. Inhibition of angiotensin-converting enzyme activity**
- d. beta-adrenoceptor block
- e. alpha-adrenoceptor block

648. A patient with essential hypertension is prescribed captopril. What is the mechanism of action of this drug?

- a. Slow calcium channel block
- b. beta-adrenoceptor block
- c. alpha-adrenoceptor block
- d. Angiotensin II receptor block
- e. Inhibition of angiotensin-converting enzyme activity**

649. A patient with essential hypertension was prescribed a diuretic as a part of complex therapy. This diuretic caused hypokalemia in the patient. Name this diuretic:

- a. Hydrochlorothiazide**
- b. Triamterene
- c. Amiloride
- d. Spironolactone
- e. Allopurinol

650. A patient with essential hypertension was prescribed a diuretic as a part of complex therapy. This diuretic caused hypokalemia in the patient. Name this diuretic:

- a. Allopurinol
- b. Hydrochlorothiazide**
- c. Spironolactone
- d. Amiloride
- e. Triamterene

651. A patient with essential hypertension was prescribed a diuretic as a part of complex therapy. This diuretic caused hypokalemia in the patient. Name this diuretic:

- a. Allopurinol
- b. Triamterene
- c. Amiloride
- d. Hydrochlorothiazide**
- e. Spironolactone

652. A patient with food poisoning, accompanied by diarrhea and multiple episodes of vomiting, developed dehydration. What type of total blood volume disorder can be observed in this case?

- a. Normocythemich hypovolemia
- b. Polycythemich hypovolemia**
- c. Oligocythemich hypovolemia

d. Polycythemic hypervolemia

e. Oligocytemic hypervolemia

653. A patient with food poisoning, accompanied by diarrhea and multiple episodes of vomiting, developed dehydration. What type of total blood volume disorder can be observed in this case?

a. Normocythemic hypovolemia

b. Oligocytemic hypervolemia

c. Polycythemic hypovolemia

d. Polycythemic hypervolemia

e. Oligocytemic hypovolemia

654. A patient with food poisoning, accompanied by diarrhea and multiple episodes of vomiting, developed dehydration. What type of total blood volume disorder can be observed in this case?

a. Oligocythemic hypovolemia

b. Polycythemic hypervolemia

c. Oligocytemic hypervolemia

d. Normocythemic hypovolemia

e. Polycythemic hypovolemia

655. A patient with frequent recurrent chronic bronchitis is prescribed a sulfanilamide drug. This drug is an analog of the following compound:

a. Citric acid

b. P-aminobenzoic acid

c. Formic acid

d. Lactic acid

e. Uric acid

656. A patient with frequent recurrent chronic bronchitis is prescribed a sulfanilamide drug. This drug is an analog of the following compound:

a. Citric acid

b. Uric acid

c. Lactic acid

d. P-aminobenzoic acid

e. Formic acid

657. A patient with frequent recurrent chronic bronchitis is prescribed a sulfanilamide drug. This drug is an analog of the following compound:

a. Lactic acid

b. Uric acid

c. Formic acid

d. P-aminobenzoic acid

e. Citric acid

658. A patient with gastric carcinoma has undergone several courses of radiation therapy. What system is the first to become functionally disturbed after the body was exposed to ionizing radiation?

a. Respiratory

b. Blood

c. Urinary

d. Digestive

e. Nervous

659. A patient with gastric carcinoma has undergone several courses of radiation therapy. What system is the first to become functionally disturbed after the body was exposed to ionizing radiation?

a. Urinary

b. Blood

c. Nervous

d. Digestive

e. Respiratory

660. A patient with gastric carcinoma has undergone several courses of radiation therapy. What system is the first to become functionally disturbed after the body was exposed to ionizing radiation?

a. Urinary

b. Blood

- c. Nervous
- d. Respiratory
- e. Digestive

661. A patient with gingivitis was prescribed oral cavity irrigation with 0.02% potassium permanganate solution. What group of antiseptics does this drug belong to?

- a. Oxidants**
- b. Nitrofurans
- c. Dyes
- d. Alcohols
- e. Detergents

662. A patient with gingivitis was prescribed oral cavity irrigation with 0.02% potassium permanganate solution. What group of antiseptics does this drug belong to?

- a. Nitrofurans
- b. Oxidants**
- c. Detergents
- d. Dyes
- e. Alcohols

663. A patient with gingivitis was prescribed oral cavity irrigation with 0.02% potassium permanganate solution. What group of antiseptics does this drug belong to?

- a. Nitrofurans
- b. Alcohols
- c. Dyes
- d. Oxidants**
- e. Detergents

664. A patient with gout was prescribed allopurinol - a competitive inhibitor of xanthine oxidase. Xanthine oxidase is a terminal enzyme of catabolism of:

- a. Purine nucleotides**
- b. Higher fatty acids
- c. Phospholipids
- d. Glycoproteins
- e. Heteropolysaccharides

665. A patient with gout was prescribed allopurinol - a competitive inhibitor of xanthine oxidase. Xanthine oxidase is a terminal enzyme of catabolism of:

- a. Heteropolysaccharides
- b. Glycoproteins
- c. Purine nucleotides**
- d. Phospholipids
- e. Higher fatty acids

666. A patient with gout was prescribed allopurinol - a competitive inhibitor of xanthine oxidase. Xanthine oxidase is a terminal enzyme of catabolism of:

- a. Higher fatty acids
- b. Glycoproteins
- c. Heteropolysaccharides
- d. Phospholipids
- e. Purine nucleotides**

667. A patient with heart failure has developed acute edematous syndrome. What drug should be prescribed to make the edemas recede?

- a. Nitroglycerine
- b. Furosemide**
- c. Nifedipine
- d. Panangin (Potassium aspartate and magnesium aspartate)
- e. Propranolol

668. A patient with heart failure has developed acute edematous syndrome. What drug should be prescribed to make the edemas recede?

- a. Nitroglycerine**

b. Furosemide

- c. Nifedipine
- d. Propranolol
- e. Panangin (Potassium aspartate and magnesium aspartate)

669. A patient with heart failure has developed acute edematous syndrome. What drug should be prescribed to make the edemas recede?

- a. Nitroglycerine
- b. Propranolol

c. Furosemide

- d. Panangin (Potassium aspartate and magnesium aspartate)
- e. Nifedipine

670. A patient with high fever and pain in throat when swallowing is diagnosed with tonsillitis. Which of the listed symptoms is a local feature of acute inflammation?

- a. Increased ESR
- b. Fever

c. Reddening

- d. Leukocytosis
- e. Tachycardia

671. A patient with high fever and pain in throat when swallowing is diagnosed with tonsillitis. Which of the listed symptoms is a local feature of acute inflammation?

- a. Leukocytosis
- b. Increased ESR

c. Reddening

- d. Fever
- e. Tachycardia

672. A patient with high fever and pain in throat when swallowing is diagnosed with tonsillitis. Which of the listed symptoms is a local feature of acute inflammation?

- a. Tachycardia

b. Reddening

- c. Fever
- d. Leukocytosis
- e. Increased ESR

673. A patient with high risk of hemorrhages is recommended to take vicasol (menadione) by his physician. This drug is the structural analog of:

a. Vitamin K

- b. Vitamin B₅
- c. Vitamin A
- d. Vitamin B₆
- e. Vitamin B₁₂

674. A patient with high risk of hemorrhages is recommended to take vicasol (menadione) by his physician. This drug is the structural analog of:

- a. Vitamin B₅
- b. Vitamin A

c. Vitamin K

- d. Vitamin B₆
- e. Vitamin B₁₂

675. A patient with high risk of hemorrhages is recommended to take vicasol (menadione) by his physician. This drug is the structural analog of:

- a. Vitamin B₅
- b. Vitamin B₁₂
- c. Vitamin B₆

d. Vitamin K

- e. Vitamin A

676. A patient with hyperproduction of thyroid hormones has been prescribed Merkazolilum. This drug inhibits the following enzyme of iodothyronine synthesis:

- a. Aromatase
- b. Reductase
- c. Iodide peroxidase**
- d. Aminotransferase
- e. Decarboxylase

677. A patient with hyperproduction of thyroid hormones has been prescribed Merkazolilum. This drug inhibits the following enzyme of iodothyronine synthesis:

- a. Reductase
- b. Decarboxylase

- c. Iodide peroxidase**
- d. Aminotransferase
- e. Aromatase

678. A patient with hyperproduction of thyroid hormones has been prescribed Merkazolilum. This drug inhibits the following enzyme of iodothyronine synthesis:

- a. Reductase
- b. Decarboxylase

- c. Iodide peroxidase**
- d. Aromatase
- e. Aminotransferase

679. A patient with hypertension has been prescribed a drug that blocks angiotensin receptors. Specify this drug:

- a. Captopril
- b. Aprestin
- c. Nifedipine
- d. Prazosin

- e. Losartan**

680. A patient with hypertension has been prescribed a drug that blocks angiotensin receptors. Specify this drug:

- a. Prazosin
- b. Captopril
- c. Nifedipine

- d. Losartan**
- e. Aprestin

681. A patient with hypertension has been prescribed a drug that blocks angiotensin receptors. Specify this drug:

- a. Prazosin
- b. Nifedipine
- c. Aprestin

- d. Losartan**
- e. Captopril

682. A patient with mushroom poisoning has developed the following symptoms: yellow coloring of skin and sclera, dark-coloured urine. Hemolytic jaundice was diagnosed. What pigment causes such colouring of the patient's urine?

- a. Stercobilin**
- b. Biliverdin
- c. Verdohemoglobin
- d. Conjugated bilirubin
- e. Unconjugated bilirubin

683. A patient with mushroom poisoning has developed the following symptoms: yellow coloring of skin and sclera, dark-coloured urine. Hemolytic jaundice was diagnosed. What pigment causes such colouring of the patient's urine?

- a. Biliverdin
- b. Verdohemoglobin
- c. Conjugated bilirubin
- d. Stercobilin**

e. Unconjugated bilirubin

684. A patient with mushroom poisoning has developed the following symptoms: yellow coloring of skin and sclera, dark-coloured urine. Hemolytic jaundice was diagnosed. What pigment causes such colouring of the patient's urine?

a. Verdohemoglobin

b. Stercobilin

c. Biliverdin

d. Unconjugated bilirubin

e. Conjugated bilirubin

685. A patient with myxedema was recommended substitution therapy. What hormones are used for this purpose?

a. Androgens

b. Estrogens

c. Mineralocorticoids

d. Thyroid hormones

e. Glucocorticoids

686. A patient with myxedema was recommended substitution therapy. What hormones are used for this purpose?

a. Androgens

b. Glucocorticoids

c. Mineralocorticoids

d. Estrogens

e. Thyroid hormones

687. A patient with myxedema was recommended substitution therapy. What hormones are used for this purpose?

a. Mineralocorticoids

b. Estrogens

c. Thyroid hormones

d. Glucocorticoids

e. Androgens

688. A patient with neuritis takes diazepam. To relieve joint pain, he was prescribed an analgesic in a dose lower than the average therapeutic dose. What phenomenon did the doctor take into account when reducing the dose of the analgesic?

a. Summation

b. Drug addiction

c. Tolerance

d. Material cumulation

e. Potentiation

689. A patient with neuritis takes diazepam. To relieve joint pain, he was prescribed an analgesic in a dose lower than the average therapeutic dose. What phenomenon did the doctor take into account when reducing the dose of the analgesic?

a. Tolerance

b. Drug addiction

c. Summation

d. Material cumulation

e. Potentiation

690. A patient with neuritis takes diazepam. To relieve joint pain, he was prescribed an analgesic in a dose lower than the average therapeutic dose. What phenomenon did the doctor take into account when reducing the dose of the analgesic?

a. Tolerance

b. Summation

c. Material cumulation

d. Potentiation

e. Drug addiction

691. A patient with neurosis suffers from fear and emotional tension. To relieve these symptoms a

doctor prescribed the following drug:

a. Diazepam

- b. Nootropil (Pyracetam)
- c. Sydnocarb (Mesocarb)
- d. Caffeine
- e. Lithium carbonate

692. A patient with neurosis suffers from fear and emotional tension. To relieve these symptoms a doctor prescribed the following drug:

a. Lithium carbonate

b. Diazepam

- c. Sydnocarb (Mesocarb)
- d. Nootropil (Pyracetam)
- e. Caffeine

693. A patient with neurosis suffers from fear and emotional tension. To relieve these symptoms a doctor prescribed the following drug:

- a. Sydnocarb (Mesocarb)
- b. Caffeine

c. Diazepam

- d. Nootropil (Pyracetam)
- e. Lithium carbonate

694. A patient with peptic ulcer disease of the duodenum was taking a histamine H₂ receptor blocker. Which one of the listed drugs belongs to this group?

a. Famotidine

- b. Omeprazole
- c. Allochol
- d. Mebeverine
- e. Pirenzepine

695. A patient with peptic ulcer disease of the duodenum was taking a histamine H₂ receptor blocker. Which one of the listed drugs belongs to this group?

a. Omeprazole

b. Famotidine

- c. Mebeverine
- d. Allochol
- e. Pirenzepine

696. A patient with peptic ulcer disease of the duodenum was taking a histamine H₂ receptor blocker. Which one of the listed drugs belongs to this group?

- a. Pirenzepine
- b. Mebeverine
- c. Allochol
- d. Omeprazole

e. Famotidine

697. A patient with peptic ulcer of duodenum was taking a histamine H₂-receptor antagonist. What drug of those given below belongs to this group?

- a. Gastrozepin (Pirenzepine)
- b. Almagel (algedrate + magnesium hydroxide)

c. Famotidine

- d. Omeprazole
- e. Allochol

698. A patient with peptic ulcer of duodenum was taking a histamine H₂-receptor antagonist. What drug of those given below belongs to this group?

- a. Gastrozepin (Pirenzepine)
- b. Omeprazole
- c. Allochol

d. Famotidine

- e. Almagel (algedrate + magnesium hydroxide)

699. A patient with peptic ulcer of duodenum was taking a histamine H₂-receptor antagonist. What drug of those given below belongs to this group?

a. Omeprazole

b. Famotidine

c. Almagel (algedrate + magnesium hydroxide)

d. Allochol

e. Gastrozepin (Pirenzepine)

700. A patient with primary hypertension is prescribed captopril. What is this drug's mechanism of action?

a. Angiotensin II receptors block

b. Block of slow calcium channels

c. Inhibition of angiotensin converting enzyme activity

d. beta-adrenergic block

e. alpha-adrenergic block

701. A patient with primary hypertension is prescribed captopril. What is this drug's mechanism of action?

a. Angiotensin II receptors block

b. Block of slow calcium channels

c. alpha-adrenergic block

d. beta-adrenergic block

e. Inhibition of angiotensin converting enzyme activity

702. A patient with primary hypertension is prescribed captopril. What is this drug's mechanism of action?

a. beta-adrenergic block

b. Block of slow calcium channels

c. Angiotensin II receptors block

d. alpha-adrenergic block

e. Inhibition of angiotensin converting enzyme activity

703. A patient with signs of cardiac glycosides intoxication was prescribed Unithiol. What is the mechanism of drug action in this case?

a. Reactivation of membrane K⁺, Na⁺ -adenosine triphosphatase

b. Increased Na⁺ content in the myocardium

c. Increased inflow of K⁺ to cardiomyocytes

d. Binding of ionized Ca²⁺

e. Induction of cardiac glycoside metabolism

704. A patient with signs of cardiac glycosides intoxication was prescribed Unithiol. What is the mechanism of drug action in this case?

a. Reactivation of membrane K⁺, Na⁺ -adenosine triphosphatase

b. Induction of cardiac glycoside metabolism

c. Increased inflow of K⁺ to cardiomyocytes

d. Binding of ionized Ca²⁺

e. Increased Na⁺ content in the myocardium

705. A patient with signs of cardiac glycosides intoxication was prescribed Unithiol. What is the mechanism of drug action in this case?

a. Increased Na⁺ content in the myocardium

b. Induction of cardiac glycoside metabolism

c. Binding of ionized Ca²⁺

d. Increased inflow of K⁺ to cardiomyocytes

e. Reactivation of membrane K⁺, Na⁺ -adenosine triphosphatase

706. A patient with symptoms of cardiac glycosides intoxication is prescribed Unithiol (Dimercaprol). What is the drug's mechanism of action?

a. Binding ionized Ca²⁺

b. Increase of Na⁺ content in myocardium

c. Induction of cardiac glycosides metabolism

d. Increase of K⁺ penetration of myocardiocytes

e. Reactivation of membrane K^+ , Na^+ -adenosinetriphosphatase

707. A patient with symptoms of cardiac glycosides intoxication is prescribed Unithiol (Dimercaprol). What is the drug's mechanism of action?

- a. Increase of K^+ penetration of myocardiocytes
- b. Increase of Na^+ content in myocardium
- c. Binding ionized Ca^{2+}
- d. Induction of cardiac glycosides metabolism

e. Reactivation of membrane K^+ , Na^+ -adenosinetriphosphatase

708. A patient with symptoms of cardiac glycosides intoxication is prescribed Unithiol (Dimercaprol). What is the drug's mechanism of action?

- a. Induction of cardiac glycosides metabolism
- b. Binding ionized Ca^{2+}

c. Reactivation of membrane K^+ , Na^+ -adenosinetriphosphatase

- d. Increase of K^+ penetration of myocardiocytes
- e. Increase of Na^+ content in myocardium

709. A patient with tuberculosis developed impaired hearing after a long-term treatment with an antibiotic. What drug had an ototoxic effect in this case?

a. Ampicillin

b. Streptomycin

- c. Abaktal (Pefloxacin)
- d. Benzylpenicillin
- e. Ceftriaxone

710. A patient with tuberculosis developed impaired hearing after a long-term treatment with an antibiotic. What drug had an ototoxic effect in this case?

- a. Ampicillin
- b. Benzylpenicillin
- c. Ceftriaxone

d. Streptomycin

e. Abaktal (Pefloxacin)

711. A patient with tuberculosis developed impaired hearing after a long-term treatment with an antibiotic. What drug had an ototoxic effect in this case?

- a. Ceftriaxone
- b. Abaktal (Pefloxacin)

c. Streptomycin

- d. Benzylpenicillin
- e. Ampicillin

712. A patient with tuberculosis has been prescribed some anti-tuberculosis preparations. Which of the following chemotherapeutic drugs has an effect on the tuberculosis pathogen?

a. Ftivazide

- b. Furacilinum
- c. Sulfadimezinum
- d. Phthalylsulfathiazole
- e. Methisazonum

713. A patient with tuberculosis has been prescribed some anti-tuberculosis preparations. Which of the following chemotherapeutic drugs has an effect on the tuberculosis pathogen?

a. Ftivazide

- b. Sulfadimezinum
- c. Furacilinum
- d. Methisazonum
- e. Phthalylsulfathiazole

714. A patient with tuberculosis has been prescribed some anti-tuberculosis preparations. Which of the following chemotherapeutic drugs has an effect on the tuberculosis pathogen?

a. Ftivazide

- b. Sulfadimezinum
- c. Methisazonum

- d. Furacilinum
- e. Phthalylsulfathiazole

715. A patient with tuberculosis has developed impaired hearing after a long-term antibiotic treatment. What drug has caused such an ototoxic effect in this case?

a. Streptomycin

- b. Benzylpenicillin
- c. Ceftriaxone
- d. Pefloxacin
- e. Ampicillin

716. A patient with tuberculosis has developed impaired hearing after a long-term antibiotic treatment. What drug has caused such an ototoxic effect in this case?

a. Streptomycin

- b. Benzylpenicillin
- c. Pefloxacin
- d. Ampicillin
- e. Ceftriaxone

717. A patient with tuberculosis has developed impaired hearing after a long-term antibiotic treatment. What drug has caused such an ototoxic effect in this case?

- a. Ampicillin
- b. Pefloxacin
- c. Benzylpenicillin
- d. Ceftriaxone

e. Streptomycin

718. A patient with type II diabetes mellitus was prescribed a synthetic drug that is a sulfonylurea derivative. Name this drug:

- a. Furosemide
- b. Prednisolone
- c. Anaprilin (Propranolol)
- d. Insulin

e. Glibenclamide

719. A patient with type II diabetes mellitus was prescribed a synthetic drug that is a sulfonylurea derivative. Name this drug:

- a. Prednisolone
- b. Anaprilin (Propranolol)
- c. Insulin

d. Glibenclamide

e. Furosemide

720. A patient with type II diabetes mellitus was prescribed a synthetic drug that is a sulfonylurea derivative. Name this drug:

- a. Prednisolone
- b. Insulin
- c. Anaprilin (Propranolol)
- d. Furosemide

e. Glibenclamide

721. A patient, who lives in the area with specific geochemical conditions, was diagnosed with endemic goiter. What microelement deficiency results in development of this pathology?

- a. Cl
- b. Na

c. I

- d. F
- e. Br

722. A patient, who lives in the area with specific geochemical conditions, was diagnosed with endemic goiter. What microelement deficiency results in development of this pathology?

a. F

b. I

- c. Cl
- d. Br
- e. Na

723. A patient, who lives in the area with specific geochemical conditions, was diagnosed with endemic goiter. What microelement deficiency results in development of this pathology?

- a. Na
- b. Br
- c. Cl
- d. F

e. I

724. A patient, who was prescribed famotidine to treat peptic ulcer disease, came to the pharmacy. What is this drug's mechanism of action?

a. H2-histamine receptor blockade

- b. Muscarinic receptor blockade
- c. H1-histamine receptor blockade
- d. Ganglionic receptor blockade
- e. Inhibition of hydrogen potassium ATPase

725. A patient, who was prescribed famotidine to treat peptic ulcer disease, came to the pharmacy. What is this drug's mechanism of action?

- a. Inhibition of hydrogen potassium ATPase
- b. H1-histamine receptor blockade
- c. Muscarinic receptor blockade
- d. Ganglionic receptor blockade

e. H2-histamine receptor blockade

726. A patient, who was prescribed famotidine to treat peptic ulcer disease, came to the pharmacy. What is this drug's mechanism of action?

- a. Inhibition of hydrogen potassium ATPase
- b. Muscarinic receptor blockade
- c. H1-histamine receptor blockade
- d. Ganglionic receptor blockade

e. H2-histamine receptor blockade

727. A perennial herbaceous plant has the following characteristic features: calyx with an epicalyx, double perianth, fused stamens with purple anthers, its fruit is a disc-like schizocarp. Name this plant.

a. *Althaea officinalis*

- b. *Melissa officinalis*
- c. *Hyoscyamus niger*
- d. *Amygdalus communis*
- e. *Polygonum persicaria*

728. A perennial herbaceous plant has the following characteristic features: calyx with an epicalyx, double perianth, fused stamens with purple anthers, its fruit is a disc-like schizocarp. Name this plant.

a. *Althaea officinalis*

- b. *Melissa officinalis*
- c. *Polygonum persicaria*
- d. *Amygdalus communis*
- e. *Hyoscyamus niger*

729. A perennial herbaceous plant has the following characteristic features: calyx with an epicalyx, double perianth, fused stamens with purple anthers, its fruit is a disc-like schizocarp. Name this plant.

a. *Polygonum persicaria*

b. *Althaea officinalis*

- c. *Melissa officinalis*
- d. *Amygdalus communis*
- e. *Hyoscyamus niger*

730. A person diagnosed with ischemic heart disease presents with stable angina pectoris, atherosclerosis, and elevated plasma lipids. What class of lipids plays the main role in the pathogenesis of atherosclerosis?

a. Fatty acid-albumin complexes

b. Low density lipoproteins

c. High density lipoproteins

d. Triglycerides

e. Chylomicrons

731. A person diagnosed with ischemic heart disease presents with stable angina pectoris, atherosclerosis, and elevated plasma lipids. What class of lipids plays the main role in the pathogenesis of atherosclerosis?

a. Fatty acid-albumin complexes

b. Low density lipoproteins

c. Triglycerides

d. Chylomicrons

e. High density lipoproteins

732. A person diagnosed with ischemic heart disease presents with stable angina pectoris, atherosclerosis, and elevated plasma lipids. What class of lipids plays the main role in the pathogenesis of atherosclerosis?

a. High density lipoproteins

b. Fatty acid-albumin complexes

c. Low density lipoproteins

d. Triglycerides

e. Chylomicrons

733. A person has been stung by a bee. The stung area developed redness and edema. What is the main mechanism of edema development in this case?

a. Decreased osmotic blood pressure

b. Increased permeability of the capillaries

c. Increased hydrostatic blood pressure

d. Disturbed lymphatic efflux

e. Decreased oncotic blood pressure

734. A person has been stung by a bee. The stung area developed redness and edema. What is the main mechanism of edema development in this case?

a. Decreased osmotic blood pressure

b. Disturbed lymphatic efflux

c. Increased hydrostatic blood pressure

d. Decreased oncotic blood pressure

e. Increased permeability of the capillaries

735. A person has been stung by a bee. The stung area developed redness and edema. What is the main mechanism of edema development in this case?

a. Increased hydrostatic blood pressure

b. Disturbed lymphatic efflux

c. Decreased oncotic blood pressure

d. Decreased osmotic blood pressure

e. Increased permeability of the capillaries

736. A person has extremely pale skin, white hair, and blue semi-transparent irises that under bright light assume a pink hue. These signs are caused by insufficient synthesis of the following in the patient's body:

a. Cholesterol

b. Glucose

c. Melanin

d. Serine

e. Phenylalanine

737. A person has extremely pale skin, white hair, and blue semi-transparent irises that under bright light assume a pink hue. These signs are caused by insufficient synthesis of the following in the patient's body:

a. Glucose

b. Phenylalanine

c. Serine

d. Melanin

e. Cholesterol

738. A person has extremely pale skin, white hair, and blue semi-transparent irises that under bright light assume a pink hue. These signs are caused by insufficient synthesis of the following in the patient's body:

a. Glucose

b. Serine

c. Melanin

d. Phenylalanine

e. Cholesterol

739. A person suffers from a chronic inflammatory process. In the focus of the inflammation, a certain biochemical process maintains the concentration of NADPH that is necessary for the phagocytosis mechanism to occur. What process is it?

a. Cori cycle

b. Ornithine cycle

c. Uric acid synthesis

d. Pentose phosphate pathway

e. Glycolysis

740. A person suffers from a chronic inflammatory process. In the focus of the inflammation, a certain biochemical process maintains the concentration of NADPH that is necessary for the phagocytosis mechanism to occur. What process is it?

a. Ornithine cycle

b. Pentose phosphate pathway

c. Uric acid synthesis

d. Cori cycle

e. Glycolysis

741. A person suffers from a chronic inflammatory process. In the focus of the inflammation, a certain biochemical process maintains the concentration of NADPH that is necessary for the phagocytosis mechanism to occur. What process is it?

a. Ornithine cycle

b. Glycolysis

c. Cori cycle

d. Pentose phosphate pathway

e. Uric acid synthesis

742. A person was hospitalized into the infectious department with the body temperature of 39°C , headache, and chills. Spiral-shaped microorganisms stained violet according to the Romanowsky-Giemsa technique were detected in the thick blood smear. What microorganisms were detected in the patient?

a. Borrelia

b. Leptospira

c. Treponema

d. Clostridia

e. Actinomycetes

743. A person was hospitalized into the infectious department with the body temperature of 39°C , headache, and chills. Spiral-shaped microorganisms stained violet according to the Romanowsky-Giemsa technique were detected in the thick blood smear. What microorganisms were detected in the patient?

a. Actinomycetes

b. Clostridia

c. Borrelia

d. Treponema

e. Leptospira

744. A person was hospitalized into the infectious department with the body temperature of 39°C , headache, and chills. Spiral-shaped microorganisms stained violet according to the

Romanowsky-Giemsa technique were detected in the thick blood smear. What microorganisms were detected in the patient?

- a. Leptospira
- b. Treponema
- c. Borrelia**
- d. Clostridia
- e. Actinomycetes

745. A person with a past history of acute myocardial infarction was recommended to take an antiaggregant that blocks platelet cyclooxygenase. What medicine can be classified as an antiaggregant?

- a. Abciximab
- b. Dipyridamole
- c. Acetylsalicylic acid**
- d. Clopidogrel
- e. Ticlopidine

746. A person with a past history of acute myocardial infarction was recommended to take an antiaggregant that blocks platelet cyclooxygenase. What medicine can be classified as an antiaggregant?

- a. Abciximab
- b. Ticlopidine
- c. Dipyridamole
- d. Acetylsalicylic acid**
- e. Clopidogrel

747. A person with a past history of acute myocardial infarction was recommended to take an antiaggregant that blocks platelet cyclooxygenase. What medicine can be classified as an antiaggregant?

- a. Dipyridamole
- b. Acetylsalicylic acid**
- c. Clopidogrel
- d. Ticlopidine
- e. Abciximab

748. A person with carbon monoxide poisoning (CO) presents with disturbed consciousness and high levels of carboxyhemoglobin in blood. What type of hypoxia does this patient have?

- a. Exogenic
- b. Respiratory
- c. Tissue
- d. Circulatory
- e. Hemic**

749. A person with carbon monoxide poisoning (CO) presents with disturbed consciousness and high levels of carboxyhemoglobin in blood. What type of hypoxia does this patient have?

- a. Respiratory
- b. Tissue
- c. Exogenic
- d. Hemic**
- e. Circulatory

750. A person with carbon monoxide poisoning (CO) presents with disturbed consciousness and high levels of carboxyhemoglobin in blood. What type of hypoxia does this patient have?

- a. Tissue
- b. Circulatory
- c. Hemic**
- d. Respiratory
- e. Exogenic

751. A person with essential hypertension was prescribed lisinopril. What is the typical side effect of this medicine?

- a. Dry cough**

- b. Constipation
- c. Increased appetite
- d. Vomiting
- e. Insomnia

752. A person with essential hypertension was prescribed lisinopril. What is the typical side effect of this medicine?

- a. Constipation
- b. Vomiting
- c. Dry cough
- d. Increased appetite
- e. Insomnia

753. A person with essential hypertension was prescribed lisinopril. What is the typical side effect of this medicine?

- a. Insomnia
- b. Constipation
- c. Increased appetite
- d. Vomiting
- e. Dry cough

754. A pharmaceutical factory has received a batch of a herbal raw material that, based on the external signs, was affected by a viral disease. What modern method of diagnostics should be used for the specific detection of viral nucleic acids in plants?

- a. Hemagglutination inhibition reaction
- b. Indirect hemagglutination reaction
- c. Hemagglutination reaction
- d. Enzyme-linked immunosorbent assay
- e. Molecular hybridization

755. A pharmaceutical factory has received a batch of a herbal raw material that, based on the external signs, was affected by a viral disease. What modern method of diagnostics should be used for the specific detection of viral nucleic acids in plants?

- a. Hemagglutination reaction
- b. Molecular hybridization
- c. Enzyme-linked immunosorbent assay
- d. Indirect hemagglutination reaction
- e. Hemagglutination inhibition reaction

756. A pharmaceutical factory has received a batch of a herbal raw material that, based on the external signs, was affected by a viral disease. What modern method of diagnostics should be used for the specific detection of viral nucleic acids in plants?

- a. Indirect hemagglutination reaction
- b. Enzyme-linked immunosorbent assay
- c. Hemagglutination reaction
- d. Molecular hybridization
- e. Hemagglutination inhibition reaction

757. A pharmaceutical manufacture produces a drug, that is an animal antibiotic. Point out this drug among those listed below:

- a. Chloramphenicol
- b. Novobiocin
- c. Phaseolin
- d. Gramicidin
- e. Lysozyme

758. A pharmaceutical manufacture produces a drug, that is an animal antibiotic. Point out this drug among those listed below:

- a. Novobiocin
- b. Chloramphenicol
- c. Gramicidin
- d. Lysozyme

e. Phaseolin

759. A pharmaceutical manufacture produces a drug, that is an animal antibiotic. Point out this drug among those listed below:

- a. Phaseolin
- b. Novobiocin
- c. Gramicidin

d. Lysozyme

e. Chloramphenicol

760. A pharmacy has decided to use a biological method for quality control of instrument sterilization in an autoclave. What microorganisms optimally should be used for this purpose?

a. *Bacillus subtilis*

- b. *Streptococcus pyogenes*
- c. *Borrelia recurrentis*
- d. *Salmonella typhi*
- e. *Yersinia pestis*

761. A pharmacy has decided to use a biological method for quality control of instrument sterilization in an autoclave. What microorganisms optimally should be used for this purpose?

- a. *Borrelia recurrentis*
- b. *Streptococcus pyogenes*
- c. *Salmonella typhi*

d. *Bacillus subtilis*

e. *Yersinia pestis*

762. A pharmacy has decided to use a biological method for quality control of instrument sterilization in an autoclave. What microorganisms optimally should be used for this purpose?

a. *Streptococcus pyogenes*

b. *Bacillus subtilis*

- c. *Salmonella typhi*
- d. *Borrelia recurrentis*
- e. *Yersinia pestis*

763. A pharmacy has received a batch of drugs for treatment of upper respiratory tract infection. What drug is used to treat influenza?

a. Rimantadine

- b. Idoxuridine
- c. Levamisole
- d. Doxycycline
- e. Methisazone

764. A pharmacy has received a batch of drugs for treatment of upper respiratory tract infection. What drug is used to treat influenza?

a. Doxycycline

b. Rimantadine

- c. Methisazone
- d. Levamisole
- e. Idoxuridine

765. A pharmacy has received a batch of drugs for treatment of upper respiratory tract infection. What drug is used to treat influenza?

- a. Methisazone
- b. Doxycycline
- c. Idoxuridine
- d. Levamisole

e. Rimantadine

766. A pharmacy needs to sterilize a liquid dosage form by means of a mechanical sterilization method. What device should be used for this purpose?

- a. Autoclave
- b. Pasteur oven
- c. Steam sterilizer

d. Seitz filter

e. Koch apparatus

767. A pharmacy needs to sterilize a liquid dosage form by means of a mechanical sterilization method. What device should be used for this purpose?

a. Pasteur oven

b. Autoclave

c. Seitz filter

d. Steam sterilizer

e. Koch apparatus

768. A pharmacy needs to sterilize a liquid dosage form by means of a mechanical sterilization method. What device should be used for this purpose?

a. Pasteur oven

b. Steam sterilizer

c. Autoclave

d. Seitz filter

e. Koch apparatus

769. A pharmacy network is supplied with significant amount of sterile medical products (bandages, rubber gloves, catheters, etc.). What ensures their sterility during manufacturing?

a. Beta irradiation

b. Gamma irradiation

c. Ultraviolet irradiation

d. Infrared irradiation

e. Alpha irradiation

770. A pharmacy network is supplied with significant amount of sterile medical products (bandages, rubber gloves, catheters, etc.). What ensures their sterility during manufacturing?

a. Beta irradiation

b. Infrared irradiation

c. Alpha irradiation

d. Gamma irradiation

e. Ultraviolet irradiation

771. A pharmacy network is supplied with significant amount of sterile medical products (bandages, rubber gloves, catheters, etc.). What ensures their sterility during manufacturing?

a. Ultraviolet irradiation

b. Gamma irradiation

c. Alpha irradiation

d. Infrared irradiation

e. Beta irradiation

772. A pharmacy produces a batch of vials with physiological saline for injections. How should they be sterilized?

a. In a steam-jacketed autoclave chamber

b. Ultraviolet irradiation

c. Under pressure in an autoclave

d. In a dry heat sterilizer

e. X-ray irradiation

773. A pharmacy produces a batch of vials with physiological saline for injections. How should they be sterilized?

a. Ultraviolet irradiation

b. In a dry heat sterilizer

c. X-ray irradiation

d. Under pressure in an autoclave

e. In a steam-jacketed autoclave chamber

774. A pharmacy produces a batch of vials with physiological saline for injections. How should they be sterilized?

a. X-ray irradiation

b. In a dry heat sterilizer

- c. Ultraviolet irradiation
- d. In a steam-jacketed autoclave chamber

e. Under pressure in an autoclave

775. A pharmacy produces eye drops and dispenses them into sterile vials. What method should be used to sterilize the vials?

- a. Dry heat box**
- b. Boiling
- c. Autoclaving
- d. Disinfectant solutions
- e. Ultraviolet irradiation

776. A pharmacy produces eye drops and dispenses them into sterile vials. What method should be used to sterilize the vials?

- a. Autoclaving
- b. Dry heat box**

- c. Boiling
- d. Ultraviolet irradiation
- e. Disinfectant solutions

777. A pharmacy produces eye drops and dispenses them into sterile vials. What method should be used to sterilize the vials?

- a. Disinfectant solutions
- b. Ultraviolet irradiation
- c. Autoclaving
- d. Boiling

e. Dry heat box

778. A plant has floating leaves with thick leathery cuticle, stratified columnar parenchyma, and spongy parenchyma with large intercellular spaces. Only the upper epidermis has stomata in it. This plant is a:

- a. Heliophyte
- b. Xerophyte

c. Hydrophyte

- d. Mesophyte
- e. Sciophyte

779. A plant has floating leaves with thick leathery cuticle, stratified columnar parenchyma, and spongy parenchyma with large intercellular spaces. Only the upper epidermis has stomata in it. This plant is a:

- a. Heliophyte
- b. Xerophyte
- c. Sciophyte

d. Hydrophyte

- e. Mesophyte

780. A plant has floating leaves with thick leathery cuticle, stratified columnar parenchyma, and spongy parenchyma with large intercellular spaces. Only the upper epidermis has stomata in it. This plant is a:

- a. Mesophyte
- b. Xerophyte
- c. Sciophyte

d. Hydrophyte

- e. Heliophyte

781. A plant has laticifers with milky sap and single flowers with deciduous calyx lobes; the fruit is a capsule. Determine the family of this plant based on these diagnostic characters:

a. Papaveraceae

- b. Compositae
- c. Apiaceae
- d. Fabaceae
- e. Rosaceae

782. A plant has laticifers with milky sap and single flowers with deciduous calyx lobes; the fruit is a capsule. Determine the family of this plant based on these diagnostic characters:

- a. Fabaceae
- b. Papaveraceae**
- c. Apiaceae
- d. Rosaceae
- e. Compositae

783. A plant has laticifers with milky sap and single flowers with deciduous calyx lobes; the fruit is a capsule. Determine the family of this plant based on these diagnostic characters:

- a. Rosaceae
- b. Fabaceae
- c. Papaveraceae**
- d. Apiaceae
- e. Compositae

784. A plant has roots with bacteriorhiza, complex leaves with stipules, flowers with a papilionaceous corolla, and a silique fruit. These features are characteristic of the following family:

- a. Apiaceae
- b. Solanaceae
- c. Lamiaceae
- d. Fabaceae**
- e. Asteraceae

785. A plant has roots with bacteriorhiza, complex leaves with stipules, flowers with a papilionaceous corolla, and a silique fruit. These features are characteristic of the following family:

- a. Lamiaceae
- b. Solanaceae
- c. Apiaceae
- d. Fabaceae**
- e. Asteraceae

786. A plant has roots with bacteriorhiza, complex leaves with stipules, flowers with a papilionaceous corolla, and a silique fruit. These features are characteristic of the following family:

- a. Solanaceae
- b. Fabaceae**
- c. Apiaceae
- d. Lamiaceae
- e. Asteraceae

787. A poisonous weed of the Solanaceae family has branching downy stems. Its leaves are soft, dull, and dark green; on their lower surface they are light gray, with thicker and longer down along their veins and edges. The flowers are sessile, with a deciduous five-lobed funnelform corolla that is colored dirty yellow (rarely whitish) and has a network of purple-violet veins. The fruit is an urceolate capsule with an operculum. These features are characteristic of:

- a. Hyoscyamus niger**
- b. Atropa belladonna
- c. Datura stramonium
- d. Datura innoxia
- e. Nicotiana tabacum

788. A poisonous weed of the Solanaceae family has branching downy stems. Its leaves are soft, dull, and dark green; on their lower surface they are light gray, with thicker and longer down along their veins and edges. The flowers are sessile, with a deciduous five-lobed funnelform corolla that is colored dirty yellow (rarely whitish) and has a network of purple-violet veins. The fruit is an urceolate capsule with an operculum. These features are characteristic of:

- a. Hyoscyamus niger**
- b. Atropa belladonna
- c. Datura stramonium
- d. Nicotiana tabacum
- e. Datura innoxia

789. A poisonous weed of the Solanaceae family has branching downy stems. Its leaves are soft, dull, and dark green; on their lower surface they are light gray, with thicker and longer down along their veins and edges. The flowers are sessile, with a deciduous five-lobed funnelform corolla that is colored dirty yellow (rarely whitish) and has a network of purple-violet veins. The fruit is an urceolate capsule with an operculum. These features are characteristic of:

- a. *Atropa belladonna*
- b. *Datura innoxia*
- c. *Datura stramonium*
- d. *Nicotiana tabacum*

e. *Hyoscyamus niger*

790. A potassium chromate solution was added into the solution being analyzed, which resulted in the formation of a yellow precipitate, soluble in acetic acid. What cations were present in the solution, as indicated by this qualitative reaction?

a. Strontium cations

- b. Ammonium cations
- c. Magnesium cations
- d. Sodium cations
- e. Potassium cations

791. A potassium chromate solution was added into the solution being analyzed, which resulted in the formation of a yellow precipitate, soluble in acetic acid. What cations were present in the solution, as indicated by this qualitative reaction?

a. Ammonium cations

b. Strontium cations

- c. Potassium cations
- d. Sodium cations
- e. Magnesium cations

792. A potassium chromate solution was added into the solution being analyzed, which resulted in the formation of a yellow precipitate, soluble in acetic acid. What cations were present in the solution, as indicated by this qualitative reaction?

a. Sodium cations

b. Strontium cations

- c. Ammonium cations
- d. Potassium cations
- e. Magnesium cations

793. A pregnant woman develops leg edemas in the evening. In the morning, the edemas disappear. What pathogenetic factor contributes to the development of edema in this case?

a. Increase of hydrostatic blood pressure

- b. Hyperglycemia
- c. Decrease of hydrostatic blood pressure
- d. Decrease of oncotic blood pressure
- e. Increase of oncotic blood pressure

794. A pregnant woman develops leg edemas in the evening. In the morning, the edemas disappear. What pathogenetic factor contributes to the development of edema in this case?

- a. Decrease of oncotic blood pressure
- b. Increase of oncotic blood pressure

c. Increase of hydrostatic blood pressure

- d. Decrease of hydrostatic blood pressure
- e. Hyperglycemia

795. A pregnant woman develops leg edemas in the evening. In the morning, the edemas disappear. What pathogenetic factor contributes to the development of edema in this case?

- a. Hyperglycemia
- b. Decrease of oncotic blood pressure

c. Increase of hydrostatic blood pressure

- d. Increase of oncotic blood pressure
- e. Decrease of hydrostatic blood pressure

796. A pregnant woman has received intravenously a uterotonic to stimulate uterine activity. This drug is a synthetic analog of a hormone of the posterior pituitary. Name this drug:

a. Folliculin (Estrone)

b. Oxytocin

c. Anaprilin (Propranolol)

d. Dinoprost

e. Proserin

797. A pregnant woman has received intravenously a uterotonic to stimulate uterine activity. This drug is a synthetic analog of a hormone of the posterior pituitary. Name this drug:

a. Proserin

b. Anaprilin (Propranolol)

c. Oxytocin

d. Folliculin (Estrone)

e. Dinoprost

798. A pregnant woman has received intravenously a uterotonic to stimulate uterine activity. This drug is a synthetic analog of a hormone of the posterior pituitary. Name this drug:

a. Proserin

b. Folliculin (Estrone)

c. Anaprilin (Propranolol)

d. Dinoprost

e. Oxytocin

799. A pregnant woman suffers from pneumonia: the term of pregnancy is 20 weeks. What chemotherapeutical drug not dangerous to development of the fetus can be prescribed to the patient?

a. Levomycetin (Chloramphenicol)

b. Sulfalene

c. Benzylpenicillin

d. Gentamicin

e. Ofloxacin

800. A pregnant woman suffers from pneumonia: the term of pregnancy is 20 weeks. What chemotherapeutical drug not dangerous to development of the fetus can be prescribed to the patient?

a. Ofloxacin

b. Gentamicin

c. Levomycetin (Chloramphenicol)

d. Sulfalene

e. Benzylpenicillin

801. A pregnant woman suffers from pneumonia: the term of pregnancy is 20 weeks. What chemotherapeutical drug not dangerous to development of the fetus can be prescribed to the patient?

a. Sulfalene

b. Ofloxacin

c. Gentamicin

d. Levomycetin (Chloramphenicol)

e. Benzylpenicillin

802. A pregnant woman was administered fenoterol to reduce the uterine tone for the correction of her labor activity. What is the mechanism of the uterolytic effect of this drug?

a. Stimulation of beta₂-adrenoceptors of the uterus

b. Direct antispasmodic effect

c. Blocking beta₂-adrenoceptors of the uterus

d. Stimulation of alpha₁-adrenoceptors of the uterus

e. Stimulation of beta₂- and alpha₁-adrenoceptors of the uterus

803. A pregnant woman was administered fenoterol to reduce the uterine tone for the correction of her labor activity. What is the mechanism of the uterolytic effect of this drug?

a. Direct antispasmodic effect

- b. Blocking beta₂-adrenoceptors of the uterus
- c. Stimulation of alpha₁-adrenoceptors of the uterus
- d. Stimulation of beta₂- and alpha₁-adrenoceptors of the uterus

e. Stimulation of beta₂-adrenoceptors of the uterus

804. A pregnant woman was administered fenoterol to reduce the uterine tone for the correction of her labor activity. What is the mechanism of the uterolytic effect of this drug?

- a. Stimulation of alpha₁-adrenoceptors of the uterus
- b. Stimulation of beta₂- and alpha₁-adrenoceptors of the uterus
- c. Direct antispasmodic effect

d. Stimulation of beta₂-adrenoceptors of the uterus

- e. Blocking beta₂-adrenoceptors of the uterus

805. A pure culture of movable vibrios was obtained from a patient diagnosed with cholera. What group of flagellates does this agent belong to?

a. Monotrichous

- b. Amphitrichous
- c. Lophotrichous
- d. -
- e. Peritrichous

806. A pure culture of movable vibrios was obtained from a patient diagnosed with cholera. What group of flagellates does this agent belong to?

- a. -

b. Monotrichous

- c. Amphitrichous
- d. Lophotrichous
- e. Peritrichous

807. A pure culture of movable vibrios was obtained from a patient diagnosed with cholera. What group of flagellates does this agent belong to?

- a. Lophotrichous
- b. Peritrichous
- c. -
- d. Amphitrichous

e. Monotrichous

808. A quantity of medicine expressed in units of mass (milligram, gram), volume, or bioactivity (units of activity) is called:

- a. Dosage form

b. Dose

- c. Therapeutic index
- d. Effectiveness
- e. Speed of action

809. A quantity of medicine expressed in units of mass (milligram, gram), volume, or bioactivity (units of activity) is called:

- a. Dosage form
- b. Effectiveness

c. Dose

- d. Speed of action
- e. Therapeutic index

810. A quantity of medicine expressed in units of mass (milligram, gram), volume, or bioactivity (units of activity) is called:

- a. Dosage form
- b. Speed of action

c. Dose

- d. Effectiveness
- e. Therapeutic index

811. A ready-made drug was inoculated on Sabouraud's agar and incubated under 22°C for 5 days. This nutrient medium was used to determine the following:

a. Presence of E) coli

b. Number of mold and yeast fungi

c. Total number of bacteria

d. Presence of S. aureus

e. Presence of Salmonella

812. A ready-made drug was inoculated on Sabouraud's agar and incubated under 22°C for 5 days. This nutrient medium was used to determine the following:

a. Presence of E) coli

b. Presence of S. aureus

c. Total number of bacteria

d. Number of mold and yeast fungi

e. Presence of Salmonella

813. A ready-made drug was inoculated on Sabouraud's agar and incubated under 22°C for 5 days. This nutrient medium was used to determine the following:

a. Presence of S. aureus

b. Total number of bacteria

c. Presence of Salmonella

d. Presence of E) coli

e. Number of mold and yeast fungi

814. A sailor, who had been at sea for 10 months, developed bleeding gums and mobility and loss of healthy teeth. After an examination he was diagnosed with scurvy. What vitamin is deficient in this case, causing this disease?

a. Vitamin E

b. Folic acid

c. Vitamin C

d. Vitamin D

e. Nicotinic acid

815. A sailor, who had been at sea for 10 months, developed bleeding gums and mobility and loss of healthy teeth. After an examination he was diagnosed with scurvy. What vitamin is deficient in this case, causing this disease?

a. Vitamin E

b. Nicotinic acid

c. Folic acid

d. Vitamin D

e. Vitamin C

816. A sailor, who had been at sea for 10 months, developed bleeding gums and mobility and loss of healthy teeth. After an examination he was diagnosed with scurvy. What vitamin is deficient in this case, causing this disease?

a. Vitamin E

b. Vitamin D

c. Folic acid

d. Vitamin C

e. Nicotinic acid

817. A sample obtained from the wound of a patient with suspected gas anaerobic infection was inoculated on the Kitt-Tarozzi medium. Why must this medium be heated before the inoculation?

a. To remove oxygen

b. To dissolve salts

c. To enrich the medium with carbon dioxide

d. To destroy microorganisms

e. To sterilize the medium

818. A sample obtained from the wound of a patient with suspected gas anaerobic infection was inoculated on the Kitt-Tarozzi medium. Why must this medium be heated before the inoculation?

a. To dissolve salts

b. To enrich the medium with carbon dioxide

c. To sterilize the medium

d. To destroy microorganisms

e. To remove oxygen

819. A sample obtained from the wound of a patient with suspected gas anaerobic infection was inoculated on the Kitt-Tarozzi medium. Why must this medium be heated before the inoculation?

a. To sterilize the medium

b. To enrich the medium with carbon dioxide

c. To dissolve salts

d. To remove oxygen

e. To destroy microorganisms

820. A skin area turned red after an exposure to high temperature. What local circulatory disorder can be observed in the focus of the acute inflammation, resulting in the "rubor"?

a. Ischemia

b. Arterial hyperemia

c. Stasis

d. Venous hyperemia

e. Thrombosis

821. A skin area turned red after an exposure to high temperature. What local circulatory disorder can be observed in the focus of the acute inflammation, resulting in the "rubor"?

a. Thrombosis

b. Arterial hyperemia

c. Ischemia

d. Stasis

e. Venous hyperemia

822. A skin area turned red after an exposure to high temperature. What local circulatory disorder can be observed in the focus of the acute inflammation, resulting in the "rubor"?

a. Venous hyperemia

b. Ischemia

c. Arterial hyperemia

d. Stasis

e. Thrombosis

823. A solution being analyzed contains ammonium and sodium cations. What reagent can detect sodium cations in this solution?

a. Potassium hydrotartrate

b. Potassium benzoate

c. Uranyl zinc acetate

d. Potassium oxalate

e. Potassium tetraiodomercurate(II)

824. A solution being analyzed contains ammonium and sodium cations. What reagent can detect sodium cations in this solution?

a. Potassium oxalate

b. Uranyl zinc acetate

c. Potassium benzoate

d. Potassium hydrotartrate

e. Potassium tetraiodomercurate(II)

825. A solution being analyzed contains ammonium and sodium cations. What reagent can detect sodium cations in this solution?

a. Potassium oxalate

b. Potassium benzoate

c. Potassium tetraiodomercurate(II)

d. Potassium hydrotartrate

e. Uranyl zinc acetate

826. A solution being analyzed contains calcium chloride and sodium bromide. What solution must be added to the solution being analyzed, to identify the calcium ions?

a. Ammonium oxalate

b. Barium chloride

- c. Potassium iodide
- d. Ammonium acetate
- e. Sodium chloride

827. A solution being analyzed contains calcium chloride and sodium bromide. What solution must be added to the solution being analyzed, to identify the calcium ions?

- a. Ammonium acetate
- b. Sodium chloride
- c. Potassium iodide
- d. Barium chloride

e. Ammonium oxalate

828. A solution being analyzed contains calcium chloride and sodium bromide. What solution must be added to the solution being analyzed, to identify the calcium ions?

- a. Barium chloride

b. Ammonium oxalate

- c. Potassium iodide
- d. Sodium chloride
- e. Ammonium acetate

829. A solution containing calcium and magnesium cations is titrated with Trilon B solution. Complexometric titration of these cations requires the following medium:

- a. Formate buffer solution

b. Ammonium buffer solution

- c. Acetate buffer solution
- d. Acidic solution
- e. Neutral medium

830. A solution containing calcium and magnesium cations is titrated with Trilon B solution. Complexometric titration of these cations requires the following medium:

- a. Formate buffer solution
- b. Neutral medium
- c. Acidic solution
- d. Acetate buffer solution

e. Ammonium buffer solution

831. A solution containing calcium and magnesium cations is titrated with Trilon B solution. Complexometric titration of these cations requires the following medium:

- a. Neutral medium
- b. Acetate buffer solution
- c. Formate buffer solution
- d. Acidic solution

e. Ammonium buffer solution

832. A solution contains anions of organic acids. When a solution of iron(III) chloride was added, a pink-yellow precipitate formed. What anions are present in the solution?

a. Benzoate anions

- b. Oxalate anions
- c. Tetraborate anions
- d. Carbonate anions
- e. Formate anions

833. A solution contains anions of organic acids. When a solution of iron(III) chloride was added, a pink-yellow precipitate formed. What anions are present in the solution?

- a. Carbonate anions
- b. Tetraborate anions
- c. Formate anions
- d. Oxalate anions

e. Benzoate anions

834. A solution contains anions of organic acids. When a solution of iron(III) chloride was added, a pink-yellow precipitate formed. What anions are present in the solution?

- a. Oxalate anions

b. Benzoate anions

- c. Formate anions
- d. Carbonate anions
- e. Tetraborate anions

835. A solution contains iodide and chloride ions. Choose the reagent to detect iodide ions:

a. Chlorine water

- b. Gypsum water
- c. Hydrogen sulfide water
- d. Limewater
- e. Barium water

836. A solution contains iodide and chloride ions. Choose the reagent to detect iodide ions:

- a. Gypsum water
- b. Limewater
- c. Hydrogen sulfide water
- d. Barium water

e. Chlorine water

837. A solution contains iodide and chloride ions. Choose the reagent to detect iodide ions:

a. Limewater

b. Chlorine water

- c. Gypsum water
- d. Hydrogen sulfide water
- e. Barium water

838. A solution of an alkali was added into the analyte solution and the resulting solution was heated. In the process, a black precipitate formed and a pungent-smelling gas was released. It indicates the presence of the following in the solution:

a. Ammonium and calcium ions

b. Ammonium and mercury(I) ions

- c. Ammonium and lead(II) ions
- d. Ammonium and mercury(II) ions
- e. Ammonium and stannum(II) ions

839. A solution of an alkali was added into the analyte solution and the resulting solution was heated. In the process, a black precipitate formed and a pungent-smelling gas was released. It indicates the presence of the following in the solution:

- a. Ammonium and calcium ions
- b. Ammonium and mercury(II) ions
- c. Ammonium and lead(II) ions

d. Ammonium and mercury(I) ions

e. Ammonium and stannum(II) ions

840. A solution of an alkali was added into the analyte solution and the resulting solution was heated. In the process, a black precipitate formed and a pungent-smelling gas was released. It indicates the presence of the following in the solution:

a. Ammonium and mercury(II) ions

b. Ammonium and mercury(I) ions

- c. Ammonium and lead(II) ions
- d. Ammonium and stannum(II) ions
- e. Ammonium and calcium ions

841. A specialist of the analytical laboratory performs direct iodometric determination of ascorbic acid. What indicator is used in this case?

a. Starch

- b. Phenolphthalein
- c. Methyl red
- d. Methyl orange
- e. Diphenylamine

842. A specialist of the analytical laboratory performs direct iodometric determination of ascorbic acid. What indicator is used in this case?

- a. Methyl orange
- b. Phenolphthalein
- c. Diphenylamine

d. Starch

- e. Methyl red

843. A specialist of the analytical laboratory performs direct iodometric determination of ascorbic acid. What indicator is used in this case?

- a. Phenolphthalein
- b. Methyl orange
- c. Diphenylamine

d. Starch

- e. Methyl red

844. A specimen of *Rosa majalis* fruit was added to the morphological collection. This fruit consists of nutlets embedded in a matrix of fine stiff hairs on the inner surface of the succulent hypanthium.

Name this fruit:

a. Cynarrhodium

- b. Hesperidium
- c. Coenobium
- d. Cremocarp
- e. Pepo

845. A specimen of *Rosa majalis* fruit was added to the morphological collection. This fruit consists of nutlets embedded in a matrix of fine stiff hairs on the inner surface of the succulent hypanthium.

Name this fruit:

- a. Pepo
- b. Cremocarp

c. Cynarrhodium

- d. Hesperidium
- e. Coenobium

846. A specimen of *Rosa majalis* fruit was added to the morphological collection. This fruit consists of nutlets embedded in a matrix of fine stiff hairs on the inner surface of the succulent hypanthium.

Name this fruit:

- a. Pepo
- b. Cremocarp
- c. Coenobium

d. Cynarrhodium

- e. Hesperidium

847. A standard alkali solution is used to determine substances of acidic nature. This method is called:

a. Alkalimetry

- b. Acidimetry
- c. Redoxymetry (Oxidimetry)
- d. Gravimetry
- e. Complexometry (Chelatometry)

848. A standard alkali solution is used to determine substances of acidic nature. This method is called:

- a. Gravimetry
- b. Acidimetry

c. Alkalimetry

- d. Redoxymetry (Oxidimetry)
- e. Complexometry (Chelatometry)

849. A standard alkali solution is used to determine substances of acidic nature. This method is called:

- a. Gravimetry
- b. Redoxymetry (Oxidimetry)
- c. Acidimetry

d. Alkalimetry

e. Complexometry (Chelatometry)

850. A starch molecule contains residues of a certain monosaccharide. Name this monosaccharide.

- a. D-fructose
- b. D-galactose
- c. D-mannose

d. D-glucose

e. D-ribose

851. A starch molecule contains residues of a certain monosaccharide. Name this monosaccharide.

- a. D-fructose
- b. D-mannose

c. D-glucose

d. D-galactose

e. D-ribose

852. A starch molecule contains residues of a certain monosaccharide. Name this monosaccharide.

- a. D-mannose
- b. D-galactose
- c. D-fructose

d. D-glucose

e. D-ribose

853. A sterile form of *Inonotus obliquus* xylotrophic fungus was sampled from the trunk of *Betula pendula*. Its alternative names include "birch fungus" and:

- a. Ergot
- b. Champignon
- c. Fly agaric

d. Chaga mushroom

e. Tinder fungus

854. A sterile form of *Inonotus obliquus* xylotrophic fungus was sampled from the trunk of *Betula pendula*. Its alternative names include "birch fungus" and:

- a. Fly agaric

b. Chaga mushroom

c. Tinder fungus

d. Champignon

e. Ergot

855. A sterile form of *Inonotus obliquus* xylotrophic fungus was sampled from the trunk of *Betula pendula*. Its alternative names include "birch fungus" and:

- a. Tinder fungus
- b. Fly agaric
- c. Ergot
- d. Champignon

e. Chaga mushroom

856. A stool sample obtained from a patient with suspected shigellosis was inoculated on the Ploskirev nutrient medium. What will be the color of the colonies of the dysentery pathogen in this medium?

a. Colorless

- b. Yellow
- c. Dark brown
- d. Blue-violet
- e. Red with a metallic sheen

857. A stool sample obtained from a patient with suspected shigellosis was inoculated on the Ploskirev nutrient medium. What will be the color of the colonies of the dysentery pathogen in this medium?

- a. Blue-violet
- b. Dark brown
- c. Yellow

d. Colorless

e. Red with a metallic sheen

858. A stool sample obtained from a patient with suspected shigellosis was inoculated on the Ploskirev nutrient medium. What will be the color of the colonies of the dysentery pathogen in this medium?

a. Yellow

b. Red with a metallic sheen

c. Colorless

d. Blue-violet

e. Dark brown

859. A structural analog of vitamin PP (nicotinic acid) is used as an antituberculous medicine. Name this medicine:

a. Isoniazid

b. Streptocide

c. Aspirin

d. Riboflavin

e. Tetracycline

860. A structural analog of vitamin PP (nicotinic acid) is used as an antituberculous medicine. Name this medicine:

a. Aspirin

b. Tetracycline

c. Streptocide

d. Isoniazid

e. Riboflavin

861. A structural analog of vitamin PP (nicotinic acid) is used as an antituberculous medicine. Name this medicine:

a. Riboflavin

b. Streptocide

c. Isoniazid

d. Aspirin

e. Tetracycline

862. A student was asked, what additional functions of the root are associated with the accumulation of nutrients. These functions are:

a. Formation of storage roots and root tubers

b. Respiration

c. Primary synthesis of organic substances

d. Maintaining the spatial position of a plant

e. Symbiosis of the root and algae

863. A student was asked, what additional functions of the root are associated with the accumulation of nutrients. These functions are:

a. Respiration

b. Primary synthesis of organic substances

c. Formation of storage roots and root tubers

d. Symbiosis of the root and algae

e. Maintaining the spatial position of a plant

864. A student was asked, what additional functions of the root are associated with the accumulation of nutrients. These functions are:

a. Respiration

b. Symbiosis of the root and algae

c. Primary synthesis of organic substances

d. Maintaining the spatial position of a plant

e. Formation of storage roots and root tubers

865. A tumor of the adenohypophysis disturbs the synthesis of tropic hormones and causes acromegaly. What hormone would exhibit elevated levels in this case?

a. Somatotropin

- b. Luteinizing
- c. Oxytocin
- d. Vasopressin
- e. Follicle-stimulating

866. A tumor of the adenohypophysis disturbs the synthesis of tropic hormones and causes acromegaly. What hormone would exhibit elevated levels in this case?

- a. Oxytocin
- b. Luteinizing
- c. Somatotropin**

- d. Vasopressin
- e. Follicle-stimulating

867. A tumor of the adenohypophysis disturbs the synthesis of tropic hormones and causes acromegaly. What hormone would exhibit elevated levels in this case?

- a. Vasopressin
- b. Follicle-stimulating
- c. Oxytocin

d. Somatotropin

- e. Luteinizing

868. A unilocular, single-seeded fruit has a pericarp with an exocarp, a juicy mesocarp, and a lignified endocarp. What plant is it characteristic of?

- a. Leonurus quinquelobatus
- b. Quercus robur
- c. Coriandrum sativum
- d. Potentilla erecta

e. Armeniaca vulgaris

869. A unilocular, single-seeded fruit has a pericarp with an exocarp, a juicy mesocarp, and a lignified endocarp. What plant is it characteristic of?

- a. Potentilla erecta

b. Armeniaca vulgaris

- c. Coriandrum sativum
- d. Quercus robur
- e. Leonurus quinquelobatus

870. A unilocular, single-seeded fruit has a pericarp with an exocarp, a juicy mesocarp, and a lignified endocarp. What plant is it characteristic of?

- a. Quercus robur
- b. Potentilla erecta
- c. Coriandrum sativum
- d. Leonurus quinquelobatus

e. Armeniaca vulgaris

871. A woman came to a pediatrician complaining of deteriorating condition of her child. The disorder manifests in enlarged fontanelle, a delay in tooth eruption, and bone deformation. What medicine must be prescribed first in this case?

a. Cholecalciferol

- b. Proserin (Neostigmine)
- c. Cyanocobalamin
- d. Thiamine bromide
- e. Allopurinol

872. A woman came to a pediatrician complaining of deteriorating condition of her child. The disorder manifests in enlarged fontanelle, a delay in tooth eruption, and bone deformation. What medicine must be prescribed first in this case?

- a. Cyanocobalamin
- b. Allopurinol

c. Cholecalciferol

- d. Thiamine bromide
- e. Proserin (Neostigmine)

873. A woman came to a pediatrician complaining of deteriorating condition of her child. The disorder manifests in enlarged fontanelle, a delay in tooth eruption, and bone deformation. What medicine must be prescribed first in this case?

- a. Proserin (Neostigmine)
- b. Thiamine bromide
- c. Cholecalciferol**
- d. Allopurinol
- e. Cyanocobalamin

874. A woman complains of elevated body temperature, weight loss, irritability, palpitations, and exophthalmos. Such changes are characteristic of the following endocrinopathy:

- a. Hyperaldosteronism
- b. Hyperthyroidism**
- c. Hypothyroidism
- d. Hypercorticism
- e. Hypoaldosteronism

875. A woman complains of elevated body temperature, weight loss, irritability, palpitations, and exophthalmos. Such changes are characteristic of the following endocrinopathy:

- a. Hypoaldosteronism
- b. Hypercorticism
- c. Hyperaldosteronism
- d. Hyperthyroidism**
- e. Hypothyroidism

876. A woman complains of elevated body temperature, weight loss, irritability, palpitations, and exophthalmos. Such changes are characteristic of the following endocrinopathy:

- a. Hypoaldosteronism
- b. Hypercorticism
- c. Hypothyroidism
- d. Hyperthyroidism**
- e. Hyperaldosteronism

877. A woman complains of itching lips; they are reddened and covered in scabs and scales after she had been using new lipstick for two weeks. What allergic reactions result in this kind of disorders?

- a. Delayed**
- b. Cytotoxic
- c. Anaphylactic
- d. Stimulating
- e. Immune complex

878. A woman complains of itching lips; they are reddened and covered in scabs and scales after she had been using new lipstick for two weeks. What allergic reactions result in this kind of disorders?

- a. Cytotoxic
- b. Stimulating
- c. Anaphylactic
- d. Immune complex
- e. Delayed**

879. A woman complains of itching lips; they are reddened and covered in scabs and scales after she had been using new lipstick for two weeks. What allergic reactions result in this kind of disorders?

- a. Immune complex
- b. Anaphylactic
- c. Stimulating
- d. Cytotoxic
- e. Delayed**

880. A woman has chronic heart failure with edema syndrome. Increased aldosterone levels were detected in her blood. What diuretic must be prescribed in this case?

- a. Asparcam
- b. Furosemide
- c. Paracetamol

d. Spironolactone

e. Theophylline

881. A woman has chronic heart failure with edema syndrome. Increased aldosterone levels were detected in her blood. What diuretic must be prescribed in this case?

a. Theophylline

b. Spironolactone

c. Paracetamol

d. Furosemide

e. Asparcam

882. A woman has chronic heart failure with edema syndrome. Increased aldosterone levels were detected in her blood. What diuretic must be prescribed in this case?

a. Theophylline

b. Asparcam

c. Spironolactone

d. Paracetamol

e. Furosemide

883. A woman is to be prescribed a narcotic analgesic for labor pain relief. What drug is indicated in this case?

a. Promedol (Trimeperidine)

b. Fentanyl

c. Morphine

d. Codeine

e. Papaveretum (Omnopon)

884. A woman is to be prescribed a narcotic analgesic for labor pain relief. What drug is indicated in this case?

a. Promedol (Trimeperidine)

b. Morphine

c. Papaveretum (Omnopon)

d. Codeine

e. Fentanyl

885. A woman is to be prescribed a narcotic analgesic for labor pain relief. What drug is indicated in this case?

a. Morphine

b. Codeine

c. Papaveretum (Omnopon)

d. Fentanyl

e. Promedol (Trimeperidine)

886. A woman presents with poor twilight vision and dry conjunctiva and cornea. What vitamin deficiency can cause such disorders?

a. C

b. A

c. B₁₂

d. B

e. D

887. A woman presents with poor twilight vision and dry conjunctiva and cornea. What vitamin deficiency can cause such disorders?

a. D

b. A

c. B₁₂

d. B

e. C

888. A woman suffering from neurosis has disturbed sleep. What drug is optimal for insomnia treatment?

a. Nitrazepam

b. Valerian tincture

- c. Aethaminalum-natrium (Pentobarbital)
- d. Bromisoval
- e. Phenobarbital

889. A woman suffering from neurosis has disturbed sleep. What drug is optimal for insomnia treatment?

- a. Bromisoval
- b. Aethaminalum-natrium (Pentobarbital)

c. Nitrazepam

- d. Phenobarbital
- e. Valerian tincture

890. A woman suffering from neurosis has disturbed sleep. What drug is optimal for insomnia treatment?

- a. Bromisoval
- b. Phenobarbital

c. Nitrazepam

- d. Aethaminalum-natrium (Pentobarbital)
- e. Valerian tincture

891. A woman underwent a gastroduodeno-scopy that revealed decreased functioning of the gastroesophageal junction with reflux of gastric contents into the esophagus. What sign is the main indicator of this disorder?

a. Heartburn

- b. Problematic swallowing
- c. Nausea
- d. Diarrhea
- e. Palpitations

892. A woman underwent a gastroduodeno-scopy that revealed decreased functioning of the gastroesophageal junction with reflux of gastric contents into the esophagus. What sign is the main indicator of this disorder?

- a. Diarrhea
- b. Palpitations
- c. Nausea

d. Heartburn

- e. Problematic swallowing

893. A woman underwent a gastroduodeno-scopy that revealed decreased functioning of the gastroesophageal junction with reflux of gastric contents into the esophagus. What sign is the main indicator of this disorder?

- a. Problematic swallowing
- b. Palpitations
- c. Diarrhea
- d. Nausea

e. Heartburn

894. A woman underwent gastric resection and 5 years later was diagnosed with B₁₂-deficiency anemia. What blood cells are typically present in this type of anemia?

a. Megalocytes

- b. Annulocytes
- c. Microcytes
- d. Reticulocytes
- e. Echinocytes

895. A woman underwent gastric resection and 5 years later was diagnosed with B₁₂-deficiency anemia. What blood cells are typically present in this type of anemia?

a. Megalocytes

- b. Microcytes
- c. Echinocytes
- d. Reticulocytes
- e. Annulocytes

896. A woman underwent gastric resection and 5 years later was diagnosed with B₁₂-deficiency anemia. What blood cells are typically present in this type of anemia?

- a. Microcytes
- b. Reticulocytes
- c. Annulocytes
- d. Megalocytes**
- e. Echinocytes

897. A woman with candidomycosis was prescribed a drug that is used in cases of fungal pathology of any localization and can cause diarrhea and toxic liver damage. What drug did the doctor prescribe in this case?

- a. Fluconazole**
- b. Mebendazole
- c. Amoxicillin
- d. Bicillin-5
- e. Chingamine (Chloroquine)

898. A woman with candidomycosis was prescribed a drug that is used in cases of fungal pathology of any localization and can cause diarrhea and toxic liver damage. What drug did the doctor prescribe in this case?

- a. Bicillin-5
- b. Chingamine (Chloroquine)
- c. Mebendazole
- d. Fluconazole**
- e. Amoxicillin

899. A woman with candidomycosis was prescribed a drug that is used in cases of fungal pathology of any localization and can cause diarrhea and toxic liver damage. What drug did the doctor prescribe in this case?

- a. Chingamine (Chloroquine)
- b. Mebendazole
- c. Amoxicillin
- d. Fluconazole**
- e. Bicillin-5

900. A woman with chronic heart failure developed an edematous syndrome. Increased aldosterone levels were detected in her blood. What drug must be prescribed in this case?

- a. Metoprolol
- b. Ketamine
- c. Spironolactone**
- d. Proserine (Neostigmine)
- e. Aceclidine

901. A woman with chronic heart failure developed an edematous syndrome. Increased aldosterone levels were detected in her blood. What drug must be prescribed in this case?

- a. Metoprolol
- b. Proserine (Neostigmine)
- c. Ketamine
- d. Spironolactone**
- e. Aceclidine

902. A woman with chronic heart failure developed an edematous syndrome. Increased aldosterone levels were detected in her blood. What drug must be prescribed in this case?

- a. Proserine (Neostigmine)
- b. Spironolactone**
- c. Metoprolol
- d. Aceclidine
- e. Ketamine

903. A woman with essential hypertension developed a dry hacking cough as a result of taking angiotensin-converting enzyme inhibitors. What drugs that inhibit the renin-angiotensin system should be prescribed in this case?

a. Angiotensin II receptor antagonists

- b. Diuretics
- c. Sympatholytics
- d. Calcium channel blockers
- e. Beta-blockers

904. A woman with essential hypertension developed a dry hacking cough as a result of taking angiotensin-converting enzyme inhibitors. What drugs that inhibit the renin-angiotensin system should be prescribed in this case?

a. Calcium channel blockers

b. Diuretics

c. Angiotensin II receptor antagonists

d. Beta-blockers

e. Sympatholytics

905. A woman with essential hypertension developed a dry hacking cough as a result of taking angiotensin-converting enzyme inhibitors. What drugs that inhibit the renin-angiotensin system should be prescribed in this case?

a. Diuretics

b. Beta-blockers

c. Sympatholytics

d. Calcium channel blockers

e. Angiotensin II receptor antagonists

906. A woman with peptic ulcer disease of the stomach was prescribed antibacterial treatment. It is aimed at the following pathogen:

a. H. pylori

b. St. aureus

c. Cl. trachomatis

d. E. coli

e. Cl. perfringens

907. A woman with peptic ulcer disease of the stomach was prescribed antibacterial treatment. It is aimed at the following pathogen:

a. Cl. perfringens

b. Cl. trachomatis

c. St. aureus

d. E. coli

e. H. pylori

908. A woman with peptic ulcer disease of the stomach was prescribed antibacterial treatment. It is aimed at the following pathogen:

a. E. coli

b. H. pylori

c. Cl. trachomatis

d. St. aureus

e. Cl. perfringens

909. A woman with trichomoniasis was prescribed a drug that is an imidazole derivative. Name this drug:

a. Metronidazole

b. Iodinol

c. Miramistin

d. Resorcin

e. Ampicillin

910. A woman with trichomoniasis was prescribed a drug that is an imidazole derivative. Name this drug:

a. Ampicillin

b. Resorcin

c. Iodinol

d. Metronidazole

e. Miramistin

911. A woman with trichomoniasis was prescribed a drug that is an imidazole derivative. Name this drug:

a. Miramistin

b. Metronidazole

c. Iodinol

d. Ampicillin

e. Resorcin

912. A woman with type 1 diabetes mellitus developed hyperglycemic coma. Examination revealed metabolic acidosis. This condition developed because of accumulation of the following in the blood:

a. Ketone bodies

b. Indirect bilirubin

c. Ammonium ions

d. Residual nitrogen

e. Bile acids

913. A woman with type 1 diabetes mellitus developed hyperglycemic coma. Examination revealed metabolic acidosis. This condition developed because of accumulation of the following in the blood:

a. Indirect bilirubin

b. Ketone bodies

c. Residual nitrogen

d. Bile acids

e. Ammonium ions

914. A woman with type 1 diabetes mellitus developed hyperglycemic coma. Examination revealed metabolic acidosis. This condition developed because of accumulation of the following in the blood:

a. Residual nitrogen

b. Bile acids

c. Ketone bodies

d. Ammonium ions

e. Indirect bilirubin

915. A woman, who during the 5th-10th weeks of her pregnancy had been taking sodium valproate for treatment of her epilepsy, gave birth to a child with pathology of the vertebral column (split spine). What side effect of the drug caused such malformation?

a. Teratogenic

b. Mutagenic

c. Sensitizing

d. Fetotoxic

e. Embryotoxic

916. A woman, who during the 5th-10th weeks of her pregnancy had been taking sodium valproate for treatment of her epilepsy, gave birth to a child with pathology of the vertebral column (split spine). What side effect of the drug caused such malformation?

a. Sensitizing

b. Teratogenic

c. Embryotoxic

d. Fetotoxic

e. Mutagenic

917. A woman, who during the 5th-10th weeks of her pregnancy had been taking sodium valproate for treatment of her epilepsy, gave birth to a child with pathology of the vertebral column (split spine). What side effect of the drug caused such malformation?

a. Sensitizing

b. Mutagenic

c. Fetotoxic

d. Teratogenic

e. Embryotoxic

918. ACE inhibitors cannot be used simultaneously with a certain group of diuretics. Name this group of diuretics.

a. Potassium-sparing diuretics

b. Thiazide diuretics

c. Osmotic diuretics

d. Loop diuretics

e. Carbonic anhydrase inhibitors

919. ACE inhibitors cannot be used simultaneously with a certain group of diuretics. Name this group of diuretics.

a. Carbonic anhydrase inhibitors

b. Loop diuretics

c. Potassium-sparing diuretics

d. Thiazide diuretics

e. Osmotic diuretics

920. ACE inhibitors cannot be used simultaneously with a certain group of diuretics. Name this group of diuretics.

a. Osmotic diuretics

b. Carbonic anhydrase inhibitors

c. Thiazide diuretics

d. Potassium-sparing diuretics

e. Loop diuretics

921. According to Hueckel's rule an organic compound will have aromatic properties if:

a. Its molecular structure contains a planar cycle with a closed conjugated system that contains $(4n+2)$ of pi electrons, where $n = 0,1,2,3$, etc.

b. Its molecules are composed exclusively of carbon and hydrogen atoms that form a linear carbon chain

c. There are condensed nuclei in the molecule

d. There is only one substituent in the molecule

e. There is a cyclohexane ring in the molecule

922. According to Hueckel's rule an organic compound will have aromatic properties if:

a. Its molecular structure contains a planar cycle with a closed conjugated system that contains $(4n+2)$ of pi electrons, where $n = 0,1,2,3$, etc.

b. There is a cyclohexane ring in the molecule

c. There are condensed nuclei in the molecule

d. There is only one substituent in the molecule

e. Its molecules are composed exclusively of carbon and hydrogen atoms that form a linear carbon chain

923. According to Hueckel's rule an organic compound will have aromatic properties if:

a. There is only one substituent in the molecule

b. There is a cyclohexane ring in the molecule

c. Its molecular structure contains a planar cycle with a closed conjugated system that contains $(4n+2)$ of pi electrons, where $n = 0,1,2,3$, etc.

d. There are condensed nuclei in the molecule

e. Its molecules are composed exclusively of carbon and hydrogen atoms that form a linear carbon chain

924. According to the Bancroft's rule, the dispersion medium of an emulsion will be the liquid, with which the emulsifier:

a. Chemically interacts

b. Has affinity

c. Forms a precipitate

d. Forms an insoluble compound

e. Forms a colored compound

925. According to the Bancroft's rule, the dispersion medium of an emulsion will be the liquid, with which the emulsifier:

a. Chemically interacts

b. Forms a precipitate

c. Forms a colored compound

d. Has affinity

e. Forms an insoluble compound

926. According to the Bancroft's rule, the dispersion medium of an emulsion will be the liquid, with which the emulsifier:

a. Forms a colored compound

b. Chemically interacts

c. Forms a precipitate

d. Has affinity

e. Forms an insoluble compound

927. According to the Rayleigh equation, the intensity of scattered light is inversely proportional to the wavelength of:

a. Incident light

b. Incident light (fifth power)

c. Incident light (fourth power)

d. Incident light (third power)

e. Incident light (second power)

928. According to the Rayleigh equation, the intensity of scattered light is inversely proportional to the wavelength of:

a. Incident light (fifth power)

b. Incident light (fourth power)

c. Incident light

d. Incident light (second power)

e. Incident light (third power)

929. According to the Rayleigh equation, the intensity of scattered light is inversely proportional to the wavelength of:

a. Incident light (second power)

b. Incident light (fifth power)

c. Incident light (fourth power)

d. Incident light (third power)

e. Incident light

930. According to the Smoluchowski coagulation theory, the process of coagulation can be described with the kinetic equation of:

a. The fraction order

b. The second order

c. The first order

d. The zero order

e. The third order

931. According to the Smoluchowski coagulation theory, the process of coagulation can be described with the kinetic equation of:

a. The third order

b. The fraction order

c. The zero order

d. The second order

e. The first order

932. According to the Smoluchowski coagulation theory, the process of coagulation can be described with the kinetic equation of:

a. The zero order

b. The third order

c. The fraction order

d. The first order

e. The second order

933. According to the Smoluchowski theory of rapid coagulation, the coagulation process can be described using the following type of kinetic equation:

a. Second-order equation

b. Fractional-order equation

- c. First-order equation
- d. Zero-order equation
- e. Third-order equation

934. According to the Smoluchowski theory of rapid coagulation, the coagulation process can be described using the following type of kinetic equation:

- a. First-order equation
- b. Fractional-order equation
- c. Third-order equation

d. Second-order equation

- e. Zero-order equation

935. According to the Smoluchowski theory of rapid coagulation, the coagulation process can be described using the following type of kinetic equation:

- a. First-order equation
- b. Zero-order equation

c. Second-order equation

- d. Fractional-order equation
- e. Third-order equation

936. Acetylsalicylic acid is used in treatment of rheumatism. What biochemical links are affected by acetylsalicylic acid?

- a. Inhibits glycolysis
- b. Stimulates prostaglandines synthesis
- c. Stimulates cholesterol synthesis

d. Inhibits prostaglandines synthesis

- e. Stimulates gluconeogenesis

937. Acetylsalicylic acid is used in treatment of rheumatism. What biochemical links are affected by acetylsalicylic acid?

- a. Stimulates cholesterol synthesis
- b. Inhibits glycolysis

c. Inhibits prostaglandines synthesis

- d. Stimulates gluconeogenesis
- e. Stimulates prostaglandines synthesis

938. Acetylsalicylic acid is used in treatment of rheumatism. What biochemical links are affected by acetylsalicylic acid?

- a. Stimulates prostaglandines synthesis
- b. Stimulates gluconeogenesis
- c. Inhibits glycolysis

d. Inhibits prostaglandines synthesis

- e. Stimulates cholesterol synthesis

939. Adrenaline is used to prolong the action of novocaine (procaine) during infiltration anesthesia. What effect of adrenaline provides this prolongation?

- a. Functional suppression of nerve endings and conductors
- b. Potentiation of novocaine (procaine) action at the level of central nervous system

c. Vasoconstriction

- d. Vasodilation
- e. Inhibition of tissue esterases

940. Adrenaline is used to prolong the action of novocaine (procaine) during infiltration anesthesia. What effect of adrenaline provides this prolongation?

- a. Inhibition of tissue esterases
- b. Functional suppression of nerve endings and conductors

c. Vasoconstriction

- d. Vasodilation
- e. Potentiation of novocaine (procaine) action at the level of central nervous system

941. Adrenaline is used to prolong the action of novocaine (procaine) during infiltration anesthesia. What effect of adrenaline provides this prolongation?

- a. Potentiation of novocaine (procaine) action at the level of central nervous system

b. Vasoconstriction

- c. Functional suppression of nerve endings and conductors
- d. Vasodilation
- e. Inhibition of tissue esterases

942. Aerosols are one of the dosage forms. Name the phenomenon when aerosol particles move in the direction of decreasing temperature.

- a. Electrophoresis
- b. Peptization
- c. Photophoresis
- d. Sedimentation

e. Thermophoresis

943. Aerosols are one of the dosage forms. Name the phenomenon when aerosol particles move in the direction of decreasing temperature.

- a. Electrophoresis
- b. Photophoresis
- c. Peptization

d. Thermophoresis

- e. Sedimentation

944. Aerosols are one of the dosage forms. Name the phenomenon when aerosol particles move in the direction of decreasing temperature.

- a. Sedimentation
- b. Electrophoresis
- c. Photophoresis
- d. Peptization

e. Thermophoresis

945. After a casual sexual contact, a 30-year-old man visited a hospital complaining of a painless ulcer with smooth edges on the head of his penis. What pathogen has caused the patient's disease in this case?

a. Treponema

- b. Chlamydia
- c. Ureaplasma
- d. Neisseria
- e. Mycoplasma

946. After a casual sexual contact, a 30-year-old man visited a hospital complaining of a painless ulcer with smooth edges on the head of his penis. What pathogen has caused the patient's disease in this case?

- a. Mycoplasma
- b. Chlamydia
- c. Neisseria
- d. Ureaplasma

e. Treponema

947. After a casual sexual contact, a 30-year-old man visited a hospital complaining of a painless ulcer with smooth edges on the head of his penis. What pathogen has caused the patient's disease in this case?

- a. Neisseria
- b. Ureaplasma

c. Treponema

- d. Chlamydia
- e. Mycoplasma

948. After a stress, a woman has problems sleeping. What medicine is preferable for the treatment of insomnia in this case?

- a. Barbital
- b. Aminazine (Chlorpromazine)
- c. Phenobarbital
- d. Nitrazepam

e. Chloral hydrate

949. After a stress, a woman has problems sleeping. What medicine is preferable for the treatment of insomnia in this case?

a. Barbitol

b. Phenobarbital

c. Nitrazepam

d. Chloral hydrate

e. Aminazine (Chlorpromazine)

950. After a stress, a woman has problems sleeping. What medicine is preferable for the treatment of insomnia in this case?

a. Phenobarbital

b. Chloral hydrate

c. Barbitol

d. Nitrazepam

e. Aminazine (Chlorpromazine)

951. After a stroke the patient should be prescribed a drug that would increase energy transfer in the brain cells and stimulate the central nervous system. Name this drug:

a. Piracetam

b. Phenobarbital

c. Ketorolac

d. Doxylamine

e. Phenazepam

952. After a stroke the patient should be prescribed a drug that would increase energy transfer in the brain cells and stimulate the central nervous system. Name this drug:

a. Doxylamine

b. Piracetam

c. Phenazepam

d. Ketorolac

e. Phenobarbital

953. After a stroke the patient should be prescribed a drug that would increase energy transfer in the brain cells and stimulate the central nervous system. Name this drug:

a. Ketorolac

b. Phenobarbital

c. Piracetam

d. Phenazepam

e. Doxylamine

954. After a subtotal gastric resection, the patient developed B₁₂-deficiency anemia. What cells in a blood smear are typical in this pathology?

a. Megaloblasts

b. Erythroblasts

c. Microcytes

d. Anulocytes

e. Normoblasts

955. After a subtotal gastric resection, the patient developed B₁₂-deficiency anemia. What cells in a blood smear are typical in this pathology?

a. Normoblasts

b. Erythroblasts

c. Megaloblasts

d. Microcytes

e. Anulocytes

956. After a subtotal gastric resection, the patient developed B₁₂-deficiency anemia. What cells in a blood smear are typical in this pathology?

a. Normoblasts

b. Erythroblasts

c. Microcytes

d. Anulocytes

e. Megaloblasts

957. After a traffic accident the driver presents with increased blood glucose. What mechanism leads to hyperglycemia in this case?

a. Sympathoadrenal system activation

b. Decreased tone of parasympathetic nervous system

c. Decreased production of insulin

d. Increased production of somatotrophic hormone

e. Decreased production of glucagon

958. After a traffic accident the driver presents with increased blood glucose. What mechanism leads to hyperglycemia in this case?

a. Increased production of somatotrophic hormone

b. Decreased production of glucagon

c. Decreased production of insulin

d. Decreased tone of parasympathetic nervous system

e. Sympathoadrenal system activation

959. After a traffic accident the driver presents with increased blood glucose. What mechanism leads to hyperglycemia in this case?

a. Increased production of somatotrophic hormone

b. Decreased production of insulin

c. Decreased tone of parasympathetic nervous system

d. Decreased production of glucagon

e. Sympathoadrenal system activation

960. After accidentally eating inedible mushrooms, a woman presents with disturbed consciousness, anuria, arterial hypotension, and hyperazotemia. What pathological condition can be characterized by these symptoms?

a. Acute diffuse glomerulonephritis

b. Acute renal failure

c. Urolithiasis

d. Acute pyelonephritis

e. Chronic renal failure

961. After accidentally eating inedible mushrooms, a woman presents with disturbed consciousness, anuria, arterial hypotension, and hyperazotemia. What pathological condition can be characterized by these symptoms?

a. Chronic renal failure

b. Acute renal failure

c. Urolithiasis

d. Acute pyelonephritis

e. Acute diffuse glomerulonephritis

962. After accidentally eating inedible mushrooms, a woman presents with disturbed consciousness, anuria, arterial hypotension, and hyperazotemia. What pathological condition can be characterized by these symptoms?

a. Chronic renal failure

b. Urolithiasis

c. Acute diffuse glomerulonephritis

d. Acute renal failure

e. Acute pyelonephritis

963. After acute nitrite poisoning, the patient was diagnosed with acquired toxic hemolytic anemia. A large amount of regenerative forms of erythrocytes were detected in the patient's blood smear. Name these cells.

a. Annulocytes (Codocytes)

b. Schistocytes

c. Reticulocytes

d. Microcytes

e. Drepanocytes

964. After acute nitrite poisoning, the patient was diagnosed with acquired toxic hemolytic anemia. A large amount of regenerative forms of erythrocytes were detected in the patient's blood smear. Name these cells.

- a. Microcytes
- b. Reticulocytes**
- c. Drepanocytes
- d. Schistocytes
- e. Annulocytes (Codocytes)

965. After acute nitrite poisoning, the patient was diagnosed with acquired toxic hemolytic anemia. A large amount of regenerative forms of erythrocytes were detected in the patient's blood smear. Name these cells.

- a. Microcytes
- b. Annulocytes (Codocytes)
- c. Reticulocytes**
- d. Schistocytes
- e. Drepanocytes

966. After administration of a drug, the patient presents with itching, skin rash, difficulty breathing, blood pressure of 70/40 mm Hg, and dizziness. What allergic reaction according to the Coombs-Gell classification has likely developed in the patient?

- a. Delayed hypersensitivity reaction
- b. Arthus reaction
- c. Stimulatory hypersensitivity reaction
- d. Anaphylactic reaction**
- e. Cytolysis

967. After administration of a drug, the patient presents with itching, skin rash, difficulty breathing, blood pressure of 70/40 mm Hg, and dizziness. What allergic reaction according to the Coombs-Gell classification has likely developed in the patient?

- a. Delayed hypersensitivity reaction
- b. Cytolysis
- c. Stimulatory hypersensitivity reaction
- d. Arthus reaction
- e. Anaphylactic reaction**

968. After administration of a drug, the patient presents with itching, skin rash, difficulty breathing, blood pressure of 70/40 mm Hg, and dizziness. What allergic reaction according to the Coombs-Gell classification has likely developed in the patient?

- a. Stimulatory hypersensitivity reaction
- b. Delayed hypersensitivity reaction
- c. Arthus reaction
- d. Anaphylactic reaction**
- e. Cytolysis

969. After an 8-year-old boy had eaten some strawberries he developed red itching spots on his skin, urticaria. What bioactive substance causes the itching sensation in this case?

- a. Cathepsin
- b. Tissue hyaluronidase
- c. Histamine**
- d. Complement component C3a
- e. Prostaglandin E2

970. After an 8-year-old boy had eaten some strawberries he developed red itching spots on his skin, urticaria. What bioactive substance causes the itching sensation in this case?

- a. Tissue hyaluronidase
- b. Prostaglandin E2
- c. Histamine**
- d. Complement component C3a
- e. Cathepsin

971. After an 8-year-old boy had eaten some strawberries he developed red itching spots on his skin,

urticaria. What bioactive substance causes the itching sensation in this case?

- a. Tissue hyaluronidase
- b. Prostaglandin E2
- c. Complement component C3a
- d. Cathepsin

e. Histamine

972. After an acute myocardial infarction, the doctor recommended the patient to take acetylsalicylic acid in the dose of 80--100 mg for 3 months. The doctor expects this drug to have the following effect in this case:

- a. Analgesic
- b. Spasmolytic
- c. Anti-inflammatory

d. Antiplatelet

e. Antipyretic

973. After an acute myocardial infarction, the doctor recommended the patient to take acetylsalicylic acid in the dose of 80--100 mg for 3 months. The doctor expects this drug to have the following effect in this case:

- a. Anti-inflammatory
- b. Spasmolytic
- c. Antipyretic
- d. Analgesic

e. Antiplatelet

974. After an acute myocardial infarction, the doctor recommended the patient to take acetylsalicylic acid in the dose of 80--100 mg for 3 months. The doctor expects this drug to have the following effect in this case:

- a. Spasmolytic
- b. Analgesic
- c. Antipyretic

d. Antiplatelet

e. Anti-inflammatory

975. After eating early vegetables that had high nitrite levels, a child developed hemic hypoxia. It is caused by accumulation of the following substance:

a. Methemoglobin

- b. Carboxyhemoglobin
- c. Oxyhemoglobin
- d. Carbhemo-globin
- e. Deoxyhemoglobin

976. After eating early vegetables that had high nitrite levels, a child developed hemic hypoxia. It is caused by accumulation of the following substance:

- a. Carbhemo-globin
- b. Oxyhemoglobin
- c. Carboxyhemoglobin
- d. Deoxyhemoglobin

e. Methemoglobin

977. After eating early vegetables that had high nitrite levels, a child developed hemic hypoxia. It is caused by accumulation of the following substance:

- a. Carboxyhemoglobin
- b. Oxyhemoglobin
- c. Deoxyhemoglobin

d. Methemoglobin

e. Carbhemo-globin

978. After examination the patient was diagnosed with tick-borne encephalitis. What route of transmission is characteristic of this disease?

a. Vector-borne transmission

b. Vertical transmission

- c. Fecal-oral transmission
- d. Airborne droplet transmission
- e. Parenteral transmission

979. After examination the patient was diagnosed with tick-borne encephalitis. What route of transmission is characteristic of this disease?

- a. Airborne droplet transmission
- b. Vector-borne transmission**

- c. Fecal-oral transmission
- d. Vertical transmission
- e. Parenteral transmission

980. After examination the patient was diagnosed with tick-borne encephalitis. What route of transmission is characteristic of this disease?

- a. Airborne droplet transmission
- b. Vertical transmission
- c. Parenteral transmission
- d. Fecal-oral transmission

e. Vector-borne transmission

981. After examination, the patient was diagnosed with alkaptonuria. What enzyme is deficient in this case, causing this pathology?

a. Homogentisic acid oxidase

- b. Monoamine oxidase
- c. Tyrosinase
- d. Phenylalanine hydroxylase
- e. Thyroxine hydroxylase

982. After examination, the patient was diagnosed with alkaptonuria. What enzyme is deficient in this case, causing this pathology?

a. Thyroxine hydroxylase

b. Homogentisic acid oxidase

- c. Phenylalanine hydroxylase
- d. Monoamine oxidase
- e. Tyrosinase

983. After examination, the patient was diagnosed with alkaptonuria. What enzyme is deficient in this case, causing this pathology?

- a. Tyrosinase
- b. Thyroxine hydroxylase
- c. Phenylalanine hydroxylase

d. Homogentisic acid oxidase

e. Monoamine oxidase

984. After ischemic stroke the patient was prescribed a drug to improve his intellectual functioning and memory. What drug would he obtain in the pharmacy?

a. Piracetam

- b. Diphenin (Phenytoin)
- c. -
- d. Tabex (Cytisine)
- e. Metoclopramide

985. After ischemic stroke the patient was prescribed a drug to improve his intellectual functioning and memory. What drug would he obtain in the pharmacy?

- a. Tabex (Cytisine)
- b. -
- c. Diphenin (Phenytoin)
- d. Metoclopramide

e. Piracetam

986. After ischemic stroke the patient was prescribed a drug to improve his intellectual functioning and memory. What drug would he obtain in the pharmacy?

a. Tabex (Cytisine)

- b. Metoclopramide
- c. Diphenin (Phenytoin)

d. Piracetam

e. -

987. After obtaining an antitoxic serum, its activity must be determined. For this purpose, one needs to use a reaction that is based on a combination of equal doses of immune serum and anatoxin. Name this reaction.

- a. Complement fixation
- b. Hemadsorption
- c. Hemagglutination
- d. Precipitation

e. Flocculation

988. After obtaining an antitoxic serum, its activity must be determined. For this purpose, one needs to use a reaction that is based on a combination of equal doses of immune serum and anatoxin. Name this reaction.

- a. Hemagglutination
- b. Complement fixation
- c. Hemadsorption

d. Flocculation

e. Precipitation

989. After obtaining an antitoxic serum, its activity must be determined. For this purpose, one needs to use a reaction that is based on a combination of equal doses of immune serum and anatoxin. Name this reaction.

- a. Precipitation
- b. Hemagglutination
- c. Hemadsorption

d. Flocculation

e. Complement fixation

990. After parenteral administration of iron preparations, the patient presents with pain behind the sternum and redness of the face and neck. What drug should be administered in this case?

- a. Cyanocobalamin
- b. Ascorbic acid

c. Deferoxamine

- d. Vitamin A
- e. Folic acid

991. After parenteral administration of iron preparations, the patient presents with pain behind the sternum and redness of the face and neck. What drug should be administered in this case?

- a. Vitamin A
- b. Cyanocobalamin
- c. Ascorbic acid

d. Deferoxamine

e. Folic acid

992. After severe emotional strain a 53-year-old man suddenly developed acute pain in the heart area, which irradiates to the left hand, to the neck, and under the left scapula. He noted numbness of his left hand. His face is pale and covered in cold sweat. Nitroglycerine administration stopped the pain attack after 10 minutes had passed. What is the most likely disease in this case?

a. Angina pectoris

- b. Somatoform autonomic dysfunction
- c. Myocardial infarction
- d. Stroke
- e. Pulmonary embolism

993. After severe emotional strain a 53-year-old man suddenly developed acute pain in the heart area, which irradiates to the left hand, to the neck, and under the left scapula. He noted numbness of his left hand. His face is pale and covered in cold sweat. Nitroglycerine administration stopped the pain attack after 10 minutes had passed. What is the most likely disease in this case?

- a. Pulmonary embolism
- b. Somatoform autonomic dysfunction
- c. Stroke

d. Angina pectoris

- e. Myocardial infarction

994. After severe emotional strain a 53-year-old man suddenly developed acute pain in the heart area, which irradiates to the left hand, to the neck, and under the left scapula. He noted numbness of his left hand. His face is pale and covered in cold sweat. Nitroglycerine administration stopped the pain attack after 10 minutes had passed. What is the most likely disease in this case?

- a. Stroke

b. Angina pectoris

- c. Somatoform autonomic dysfunction
- d. Pulmonary embolism
- e. Myocardial infarction

995. After the pus sample taken from the urethra had been inoculated on ascitic agar, it resulted in growth of round transparent colonies. Microscopy of the colonies shows gram-negative kidney bean-shaped diplococci. What causative agent is it?

a. Gonococcus

- b. Streptococcus
- c. Pneumococcus
- d. Meningococcus
- e. Micrococcus

996. After the pus sample taken from the urethra had been inoculated on ascitic agar, it resulted in growth of round transparent colonies. Microscopy of the colonies shows gram-negative kidney bean-shaped diplococci. What causative agent is it?

- a. Meningococcus
- b. Streptococcus
- c. Micrococcus

d. Gonococcus

- e. Pneumococcus

997. After the pus sample taken from the urethra had been inoculated on ascitic agar, it resulted in growth of round transparent colonies. Microscopy of the colonies shows gram-negative kidney bean-shaped diplococci. What causative agent is it?

- a. Pneumococcus
- b. Micrococcus

c. Gonococcus

- d. Streptococcus
- e. Meningococcus

998. After the total resection of the stomach, the patient developed severe B₁₂-deficiency anemia with impaired hematopoiesis and altered erythrocytes appearing in the blood. What forms of erythrocytes indicate this disease in the patient, if they are present in the blood?

a. Megalocytes

- b. Normocytes
- c. Microcytes
- d. Ovalocytes
- e. Annulocytes (codocytes)

999. After the total resection of the stomach, the patient developed severe B₁₂-deficiency anemia with impaired hematopoiesis and altered erythrocytes appearing in the blood. What forms of erythrocytes indicate this disease in the patient, if they are present in the blood?

- a. Annulocytes (codocytes)
- b. Ovalocytes

c. Megalocytes

- d. Normocytes
- e. Microcytes

1000. After the total resection of the stomach, the patient developed severe B₁₂-deficiency anemia

with impaired hematopoiesis and altered erythrocytes appearing in the blood. What forms of erythrocytes indicate this disease in the patient, if they are present in the blood?

- a. Microcytes
- b. Annulocytes (codocytes)
- c. Ovalocytes
- d. Normocytes

e. Megalocytes

1001. Against the background of cardiac glycoside treatment, a person developed an arrhythmia. The doctor prescribed the patient a potassium medicine that successfully normalized the heart rate. Name this potassium medicine.

a. Asparcam

- b. Novocainamide
- c. Metoprolol
- d. Verapamil
- e. Amiodarone

1002. Against the background of cardiac glycoside treatment, a person developed an arrhythmia. The doctor prescribed the patient a potassium medicine that successfully normalized the heart rate. Name this potassium medicine.

a. Metoprolol

b. Asparcam

- c. Novocainamide
- d. Verapamil
- e. Amiodarone

1003. Against the background of cardiac glycoside treatment, a person developed an arrhythmia. The doctor prescribed the patient a potassium medicine that successfully normalized the heart rate. Name this potassium medicine.

- a. Metoprolol
- b. Amiodarone

c. Asparcam

- d. Novocainamide
- e. Verapamil

1004. Against the background of treatment with antihypertensive drugs, a woman developed a dry cough. What drugs have caused this side effect?

- a. Calcium channel blockers
- b. Diuretics
- c. Ganglioblockers
- d. alpha-blockers

e. ACE inhibitors

1005. Against the background of treatment with antihypertensive drugs, a woman developed a dry cough. What drugs have caused this side effect?

- a. Calcium channel blockers
- b. Ganglioblockers

c. ACE inhibitors

- d. alpha-blockers
- e. Diuretics

1006. Against the background of treatment with antihypertensive drugs, a woman developed a dry cough. What drugs have caused this side effect?

- a. Diuretics
- b. alpha-blockers
- c. Ganglioblockers

d. ACE inhibitors

- e. Calcium channel blockers

1007. Aggression enzymes are characteristic of pathogenic microorganisms. Select one such aggression enzyme from the list.

a. Lecithinase

- b. Lyase
- c. Lactamase
- d. Transferase
- e. Catalase

1008. Aggression enzymes are characteristic of pathogenic microorganisms. Select one such aggression enzyme from the list.

- a. Lyase
- b. Transferase
- c. Lactamase
- d. Catalase

e. Lecithinase

1009. Aggression enzymes are characteristic of pathogenic microorganisms. Select one such aggression enzyme from the list.

- a. Transferase
- b. Lyase

c. Lecithinase

- d. Catalase
- e. Lactamase

1010. Air contamination with pathological microorganisms can be determined by the presence of indicator bacteria. Specify the bacteria that indicate immediate epidemiologic danger:

- a. Micrococci
- b. Hemolytic streptococci**
- c. Mold fungi
- d. Sarcinae
- e. Yeast fungi

1011. Air contamination with pathological microorganisms can be determined by the presence of indicator bacteria. Specify the bacteria that indicate immediate epidemiologic danger:

- a. Micrococci
- b. Mold fungi
- c. Sarcinae
- d. Hemolytic streptococci**
- e. Yeast fungi

1012. Air contamination with pathological microorganisms can be determined by the presence of indicator bacteria. Specify the bacteria that indicate immediate epidemiologic danger:

- a. Mold fungi
- b. Sarcinae
- c. Micrococci
- d. Yeast fungi
- e. Hemolytic streptococci**

1013. Albinism can be characterized by disturbed metabolism of a certain amino acid. Name this amino acid.

- a. Phenylalanine**
- b. Methionine
- c. Tryptophan
- d. Glutamine
- e. Histidine

1014. Albinism can be characterized by disturbed metabolism of a certain amino acid. Name this amino acid.

- a. Methionine
- b. Glutamine
- c. Tryptophan

d. Phenylalanine

- e. Histidine

1015. Albinism can be characterized by disturbed metabolism of a certain amino acid. Name this amino acid.

a. Tryptophan

b. Phenylalanine

c. Histidine

d. Methionine

e. Glutamine

1016. Aldehyde dehydrogenase inhibitors are widely used in the treatment of alcohol dependence. What metabolite causes the feeling of disgust towards alcohol, if its blood level is elevated?

a. Acetaldehyde

b. Methanol

c. Cholesterol

d. Glucose

e. Fructose

1017. Aldehyde dehydrogenase inhibitors are widely used in the treatment of alcohol dependence. What metabolite causes the feeling of disgust towards alcohol, if its blood level is elevated?

a. Cholesterol

b. Fructose

c. Glucose

d. Methanol

e. Acetaldehyde

1018. Aldehyde dehydrogenase inhibitors are widely used in the treatment of alcohol dependence. What metabolite causes the feeling of disgust towards alcohol, if its blood level is elevated?

a. Cholesterol

b. Methanol

c. Acetaldehyde

d. Glucose

e. Fructose

1019. Alimentary hyperglycemia is observed after eating carbohydrate-rich foods. What hepatocyte enzyme activity is induced the most in this case?

a. Glucose-6-phosphatase

b. Aldolase

c. Glucokinase

d. Isocitrate dehydrogenase

e. Phosphorylase

1020. Alimentary hyperglycemia is observed after eating carbohydrate-rich foods. What hepatocyte enzyme activity is induced the most in this case?

a. Glucose-6-phosphatase

b. Isocitrate dehydrogenase

c. Phosphorylase

d. Aldolase

e. Glucokinase

1021. Alimentary hyperglycemia is observed after eating carbohydrate-rich foods. What hepatocyte enzyme activity is induced the most in this case?

a. Isocitrate dehydrogenase

b. Aldolase

c. Glucokinase

d. Phosphorylase

e. Glucose-6-phosphatase

1022. Alkaline hydrolysis of esters (complex ethers) is called:

a. Condensation

b. Rearrangement

c. Etherification

d. Oxidation

e. Saponification

1023. Alkaline hydrolysis of esters (complex ethers) is called:

a. Oxidation

b. Saponification

- c. Rearrangement
- d. Condensation
- e. Etherification

1024. Alkaline hydrolysis of esters (complex ethers) is called:

- a. Rearrangement
- b. Etherification
- c. Condensation

d. Saponification

- e. Oxidation

1025. Alkaptonuria is caused by a hereditary disorder of the metabolism of a certain amino acid. Name this amino acid.

- a. Arginine

b. Tyrosine

- c. Tryptophan
- d. Alanine
- e. Phenol

1026. Alkaptonuria is caused by a hereditary disorder of the metabolism of a certain amino acid. Name this amino acid.

- a. Tryptophan
- b. Alanine

c. Tyrosine

- d. Phenol
- e. Arginine

1027. Alkaptonuria is caused by a hereditary disorder of the metabolism of a certain amino acid. Name this amino acid.

- a. Tryptophan
- b. Alanine
- c. Arginine
- d. Phenol

e. Tyrosine

1028. Alkaptonuria is characterized by excessive urinary excretion of homogentisic acid. Development of this disease is associated with metabolism disorder of the following amino acid:

a. Tyrosine

- b. Alanine
- c. Tryptophan
- d. Asparagine
- e. Methionine

1029. Alkaptonuria is characterized by excessive urinary excretion of homogentisic acid. Development of this disease is associated with metabolism disorder of the following amino acid:

- a. Alanine
- b. Methionine
- c. Tryptophan
- d. Asparagine

e. Tyrosine

1030. Alkaptonuria is characterized by excessive urinary excretion of homogentisic acid. Development of this disease is associated with metabolism disorder of the following amino acid:

- a. Tryptophan
- b. Alanine
- c. Asparagine

d. Tyrosine

- e. Methionine

1031. All strong electrolytes cause sol coagulation, if added to a sol in a sufficient amount. The coagulant ion in this case is a particle with the charge that is:

- a. Identical to the charge of the colloidal particle

- b. Identical to potential-determining ions
- c. Identical to the charge of the nucleus
- d. Opposite to the counterions of the adsorption layer

e. Opposite to the charge of the colloidal particle

1032. All strong electrolytes cause sol coagulation, if added to a sol in a sufficient amount. The coagulant ion in this case is a particle with the charge that is:

- a. Identical to the charge of the nucleus
- b. Opposite to the counterions of the adsorption layer

c. Opposite to the charge of the colloidal particle

- d. Identical to the charge of the colloidal particle
- e. Identical to potential-determining ions

1033. All strong electrolytes cause sol coagulation, if added to a sol in a sufficient amount. The coagulant ion in this case is a particle with the charge that is:

- a. Opposite to the counterions of the adsorption layer
- b. Identical to the charge of the colloidal particle
- c. Identical to potential-determining ions
- d. Identical to the charge of the nucleus

e. Opposite to the charge of the colloidal particle

1034. Allopurinol is used to reduce the formation of uric acid in the treatment of gout. What enzyme does this compound inhibit?

a. Arginase

b. Xanthine oxidase

- c. Lactate dehydrogenase
- d. Catalase
- e. Amylase

1035. Allopurinol is used to reduce the formation of uric acid in the treatment of gout. What enzyme does this compound inhibit?

a. Lactate dehydrogenase

b. Xanthine oxidase

- c. Arginase
- d. Catalase
- e. Amylase

1036. Allopurinol is used to reduce the formation of uric acid in the treatment of gout. What enzyme does this compound inhibit?

a. Lactate dehydrogenase

b. Catalase

c. Xanthine oxidase

- d. Amylase
- e. Arginase

1037. Allopurinol is used to treat gout. What is the mechanism of action of this drug?

a. Competitive inhibitor of xanthine oxidase

- b. Xanthine oxidase activator
- c. Xanthine oxidase coenzyme
- d. Activator of purine nucleotide catabolism
- e. Inhibitor of purine nucleotide synthesis

1038. Allopurinol is used to treat gout. What is the mechanism of action of this drug?

a. Inhibitor of purine nucleotide synthesis

b. Xanthine oxidase coenzyme

c. Competitive inhibitor of xanthine oxidase

- d. Activator of purine nucleotide catabolism
- e. Xanthine oxidase activator

1039. Allopurinol is used to treat gout. What is the mechanism of action of this drug?

a. Xanthine oxidase activator

b. Xanthine oxidase coenzyme

c. Inhibitor of purine nucleotide synthesis

d. Competitive inhibitor of xanthine oxidase

e. Activator of purine nucleotide catabolism

1040. *Althaea officinalis* root assumes a marked blue hue on section when processed with methylene blue, which indicates the presence of:

a. Mucus

b. Glycogen

c. Lipids

d. Inulin

e. Starch

1041. *Althaea officinalis* root assumes a marked blue hue on section when processed with methylene blue, which indicates the presence of:

a. Mucus

b. Glycogen

c. Lipids

d. Starch

e. Inulin

1042. *Althaea officinalis* root assumes a marked blue hue on section when processed with methylene blue, which indicates the presence of:

a. Lipids

b. Mucus

c. Inulin

d. Glycogen

e. Starch

1043. Amino acids and their derivatives function as neurotransmitters in brain neurons. What neurotransmitter forms from an aromatic amino acid?

a. Dopamine

b. Methionine

c. Glycine

d. Leucine

e. Taurine

1044. Amino acids and their derivatives function as neurotransmitters in brain neurons. What neurotransmitter forms from an aromatic amino acid?

a. Leucine

b. Glycine

c. Methionine

d. Dopamine

e. Taurine

1045. Amino acids and their derivatives function as neurotransmitters in brain neurons. What neurotransmitter forms from an aromatic amino acid?

a. Leucine

b. Methionine

c. Dopamine

d. Taurine

e. Glycine

1046. Amino acids can participate in a large number of metabolic processes. What amino acid functions as a donor of methyl groups ($-\text{CH}_3$)?

a. Isoleucine

b. Leucine

c. Valine

d. Methionine

e. Tryptophan

1047. Amino acids can participate in a large number of metabolic processes. What amino acid functions as a donor of methyl groups ($-\text{CH}_3$)?

a. Leucine

b. Isoleucine

- c. Tryptophan
- d. Valine

e. Methionine

1048. Amino acids can participate in a large number of metabolic processes. What amino acid functions as a donor of methyl groups ($-CH_3$)?

- a. Valine
- b. Leucine
- c. Isoleucine

d. Methionine

e. Tryptophan

1049. Amino acids take part in methylation reactions during the synthesis of a number of bioactive substances - adrenaline, melatonin, phosphatidylcholine, creatine. For the synthesis of these compounds, the active form of a certain amino acid is used. Name this amino acid.

a. Alanine

b. Methionine

- c. Valine
- d. Phenylalanine
- e. Threonine

1050. Amino acids take part in methylation reactions during the synthesis of a number of bioactive substances - adrenaline, melatonin, phosphatidylcholine, creatine. For the synthesis of these compounds, the active form of a certain amino acid is used. Name this amino acid.

a. Threonine

b. Methionine

- c. Phenylalanine
- d. Valine
- e. Alanine

1051. Amino acids take part in methylation reactions during the synthesis of a number of bioactive substances - adrenaline, melatonin, phosphatidylcholine, creatine. For the synthesis of these compounds, the active form of a certain amino acid is used. Name this amino acid.

- a. Valine
- b. Alanine

c. Methionine

- d. Phenylalanine
- e. Threonine

1052. Ammonia is a highly toxic substance, especially for the nervous system. This toxic product binds with a certain metabolite of the tricarboxylic acid cycle, forming glutamate and glutamine. What metabolite is it?

a. Citrate

b. Alpha-ketoglutarate

- c. Malate
- d. Fumarate
- e. Succinate

1053. Ammonia is a highly toxic substance, especially for the nervous system. This toxic product binds with a certain metabolite of the tricarboxylic acid cycle, forming glutamate and glutamine. What metabolite is it?

- a. Citrate
- b. Fumarate
- c. Succinate

d. Alpha-ketoglutarate

e. Malate

1054. Ammonia is a highly toxic substance, especially for the nervous system. This toxic product binds with a certain metabolite of the tricarboxylic acid cycle, forming glutamate and glutamine. What metabolite is it?

a. Succinate

b. Alpha-ketoglutarate

- c. Malate
- d. Fumarate
- e. Citrate

1055. Ammonia is a toxic substance that is especially dangerous for the brain. In the human body, the main product of ammonia neutralization and excretion is urea. Name the process of urea synthesis.

- a. Cori cycle
- b. Linen cycle
- c. Shemin-Rittenberg cycle

d. Krebs ornithine cycle

- e. Citric acid cycle

1056. Ammonia is a toxic substance that is especially dangerous for the brain. In the human body, the main product of ammonia neutralization and excretion is urea. Name the process of urea synthesis.

- a. Shemin-Rittenberg cycle
- b. Citric acid cycle
- c. Cori cycle

d. Krebs ornithine cycle

- e. Linen cycle

1057. Ammonia is a toxic substance that is especially dangerous for the brain. In the human body, the main product of ammonia neutralization and excretion is urea. Name the process of urea synthesis.

- a. Shemin-Rittenberg cycle
- b. Cori cycle

c. Krebs ornithine cycle

- d. Citric acid cycle
- e. Linen cycle

1058. Ammonium ions (NH_4^+) must be removed from a mixture during the detection of sodium (Na^+) and potassium (K^+) cations of the first analytical group. Why is it necessary?

- a. They interfere with the determination of potassium and sodium ions**
- b. The solution pH becomes <7 , because of hydrolysis of these ions
- c. The solution pH becomes >7 , because of hydrolysis of these ions
- d. Compounds with K^+ and Na^+ ions form supersaturated solutions
- e. Ammonium salts decompose at high temperatures

1059. Ammonium ions (NH_4^+) must be removed from a mixture during the detection of sodium (Na^+) and potassium (K^+) cations of the first analytical group. Why is it necessary?

- a. Ammonium salts decompose at high temperatures
- b. Compounds with K^+ and Na^+ ions form supersaturated solutions

c. They interfere with the determination of potassium and sodium ions

- d. The solution pH becomes <7 , because of hydrolysis of these ions
- e. The solution pH becomes >7 , because of hydrolysis of these ions

1060. Ammonium ions (NH_4^+) must be removed from a mixture during the detection of sodium (Na^+) and potassium (K^+) cations of the first analytical group. Why is it necessary?

- a. Compounds with K^+ and Na^+ ions form supersaturated solutions
- b. Ammonium salts decompose at high temperatures

c. They interfere with the determination of potassium and sodium ions

- d. The solution pH becomes >7 , because of hydrolysis of these ions
- e. The solution pH becomes <7 , because of hydrolysis of these ions

1061. Ammonium iron(III) sulfate can be used as an indicator in:

- a. Acidimetry
- b. Alkalimetry
- c. Complexometric titration

d. Argentometry, Volhard method

- e. Argentometry, Mohr method

1062. Ammonium iron(III) sulfate can be used as an indicator in:

- a. Acidimetry
- b. Complexometric titration
- c. Alkalimetry

d. Argentometry, Volhard method

e. Argentometry, Mohr method

1063. Ammonium iron(III) sulfate can be used as an indicator in:

- a. Complexometric titration
- b. Acidimetry
- c. Alkalimetry

d. Argentometry, Volhard method

e. Argentometry, Mohr method

1064. Ammonium thiocyanate solution was added into the solution being studied. The resulting solution colored red. This analytical effect indicates the presence of the following cation:

a. Iron(III)

- b. Mercury(I)
- c. Mercury(II)
- d. Silver
- e. Lead(II)

1065. Ammonium thiocyanate solution was added into the solution being studied. The resulting solution colored red. This analytical effect indicates the presence of the following cation:

- a. Mercury(II)
- b. Mercury(I)
- c. Lead(II)
- d. Silver

e. Iron(III)

1066. Ammonium thiocyanate solution was added into the solution being studied. The resulting solution colored red. This analytical effect indicates the presence of the following cation:

- a. Silver
- b. Lead(II)

c. Iron(III)

- d. Mercury(II)
- e. Mercury(I)

1067. Among NSAIDs, the least damaging effect on the gastrointestinal mucosa is characteristic of:

a. Celecoxib

- b. Butadion (Phenylbutazone)
- c. Acetylsalicylic acid
- d. Diclofenac
- e. Naproxen

1068. Among NSAIDs, the least damaging effect on the gastrointestinal mucosa is characteristic of:

- a. Acetylsalicylic acid
- b. Diclofenac
- c. Naproxen

d. Celecoxib

e. Butadion (Phenylbutazone)

1069. Among NSAIDs, the least damaging effect on the gastrointestinal mucosa is characteristic of:

- a. Butadion (Phenylbutazone)
- b. Naproxen
- c. Diclofenac
- d. Acetylsalicylic acid

e. Celecoxib

1070. Among dosage forms there are numerous disperse systems. Select a free disperse system from the list:

a. Emulsion

- b. Diaphragm
- c. Gel
- d. Jelly
- e. Membrane

1071. Among dosage forms there are numerous disperse systems. Select a free disperse system from

the list:

- a. Gel
- b. Membrane
- c. Jelly
- d. Emulsion**

e. Diaphragm

1072. Among dosage forms there are numerous disperse systems. Select a free disperse system from the list:

a. Jelly

b. Emulsion

- c. Gel
- d. Membrane
- e. Diaphragm

1073. Amperometric titration is used in analysis of some pharmaceutical preparations. The amperometric titration method is based on the following:

- a. Ion exchange between the analyte solution and cationite
- b. Measuring the potential difference of the electrodes during the titration process
- c. Ion exchange between the anionite and analyte solution

d. Determining the equivalence point by a sharp change in the diffusion current during the titration process

e. Measuring the cell voltage during the titration

1074. Amperometric titration is used in analysis of some pharmaceutical preparations. The amperometric titration method is based on the following:

- a. Measuring the cell voltage during the titration
- b. Measuring the potential difference of the electrodes during the titration process
- c. Ion exchange between the anionite and analyte solution
- d. Ion exchange between the analyte solution and cationite

e. Determining the equivalence point by a sharp change in the diffusion current during the titration process

1075. Amperometric titration is used in analysis of some pharmaceutical preparations. The amperometric titration method is based on the following:

- a. Measuring the potential difference of the electrodes during the titration process
- b. Ion exchange between the analyte solution and cationite

c. Determining the equivalence point by a sharp change in the diffusion current during the titration process

- d. Measuring the cell voltage during the titration
- e. Ion exchange between the anionite and analyte solution

1076. An HIV-infected patient presents with suppression of the immune system activity. What cells are affected in this case, causing the state of immunodeficiency in the patient?

a. Helper T cells

- b. Suppressor T cells
- c. Killer T cells
- d. Macrophages
- e. B lymphocytes

1077. An HIV-infected patient presents with suppression of the immune system activity. What cells are affected in this case, causing the state of immunodeficiency in the patient?

- a. Killer T cells
- b. B lymphocytes

c. Helper T cells

- d. Suppressor T cells
- e. Macrophages

1078. An HIV-infected patient presents with suppression of the immune system activity. What cells are affected in this case, causing the state of immunodeficiency in the patient?

- a. Suppressor T cells
- b. Macrophages

- c. B lymphocytes
- d. Killer T cells

e. Helper T cells

1079. An analytical chemist conducts a systematic analysis of a mixture of anions. What reagents are used in the test for oxidizing anions?

a. KI in the presence of chloroform

- b. HCl in the presence of amyl alcohol
- c. $\text{Na}_2\text{C}_2\text{O}_4$
- d. AgNO_3 in the presence of HNO_3
- e. $\text{Ba}(\text{NO}_3)_2$

1080. An analytical chemist conducts a systematic analysis of a mixture of anions. What reagents are used in the test for oxidizing anions?

- a. HCl in the presence of amyl alcohol
- b. AgNO_3 in the presence of HNO_3
- c. $\text{Na}_2\text{C}_2\text{O}_4$
- d. $\text{Ba}(\text{NO}_3)_2$

e. KI in the presence of chloroform

1081. An analytical chemist conducts a systematic analysis of a mixture of anions. What reagents are used in the test for oxidizing anions?

a. $\text{Na}_2\text{C}_2\text{O}_4$

b. KI in the presence of chloroform

- c. HCl in the presence of amyl alcohol
- d. AgNO_3 in the presence of HNO_3
- e. $\text{Ba}(\text{NO}_3)_2$

1082. An analytical chemist conducts qualitative analysis of IV group cations. What reagent can be used to determine zinc?

- a. Alizarin
- b. Murexide
- c. Diphenylamine
- d. Thiourea

e. Dithizone

1083. An analytical chemist conducts qualitative analysis of IV group cations. What reagent can be used to determine zinc?

- a. Diphenylamine
- b. Murexide

c. Dithizone

- d. Thiourea
- e. Alizarin

1084. An analytical chemist conducts qualitative analysis of IV group cations. What reagent can be used to determine zinc?

- a. Diphenylamine
- b. Murexide
- c. Alizarin
- d. Thiourea

e. Dithizone

1085. An anxiolytic agent, a benzodiazepine derivative, was prescribed to a patient with a neurosis in order to reduce its signs. What medicine belongs to this group of drugs?

- a. Atropine sulphate
- b. Nandrolone
- c. Piroxicam
- d. Trihexyphenidyl

e. Diazepam

1086. An anxiolytic agent, a benzodiazepine derivative, was prescribed to a patient with a neurosis in order to reduce its signs. What medicine belongs to this group of drugs?

- a. Atropine sulphate

b. Trihexyphenidyl

c. Diazepam

d. Piroxicam

e. Nandrolone

1087. An anxiolytic agent, a benzodiazepine derivative, was prescribed to a patient with a neurosis in order to reduce its signs. What medicine belongs to this group of drugs?

a. Nandrolone

b. Atropine sulphate

c. Diazepam

d. Piroxicam

e. Trihexyphenidyl

1088. An athlete is recommended to take carnitine to improve his achievements. What process does carnitine activate?

a. Fatty acids transport

b. Vitamin K transport

c. Glucose transport

d. Amino acids transport

e. Vitamin B₁₂ transport

1089. An athlete is recommended to take carnitine to improve his achievements. What process does carnitine activate?

a. Vitamin K transport

b. Fatty acids transport

c. Vitamin B₁₂ transport

d. Glucose transport

e. Amino acids transport

1090. An autoimmune disorder of islet beta-cells was detected in a 14-year-old girl with hyperglycemia, glycosuria, and polyuria. What type of diabetes does this girl have?

a. Diabetes insipidus

b. -

c. Type 1 diabetes mellitus

d. Gestational diabetes

e. Type 2 diabetes mellitus

1091. An autoimmune disorder of islet beta-cells was detected in a 14-year-old girl with hyperglycemia, glycosuria, and polyuria. What type of diabetes does this girl have?

a. Type 2 diabetes mellitus

b. Diabetes insipidus

c. -

d. Type 1 diabetes mellitus

e. Gestational diabetes

1092. An autoimmune disorder of islet beta-cells was detected in a 14-year-old girl with hyperglycemia, glycosuria, and polyuria. What type of diabetes does this girl have?

a. Type 2 diabetes mellitus

b. Gestational diabetes

c. Type 1 diabetes mellitus

d. Diabetes insipidus

e. -

1093. An elderly patient has developed postoperative intestinal atony. What anticholinesterase drug should be prescribed?

a. Proserin

b. Atropine sulfate

c. Dithylinum (Suxamethonium chloride)

d. Metoprolol

e. Pilocarpine hydrochloride

1094. An elderly patient has developed postoperative intestinal atony. What anticholinesterase drug should be prescribed?

a. Atropine sulfate

b. Proserin

c. Metoprolol

d. Pilocarpine hydrochloride

e. Dithylinum (Suxamethonium chloride)

1095. An elderly patient has developed postoperative intestinal atony. What anticholinesterase drug should be prescribed?

a. Pilocarpine hydrochloride

b. Metoprolol

c. Atropine sulfate

d. Proserin

e. Dithylinum (Suxamethonium chloride)

1096. An elderly patient suffers from constipation caused by colon hypotonia. What drug should be prescribed?

a. Bisacodyl

b. Castor oil

c. Novocainamide (Procainamide)

d. Atropine sulfate

e. Sodium sulfate

1097. An elderly patient suffers from constipation caused by colon hypotonia. What drug should be prescribed?

a. Novocainamide (Procainamide)

b. Bisacodyl

c. Atropine sulfate

d. Castor oil

e. Sodium sulfate

1098. An elderly patient suffers from constipation caused by colon hypotonia. What drug should be prescribed?

a. Novocainamide (Procainamide)

b. Atropine sulfate

c. Sodium sulfate

d. Bisacodyl

e. Castor oil

1099. An engine driver complains of his seasonal allergy symptoms. What non-sedating drug should be prescribed in this case?

a. Analgine (Metamizole)

b. Novocaine

c. Loratadine

d. Atenolol

e. Fenofibrate

1100. An engine driver complains of his seasonal allergy symptoms. What non-sedating drug should be prescribed in this case?

a. Atenolol

b. Analgine (Metamizole)

c. Loratadine

d. Fenofibrate

e. Novocaine

1101. An engine driver complains of his seasonal allergy symptoms. What non-sedating drug should be prescribed in this case?

a. Fenofibrate

b. Analgine (Metamizole)

c. Loratadine

d. Atenolol

e. Novocaine

1102. An enzyme transports structure fragments from one substrate into another. Name this class of

enzymes:

a. Transferases

- b. Oxidoreductases
- c. Isomerases
- d. Hydrolases
- e. Ligases

1103. An enzyme transports structure fragments from one substrate into another. Name this class of enzymes:

- a. Hydrolases
- b. Ligases
- c. Isomerases
- d. Oxidoreductases

e. Transferases

1104. An enzyme transports structure fragments from one substrate into another. Name this class of enzymes:

- a. Oxidoreductases
- b. Hydrolases
- c. Isomerases
- d. Ligases

e. Transferases

1105. An injured person exhibits the following signs at the site of trauma: skin redness, throbbing small arteries, elevated local temperature, increased tissue turgor. What local blood circulation disorder are these presentations typical of?

a. Arterial hyperemia

- b. Ischemia
- c. Venous hyperemia
- d. Embolism
- e. Thrombosis

1106. An injured person exhibits the following signs at the site of trauma: skin redness, throbbing small arteries, elevated local temperature, increased tissue turgor. What local blood circulation disorder are these presentations typical of?

- a. Ischemia
- b. Embolism
- c. Thrombosis

d. Arterial hyperemia

e. Venous hyperemia

1107. An injured person exhibits the following signs at the site of trauma: skin redness, throbbing small arteries, elevated local temperature, increased tissue turgor. What local blood circulation disorder are these presentations typical of?

a. Venous hyperemia

b. Arterial hyperemia

- c. Ischemia
- d. Thrombosis
- e. Embolism

1108. An iodine solution was prepared using the method of established titer. What primary standards can be used for the standardization in this case?

- a. Ammonium oxalate and oxalic acid
- b. Potassium dichromate and potassium bromate
- c. Metallic iron and iron(II) sulfate
- d. Sodium tetraborate and sodium carbonate

e. Hydrazine sulfate and arsenic(III) oxide

1109. An iodine solution was prepared using the method of established titer. What primary standards can be used for the standardization in this case?

- a. Metallic iron and iron(II) sulfate
- b. Potassium dichromate and potassium bromate

c. Ammonium oxalate and oxalic acid

d. Hydrazine sulfate and arsenic(III) oxide

e. Sodium tetraborate and sodium carbonate

1110. An iodine solution was prepared using the method of established titer. What primary standards can be used for the standardization in this case?

a. Metallic iron and iron(II) sulfate

b. Sodium tetraborate and sodium carbonate

c. Ammonium oxalate and oxalic acid

d. Potassium dichromate and potassium bromate

e. Hydrazine sulfate and arsenic(III) oxide

1111. An older patient exhibits low levels of red blood cells and hemoglobin in blood, but the color index is 1,3. Blood smear analysis revealed megaloblasts. What type of anemia is observed in this case?

a. Acquired hemolytic

b. Iron-deficiency

c. B₁₂-folic acid deficiency

d. Hereditary hemolytic

e. Chronic posthemorrhagic

1112. An older patient exhibits low levels of red blood cells and hemoglobin in blood, but the color index is 1,3. Blood smear analysis revealed megaloblasts. What type of anemia is observed in this case?

a. Chronic posthemorrhagic

b. Acquired hemolytic

c. Iron-deficiency

d. Hereditary hemolytic

e. B₁₂-folic acid deficiency

1113. An older patient exhibits low levels of red blood cells and hemoglobin in blood, but the color index is 1,3. Blood smear analysis revealed megaloblasts. What type of anemia is observed in this case?

a. Iron-deficiency

b. Acquired hemolytic

c. Chronic posthemorrhagic

d. Hereditary hemolytic

e. B₁₂-folic acid deficiency

1114. An oncological patient was prescribed fluorouracil that is a competitive inhibitor of thymidine synthase. It inhibits the process of:

a. Pyrimidine nucleotides synthesis

b. Purine nucleotides synthesis

c. Carbohydrate disintegration

d. Lipids synthesis

e. Purine nucleotides disintegration

1115. An oncological patient was prescribed fluorouracil that is a competitive inhibitor of thymidine synthase. It inhibits the process of:

a. Carbohydrate disintegration

b. Purine nucleotides synthesis

c. Purine nucleotides disintegration

d. Pyrimidine nucleotides synthesis

e. Lipids synthesis

1116. An oncological patient was prescribed fluorouracil that is a competitive inhibitor of thymidine synthase. It inhibits the process of:

a. Purine nucleotides disintegration

b. Lipids synthesis

c. Purine nucleotides synthesis

d. Carbohydrate disintegration

e. Pyrimidine nucleotides synthesis

1117. An outbreak of acute intestinal infection occurred in a kindergarten. An epidemiological laboratory team has conducted an examination of hand lavage of kitchen workers. What microorganisms in the hand lavage can indicate a fecal contamination?

a. Actinomycetes

b. *S. aureus*

c. *E. coli*

d. Streptomycetes

e. *C. albicans*

1118. An outbreak of acute intestinal infection occurred in a kindergarten. An epidemiological laboratory team has conducted an examination of hand lavage of kitchen workers. What microorganisms in the hand lavage can indicate a fecal contamination?

a. *C. albicans*

b. *E. coli*

c. Actinomycetes

d. *S. aureus*

e. Streptomycetes

1119. An outbreak of acute intestinal infection occurred in a kindergarten. An epidemiological laboratory team has conducted an examination of hand lavage of kitchen workers. What microorganisms in the hand lavage can indicate a fecal contamination?

a. *C. albicans*

b. *E. coli*

c. Actinomycetes

d. Streptomycetes

e. *S. aureus*

1120. Analysis of a sedative herbal tea detects yellow-green infructescences (microstrobiles) formed by bract scales with a tile-like arrangement and small nut-like fruits. What plant can be characterized by such features?

a. *Humulus lupulus*

b. *Juniperus communis*

c. *Ephedra distachya*

d. *Alnus glutinosa*

e. *Schizandra chinensis*

1121. Analysis of a sedative herbal tea detects yellow-green infructescences (microstrobiles) formed by bract scales with a tile-like arrangement and small nut-like fruits. What plant can be characterized by such features?

a. *Alnus glutinosa*

b. *Humulus lupulus*

c. *Ephedra distachya*

d. *Juniperus communis*

e. *Schizandra chinensis*

1122. Analysis of a sedative herbal tea detects yellow-green infructescences (microstrobiles) formed by bract scales with a tile-like arrangement and small nut-like fruits. What plant can be characterized by such features?

a. *Ephedra distachya*

b. *Juniperus communis*

c. *Schizandra chinensis*

d. *Humulus lupulus*

e. *Alnus glutinosa*

1123. Androecium of *Brassica oleracea* flower has six stamens, with four stamens of inner circle longer than two stamens of outer circle. What is this type of androecium called?

a. Tetradynamous

b. Polydelphous

c. Didynamous

d. Diadelphous

e. Monadelphous

1124. Androecium of Brassica oleracea flower has six stamens, with four stamens of inner circle longer than two stamens of outer circle. What is this type of androecium called?

- a. Didynamous
- b. Diadelphous
- c. Polydelphous
- d. Monadelphous

e. Tetradynamous

1125. Androecium of Brassica oleracea flower has six stamens, with four stamens of inner circle longer than two stamens of outer circle. What is this type of androecium called?

- a. Didynamous
- b. Monadelphous
- c. Diadelphous

d. Tetradynamous

e. Polydelphous

1126. Anionites are the adsorbents that can:

- a. Adsorb ions from the medium
- b. Replace their own anions with anions of the medium**
- c. Replace their own ions with molecules of the medium
- d. Replace their own cations with cations of the medium
- e. Adsorb molecules from the medium

1127. Anionites are the adsorbents that can:

- a. Replace their own ions with molecules of the medium
- b. Replace their own anions with anions of the medium**
- c. Replace their own cations with cations of the medium
- d. Adsorb ions from the medium
- e. Adsorb molecules from the medium

1128. Anionites are the adsorbents that can:

- a. Replace their own ions with molecules of the medium
- b. Adsorb ions from the medium
- c. Replace their own anions with anions of the medium**
- d. Adsorb molecules from the medium
- e. Replace their own cations with cations of the medium

1129. Anticholinesterase agents have an effect on neuromuscular transmission and on the tone and motility of the gastrointestinal tract and urinary bladder. What drug is a synthetic representative of this group of drugs?

- a. Dipyroxime (Trimedoxime bromide)
- b. Physostigmine salicylate
- c. Isonitrozone

d. Prozerin (Neostigmine)

e. Galantamine hydrobromide

1130. Anticholinesterase agents have an effect on neuromuscular transmission and on the tone and motility of the gastrointestinal tract and urinary bladder. What drug is a synthetic representative of this group of drugs?

- a. Galantamine hydrobromide
- b. Physostigmine salicylate

c. Prozerin (Neostigmine)

d. Dipyroxime (Trimedoxime bromide)

e. Isonitrozone

1131. Anticholinesterase agents have an effect on neuromuscular transmission and on the tone and motility of the gastrointestinal tract and urinary bladder. What drug is a synthetic representative of this group of drugs?

- a. Isonitrozone
- b. Dipyroxime (Trimedoxime bromide)

c. Prozerin (Neostigmine)

d. Physostigmine salicylate

e. Galantamine hydrobromide

1132. Antidepressants can increase the content of catecholamines in the synaptic cleft. What is the mechanism of action of these drugs?

- a. Activate decarboxylase
- b. Inhibit aminotransferase
- c. Activate aminotransferase

d. Inhibit monoamine oxidase

e. Inhibit xanthine oxidase

1133. Antidepressants can increase the content of catecholamines in the synaptic cleft. What is the mechanism of action of these drugs?

- a. Activate decarboxylase
- b. Inhibit xanthine oxidase
- c. Activate aminotransferase
- d. Inhibit aminotransferase

e. Inhibit monoamine oxidase

1134. Antidepressants can increase the content of catecholamines in the synaptic cleft. What is the mechanism of action of these drugs?

- a. Inhibit xanthine oxidase
- b. Activate aminotransferase
- c. Activate decarboxylase

d. Inhibit monoamine oxidase

e. Inhibit aminotransferase

1135. Antiparkinsonian drugs are classified based on the mechanism of their action in the body. What drug is a dopamine precursor?

- a. Bromocriptine
- b. Midantan (Amantadine)
- c. Selegiline
- d. Cyclodol (Trihexyphenidyl)

e. Levodopa

1136. Antiparkinsonian drugs are classified based on the mechanism of their action in the body. What drug is a dopamine precursor?

- a. Cyclodol (Trihexyphenidyl)
- b. Midantan (Amantadine)

c. Levodopa

d. Selegiline

e. Bromocriptine

1137. Antiparkinsonian drugs are classified based on the mechanism of their action in the body. What drug is a dopamine precursor?

- a. Cyclodol (Trihexyphenidyl)
- b. Selegiline
- c. Bromocriptine

d. Levodopa

e. Midantan (Amantadine)

1138. Any damage to the patient's vessels results in persistent hemorrhage. Blood clotting factor VIII is deficient in the patient's blood. What disease does this patient suffer from?

a. Hemophilia

- b. Acute vascular purpura
- c. Thrombocytopenic purpura
- d. Anemia
- e. Radiation sickness

1139. Any damage to the patient's vessels results in persistent hemorrhage. Blood clotting factor VIII is deficient in the patient's blood. What disease does this patient suffer from?

a. Anemia

b. Hemophilia

c. Thrombocytopenic purpura

- d. Radiation sickness
- e. Acute vascular purpura

1140. Any damage to the patient's vessels results in persistent hemorrhage. Blood clotting factor VIII is deficient in the patient's blood. What disease does this patient suffer from?

- a. Anemia
- b. Thrombocytopenic purpura
- c. Acute vascular purpura

d. Hemophilia

- e. Radiation sickness

1141. As a result of a car accident, a man (driver) has suffered an extensive blood loss. He presents with rapid breathing, tachycardia, and low blood pressure. What pathological condition is likely to be observed in him one hour after the blood loss?

a. Hypovolemia

- b. Erythrocyte hypochromia
- c. Erythrocyte hyperchromia
- d. Dyslipidemia
- e. Hyperglycemia

1142. As a result of a car accident, a man (driver) has suffered an extensive blood loss. He presents with rapid breathing, tachycardia, and low blood pressure. What pathological condition is likely to be observed in him one hour after the blood loss?

- a. Dyslipidemia
- b. Erythrocyte hyperchromia
- c. Erythrocyte hypochromia

d. Hypovolemia

- e. Hyperglycemia

1143. As a result of a car accident, a man (driver) has suffered an extensive blood loss. He presents with rapid breathing, tachycardia, and low blood pressure. What pathological condition is likely to be observed in him one hour after the blood loss?

- a. Erythrocyte hyperchromia

b. Hypovolemia

- c. Dyslipidemia
- d. Hyperglycemia
- e. Erythrocyte hypochromia

1144. As a result of an accident (snakebite) a male patient has the following blood values: Hb- 80 g/l, RBC- $3,0 \cdot 10^{12}/l$; WBC- $5,5 \cdot 10^9/l$. What type of anemia is observed in this case?

a. Hemolytic

- b. Folic acid-deficiency
- c. Iron-deficiency
- d. Posthemorrhagic
- e. Aplastic

1145. As a result of an accident (snakebite) a male patient has the following blood values: Hb- 80 g/l, RBC- $3,0 \cdot 10^{12}/l$; WBC- $5,5 \cdot 10^9/l$. What type of anemia is observed in this case?

a. Hemolytic

- b. Posthemorrhagic
- c. Folic acid-deficiency
- d. Iron-deficiency
- e. Aplastic

1146. As a result of an accident (snakebite) a male patient has the following blood values: Hb- 80 g/l, RBC- $3,0 \cdot 10^{12}/l$; WBC- $5,5 \cdot 10^9/l$. What type of anemia is observed in this case?

- a. Posthemorrhagic

b. Hemolytic

- c. Aplastic
- d. Iron-deficiency
- e. Folic acid-deficiency

1147. As a result of prolonged starvation, intracellular lipolysis activates in the tissues. What hormone

is the activator of this process?

- a. Cholecalciferol
- b. Calcitonin
- c. Glucagon**
- d. Oxytocin
- e. Insulin

1148. As a result of prolonged starvation, intracellular lipolysis activates in the tissues. What hormone is the activator of this process?

- a. Cholecalciferol
- b. Oxytocin
- c. Insulin
- d. Calcitonin
- e. Glucagon**

1149. As a result of prolonged starvation, intracellular lipolysis activates in the tissues. What hormone is the activator of this process?

- a. Oxytocin
- b. Cholecalciferol
- c. Calcitonin
- d. Insulin
- e. Glucagon**

1150. Asepsis, antiseptics, disinfection, and sterilization are widely used in pharmaceutical practice. What is the correct definition of the term "asepsis"?

- a. Preventing microbes from contaminating any object**
- b. Destruction of pathogenic microbes in the environment
- c. The use of substances that kill microorganisms on the skin and mucosa
- d. The use of substances that kill pathogenic microbes in the internal environment of the body
- e. Complete destruction of all forms of microbes in an object

1151. Asepsis, antiseptics, disinfection, and sterilization are widely used in pharmaceutical practice. What is the correct definition of the term "asepsis"?

- a. Complete destruction of all forms of microbes in an object
- b. The use of substances that kill microorganisms on the skin and mucosa
- c. The use of substances that kill pathogenic microbes in the internal environment of the body
- d. Destruction of pathogenic microbes in the environment
- e. Preventing microbes from contaminating any object**

1152. Asepsis, antiseptics, disinfection, and sterilization are widely used in pharmaceutical practice. What is the correct definition of the term "asepsis"?

- a. Destruction of pathogenic microbes in the environment
- b. Preventing microbes from contaminating any object**
- c. The use of substances that kill microorganisms on the skin and mucosa
- d. The use of substances that kill pathogenic microbes in the internal environment of the body
- e. Complete destruction of all forms of microbes in an object

1153. At an altitude of 20000 meters, a depressurization of a cargo plane occurred, followed by its crashing to the ground. A forensic examination determined that the people onboard had died before the impact with the ground. Embolism was stated as one of the causes of death of the entire crew. What type of embolism is most likely in this case?

- a. Air embolism
- b. Thromboembolism
- c. Gas embolism**
- d. Foreign body embolism
- e. Fat embolism

1154. At an altitude of 20000 meters, a depressurization of a cargo plane occurred, followed by its crashing to the ground. A forensic examination determined that the people onboard had died before the impact with the ground. Embolism was stated as one of the causes of death of the entire crew. What type of embolism is most likely in this case?

- a. Foreign body embolism

b. Gas embolism

- c. Fat embolism
- d. Air embolism
- e. Thromboembolism

1155. At an altitude of 20000 meters, a depressurization of a cargo plane occurred, followed by its crashing to the ground. A forensic examination determined that the people onboard had died before the impact with the ground. Embolism was stated as one of the causes of death of the entire crew. What type of embolism is most likely in this case?

- a. Foreign body embolism
- b. Fat embolism
- c. Thromboembolism

d. Gas embolism

- e. Air embolism

1156. At the beginning of the bacteriological study, microscopy of the studied material was carried out and Gram-positive cocci were detected in it. The cocci were arranged in the clusters that resembled a bunch of grapes. Next, the material was inoculated on a dense nutrient medium. Why was it done?

- a. To obtain the pure culture
- b. To study the biochemical properties
- c. To study the cultural properties
- d. To study the antigenic properties

e. To obtain isolated colonies

1157. At the beginning of the bacteriological study, microscopy of the studied material was carried out and Gram-positive cocci were detected in it. The cocci were arranged in the clusters that resembled a bunch of grapes. Next, the material was inoculated on a dense nutrient medium. Why was it done?

- a. To study the antigenic properties
- b. To obtain the pure culture
- c. To study the biochemical properties

d. To obtain isolated colonies

- e. To study the cultural properties

1158. At the beginning of the bacteriological study, microscopy of the studied material was carried out and Gram-positive cocci were detected in it. The cocci were arranged in the clusters that resembled a bunch of grapes. Next, the material was inoculated on a dense nutrient medium. Why was it done?

- a. To study the biochemical properties

b. To obtain isolated colonies

- c. To study the antigenic properties
- d. To study the cultural properties
- e. To obtain the pure culture

1159. At what temperature should the determination be carried out in refractometric method of analysis?

- a. 18[°]C
- b. 28[°]C
- c. 23[°]C

d. 20[°]C

- e. 25[°]C

1160. At what temperature should the determination be carried out in refractometric method of analysis?

- a. 25[°]C
- b. 28[°]C
- c. 23[°]C
- d. 18[°]C

e. 20[°]C

1161. At what temperature should the determination be carried out in refractometric method of

analysis?

- a. 28°C
- b. 25°C
- c. 23°C
- d. 20°C**
- e. 18°C

1162. Atropine sulfate belongs to the following group of drugs:

- a. Nicotinic antagonists
- b. Tranquilizers
- c. Muscarinic antagonists**
- d. alpha-adrenergic agonists
- e. beta-adrenergic agonists

1163. Atropine sulfate belongs to the following group of drugs:

- a. Nicotinic antagonists
- b. beta-adrenergic agonists
- c. Tranquilizers
- d. Muscarinic antagonists**
- e. alpha-adrenergic agonists

1164. Atropine sulfate belongs to the following group of drugs:

- a. beta-adrenergic agonists
- b. Nicotinic antagonists
- c. alpha-adrenergic agonists
- d. Tranquilizers
- e. Muscarinic antagonists**

1165. Autopsy of a lab rat that for the period of 24 hours remained in an immobilization chamber revealed gastric erosions. What hormones can cause erosions in this case?

- a. Estrogens
- b. Glucagon
- c. Glucocorticoids**
- d. Mineralocorticoids
- e. Insulin

1166. Autopsy of a lab rat that for the period of 24 hours remained in an immobilization chamber revealed gastric erosions. What hormones can cause erosions in this case?

- a. Mineralocorticoids
- b. Estrogens
- c. Insulin
- d. Glucagon
- e. Glucocorticoids**

1167. Autopsy of a lab rat that for the period of 24 hours remained in an immobilization chamber revealed gastric erosions. What hormones can cause erosions in this case?

- a. Mineralocorticoids
- b. Glucagon
- c. Insulin
- d. Estrogens
- e. Glucocorticoids**

1168. Azo dyes are produced as the result of:

- a. Amination
- b. Nitration
- c. Nitrosation
- d. Azo coupling**
- e. Diazotization

1169. Azo dyes are produced as the result of:

- a. Diazotization
- b. Amination
- c. Azo coupling**

- d. Nitrosation
- e. Nitration

1170. Azo dyes are produced as the result of:

- a. Nitration
- b. Amination
- c. Azo coupling
- d. Nitrosation
- e. Diazotization

1171. Bacteria eventually become resistant to antibacterial agents. What enables gram-positive bacteria's resistance to penicillin antibiotics?

- a. Beta-lactamases production
- b. Cell wall permeability
- c. Protein synthesis
- d. Active transport of antibiotics
- e. Active synthesis of peptidoglycane

1172. Bacteria eventually become resistant to antibacterial agents. What enables gram-positive bacteria's resistance to penicillin antibiotics?

- a. Active synthesis of peptidoglycane
- b. Active transport of antibiotics
- c. Cell wall permeability
- d. Protein synthesis

e. Beta-lactamases production

1173. Bacteria eventually become resistant to antibacterial agents. What enables gram-positive bacteria's resistance to penicillin antibiotics?

- a. Active transport of antibiotics
- b. Cell wall permeability
- c. Active synthesis of peptidoglycane

d. Beta-lactamases production

e. Protein synthesis

1174. Bacterial enzymes typically exhibit a high specificity of their action. In practice, this feature of bacterial enzymes is used for:

- a. Bacteria identification
- b. Bacteria phage typing
- c. Bacteria serotyping
- d. Immunoglobulin production
- e. Bacteria cultivation

1175. Bacterial enzymes typically exhibit a high specificity of their action. In practice, this feature of bacterial enzymes is used for:

- a. Bacteria cultivation
- b. Bacteria serotyping
- c. Immunoglobulin production

d. Bacteria identification

e. Bacteria phage typing

1176. Bacterial enzymes typically exhibit a high specificity of their action. In practice, this feature of bacterial enzymes is used for:

a. Bacteria phage typing

b. Bacteria identification

- c. Immunoglobulin production
- d. Bacteria cultivation
- e. Bacteria serotyping

1177. Bactericidal drug rivanol contains the following heterocyclic structure:

- a. Acridine
- b. Anthracene
- c. Quinoline
- d. Isoquinoline

e. Phenanthrene

1178. Bactericidal drug rivanol contains the following heterocyclic structure:

- a. Isoquinoline
- b. Anthracene
- c. Quinoline

d. Acridine

e. Phenanthrene

1179. Bactericidal drug rivanol contains the following heterocyclic structure:

- a. Quinoline
- b. Anthracene
- c. Phenanthrene
- d. Isoquinoline

e. Acridine

1180. Bacteriological analysis was conducted to assess the quality of the water used for pharmaceutical purposes. What value indicates the number of coliform bacteria in 1 liter of water?

a. Coli index

- b. Perfringens titer
- c. Coliphage titer
- d. Microbial number
- e. Enterococcus titer

1181. Bacteriological analysis was conducted to assess the quality of the water used for pharmaceutical purposes. What value indicates the number of coliform bacteria in 1 liter of water?

a. Coliphage titer

b. Coli index

- c. Microbial number
- d. Perfringens titer
- e. Enterococcus titer

1182. Bacteriological analysis was conducted to assess the quality of the water used for pharmaceutical purposes. What value indicates the number of coliform bacteria in 1 liter of water?

- a. Enterococcus titer
- b. Perfringens titer
- c. Coliphage titer

d. Coli index

e. Microbial number

1183. Bacteriology of the feces of a patient with an acute intestinal infection allowed isolating a culture of *Shigella sonnei*. What serological reaction was used to identify the isolated culture?

a. Agglutination

- b. Bacteriolysis
- c. Neutralization
- d. Precipitation
- e. Complement binding

1184. Bacteriology of the feces of a patient with an acute intestinal infection allowed isolating a culture of *Shigella sonnei*. What serological reaction was used to identify the isolated culture?

a. Agglutination

- b. Neutralization
- c. Precipitation
- d. Complement binding
- e. Bacteriolysis

1185. Bacteriology of the feces of a patient with an acute intestinal infection allowed isolating a culture of *Shigella sonnei*. What serological reaction was used to identify the isolated culture?

- a. Complement binding
- b. Bacteriolysis
- c. Agglutination

- d. Neutralization
- e. Precipitation

1186. Bacterioscopic examination of chancre material revealed some mobile, long, convoluted microorganisms with 8-12 regular coils. These features are typical for:

- a. Borrellia
- b. Campylobacter
- c. Vibrios
- d. Leptospira

e. Treponema

1187. Bacterioscopic examination of chancre material revealed some mobile, long, convoluted microorganisms with 8-12 regular coils. These features are typical for:

- a. Campylobacter
- b. Borrellia
- c. Vibrios
- d. Leptospira

e. Treponema

1188. Bacterioscopic examination of chancre material revealed some mobile, long, convoluted microorganisms with 8-12 regular coils. These features are typical for:

- a. Leptospira
- b. Borrellia

c. Treponema

- d. Campylobacter
- e. Vibrios

1189. Bacterioscopy of smears stained according to the Romanowsky-Giemsa technique revealed violet cocci-like microorganisms in the cytoplasm of epithelial cells. What pathogen can be characterized by its intracellular location?

- a. Salmonella
- b. Staphylococci
- c. Streptococci
- d. Shigella

e. Chlamydia

1190. Bacterioscopy of smears stained according to the Romanowsky-Giemsa technique revealed violet cocci-like microorganisms in the cytoplasm of epithelial cells. What pathogen can be characterized by its intracellular location?

- a. Shigella
- b. Staphylococci

c. Chlamydia

- d. Salmonella
- e. Streptococci

1191. Bacterioscopy of smears stained according to the Romanowsky-Giemsa technique revealed violet cocci-like microorganisms in the cytoplasm of epithelial cells. What pathogen can be characterized by its intracellular location?

- a. Staphylococci
- b. Shigella
- c. Salmonella

d. Chlamydia

- e. Streptococci

1192. Bacterioscopy of the smears prepared from urethral discharge detects there gram-positive intracellular diplococci. What microorganisms were detected in the material?

a. Gonococci

- b. Staphylococci
- c. Meningococci
- d. Peptostreptococci
- e. Streptococci

1193. Bacterioscopy of the smears prepared from urethral discharge detects there gram-positive intracellular diplococci. What microorganisms were detected in the material?

a. Gonococci

- b. Streptococci
- c. Peptostreptococci
- d. Meningococci
- e. Staphylococci

1194. Bacterioscopy of the smears prepared from urethral discharge detects there gram-positive intracellular diplococci. What microorganisms were detected in the material?

- a. Staphylococci
- b. Meningococci
- c. Streptococci
- d. Peptostreptococci

e. Gonococci

1195. Because of its antiplatelet effect, acetylsalicylic acid is used in the treatment of diseases of the cardiovascular system. What mechanism is this effect based on?

- a. Inhibition of COX-2 enzyme activity
- b. Inhibition of COX-1 enzyme activity
- c. Stimulation of synthesis of E1 prostaglandins

d. Inhibition of thromboxane A2 biosynthesis

- e. Reduction of synthesis of E2 prostaglandins

1196. Because of its antiplatelet effect, acetylsalicylic acid is used in the treatment of diseases of the cardiovascular system. What mechanism is this effect based on?

- a. Inhibition of COX-2 enzyme activity
- b. Stimulation of synthesis of E1 prostaglandins
- c. Reduction of synthesis of E2 prostaglandins

d. Inhibition of thromboxane A2 biosynthesis

- e. Inhibition of COX-1 enzyme activity

1197. Because of its antiplatelet effect, acetylsalicylic acid is used in the treatment of diseases of the cardiovascular system. What mechanism is this effect based on?

- a. Stimulation of synthesis of E1 prostaglandins
- b. Inhibition of COX-2 enzyme activity
- c. Inhibition of COX-1 enzyme activity
- d. Reduction of synthesis of E2 prostaglandins

e. Inhibition of thromboxane A2 biosynthesis

1198. Because of suberization, the cell membranes do not become moistened with water, are impermeable to water and gases, and are resistant to decay. What tissue can contain suberized cells?

a. Periderm

- b. Cambium
- c. Epidermis
- d. Phloem
- e. Phelloderm

1199. Because of suberization, the cell membranes do not become moistened with water, are impermeable to water and gases, and are resistant to decay. What tissue can contain suberized cells?

a. Periderm

- b. Cambium
- c. Phelloderm
- d. Epidermis
- e. Phloem

1200. Because of suberization, the cell membranes do not become moistened with water, are impermeable to water and gases, and are resistant to decay. What tissue can contain suberized cells?

- a. Epidermis
- b. Phloem

c. Periderm

- d. Cambium
- e. Phelloderm

1201. Bioavailability of a powder depends on the degree of comminution of the substance. The following value must be measured:

a. Concentration

b. Dispersion

c. Particle mass

d. Particle volume

e. Solution density

1202. Bioavailability of a powder depends on the degree of comminution of the substance. The following value must be measured:

a. Particle volume

b. Solution density

c. Particle mass

d. Concentration

e. Dispersion

1203. Bioavailability of a powder depends on the degree of comminution of the substance. The following value must be measured:

a. Solution density

b. Particle mass

c. Dispersion

d. Particle volume

e. Concentration

1204. Biological fluids (sera, enzyme and vitamin solutions, etc.) are vulnerable to high temperatures, which is why they are sterilized under the temperature of 56--58°C. They are heated 5--6 times, with 24-hour-long intervals between them. What sterilization method is it?

a. Tyndallization

b. Autoclaving

c. Flaming

d. Pasteurization

e. Moist heat sterilization

1205. Biological fluids (sera, enzyme and vitamin solutions, etc.) are vulnerable to high temperatures, which is why they are sterilized under the temperature of 56--58°C. They are heated 5--6 times, with 24-hour-long intervals between them. What sterilization method is it?

a. Flaming

b. Pasteurization

c. Moist heat sterilization

d. Tyndallization

e. Autoclaving

1206. Biological fluids (sera, enzyme and vitamin solutions, etc.) are vulnerable to high temperatures, which is why they are sterilized under the temperature of 56--58°C. They are heated 5--6 times, with 24-hour-long intervals between them. What sterilization method is it?

a. Pasteurization

b. Tyndallization

c. Moist heat sterilization

d. Flaming

e. Autoclaving

1207. Biopotentials caused by various physiological processes are the result of the following forming at the phase interface:

a. Electrical double layer

b. Adhesive layer

c. Diffuse layer

d. -

e. Absorption layer

1208. Biopotentials caused by various physiological processes are the result of the following forming at the phase interface:

a. Absorption layer

b. -

c. Diffuse layer

d. Electrical double layer

e. Adhesive layer

1209. Biopotentials caused by various physiological processes are the result of the following forming at the phase interface:

a. Diffuse layer

b. Absorption layer

c. -

d. Electrical double layer

e. Adhesive layer

1210. Blood contains erythrocytes with sizes of 10^{-6} m degree as its constituent parts. What type of disperse system is blood?

a. Heterogeneous

b. Microheterogeneous

c. Colloidal dispersion

d. Homogeneous

e. Coarse dispersion

1211. Blood contains erythrocytes with sizes of 10^{-6} m degree as its constituent parts. What type of disperse system is blood?

a. Heterogeneous

b. Colloidal dispersion

c. Coarse dispersion

d. Homogeneous

e. Microheterogeneous

1212. Blood contains erythrocytes with sizes of 10^{-6} m degree as its constituent parts. What type of disperse system is blood?

a. Homogeneous

b. Colloidal dispersion

c. Coarse dispersion

d. Heterogeneous

e. Microheterogeneous

1213. Blood test is as follows: erythrocytes - $1,5 \cdot 10^{12}/l$; hemoglobin - 60 g/l; blood color index - 1,4; leukocytes - $3,0 \cdot 10^9/l$, thrombocytes - $1,2 \cdot 10^{10}/l$, reticulocytes - 0,2%. Blood smear revealed Jolly bodies, Cabot rings, megalocytes. What type of anemia does the patient have?

a. B₁₂ and folic acid deficiency anemia

b. Iron deficiency anemia

c. Iron refractory anemia

d. Hemolytic anemia

e. Hypoplastic anemia

1214. Blood test is as follows: erythrocytes - $1,5 \cdot 10^{12}/l$; hemoglobin - 60 g/l; blood color index - 1,4; leukocytes - $3,0 \cdot 10^9/l$, thrombocytes - $1,2 \cdot 10^{10}/l$, reticulocytes - 0,2%. Blood smear revealed Jolly bodies, Cabot rings, megalocytes. What type of anemia does the patient have?

a. Iron deficiency anemia

b. B₁₂ and folic acid deficiency anemia

c. Hemolytic anemia

d. Hypoplastic anemia

e. Iron refractory anemia

1215. Blood test is as follows: erythrocytes - $1,5 \cdot 10^{12}/l$; hemoglobin - 60 g/l; blood color index - 1,4; leukocytes - $3,0 \cdot 10^9/l$, thrombocytes - $1,2 \cdot 10^{10}/l$, reticulocytes - 0,2%. Blood smear revealed Jolly bodies, Cabot rings, megalocytes. What type of anemia does the patient have?

a. Iron deficiency anemia

b. Hypoplastic anemia

c. Iron refractory anemia

d. Hemolytic anemia

e. B₁₂ and folic acid deficiency anemia

1216. Blood test of a patient, who had been taking non-steroidal anti-inflammatory drugs for a long

time, detected a sharp decrease in the amount of neutrophilic granulocytes, basophils, and eosinophils against the background of leukopenia. What pathological condition has developed in the patient?

a. Agranulocytosis

- b. Leukocytosis
- c. Aleukia
- d. Leukemia
- e. Anemia

1217. Blood test of a patient, who had been taking non-steroidal anti-inflammatory drugs for a long time, detected a sharp decrease in the amount of neutrophilic granulocytes, basophils, and eosinophils against the background of leukopenia. What pathological condition has developed in the patient?

- a. Anemia
- b. Leukemia
- c. Leukocytosis

d. Agranulocytosis

- e. Aleukia

1218. Blood test of a patient, who had been taking non-steroidal anti-inflammatory drugs for a long time, detected a sharp decrease in the amount of neutrophilic granulocytes, basophils, and eosinophils against the background of leukopenia. What pathological condition has developed in the patient?

- a. Anemia
- b. Leukocytosis

c. Agranulocytosis

- d. Aleukia
- e. Leukemia

1219. Both scientific and folk medicine uses medicinal plant *Glycyrrhiza glabra* L. What part of the plant is harvested?

- a. Grass
- b. Leaves
- c. Inflorescence

d. Roots and rhizomes

- e. Seeds

1220. Both scientific and folk medicine uses medicinal plant *Glycyrrhiza glabra* L. What part of the plant is harvested?

- a. Inflorescence

b. Roots and rhizomes

- c. Seeds
- d. Grass
- e. Leaves

1221. Both scientific and folk medicine uses medicinal plant *Glycyrrhiza glabra* L. What part of the plant is harvested?

- a. Leaves
- b. Grass

c. Roots and rhizomes

- d. Seeds
- e. Inflorescence

1222. Bromatometric determination of streptocide (Sulfanilamide) is performed by means of direct titration with a standard solution of potassium bromate. What is used as an indicator in this method of titration?

a. Methyl orange

- b. Eriochrome black T
- c. Iron(III) thiocyanate
- d. Phenolphthalein
- e. Murexide

1223. Bromatometric determination of streptocide (Sulfanilamide) is performed by means of direct titration with a standard solution of potassium bromate. What is used as an indicator in this method of titration?

- a. Murexide
- b. Methyl orange**
- c. Eriochrome black T
- d. Iron(III) thiocyanate
- e. Phenolphthalein

1224. Bromatometric determination of streptocide (Sulfanilamide) is performed by means of direct titration with a standard solution of potassium bromate. What is used as an indicator in this method of titration?

- a. Phenolphthalein
- b. Eriochrome black T
- c. Methyl orange**

- d. Murexide
- e. Iron(III) thiocyanate

1225. By means of photoelectrocolorimetric analysis the concentration of the following can be determined:

- a. Any type of solution
- b. Turbid solution
- c. Optically active substance
- d. Colored solution**

- e. Colorless solution

1226. By means of photoelectrocolorimetric analysis the concentration of the following can be determined:

- a. Turbid solution
- b. Colorless solution
- c. Optically active substance
- d. Any type of solution

- e. Colored solution**

1227. C_7H_8O compound is an aromatic carbohydrate derivative and does not color with $FeCl_3$. Upon oxidation, it forms benzoic acid. Name this compound:

- a. m-Cresol
- b. p-Cresol
- c. o-Cresol
- d. Methylphenyl ether

- e. Benzyl alcohol**

1228. C_7H_8O compound is an aromatic carbohydrate derivative and does not color with $FeCl_3$. Upon oxidation, it forms benzoic acid. Name this compound:

- a. o-Cresol
- b. p-Cresol

- c. Benzyl alcohol**

- d. Methylphenyl ether
- e. m-Cresol

1229. C_7H_8O compound is an aromatic carbohydrate derivative and does not color with $FeCl_3$. Upon oxidation, it forms benzoic acid. Name this compound:

- a. p-Cresol
- b. Methylphenyl ether
- c. m-Cresol

- d. Benzyl alcohol**

- e. o-Cresol

1230. Calcium carbonate crystals are deposited as clusters on the inner protrusions of a cell wall. What are these formations called?

- a. Druses
- b. Druses attached to cell membrane

- c. Raphides
- d. Styloids

e. Cystoliths

1231. Calcium carbonate crystals are deposited as clusters on the inner protrusions of a cell wall. What are these formations called?

- a. Raphides
- b. Druses attached to cell membrane
- c. Druses
- d. Styloids

e. Cystoliths

1232. Calcium carbonate crystals are deposited as clusters on the inner protrusions of a cell wall. What are these formations called?

- a. Raphides
- b. Styloids
- c. Druses
- d. Druses attached to cell membrane

e. Cystoliths

1233. Calcium cations can be used as components of pharmaceuticals. Pharmacopoeial reaction for the detection of calcium cations is a reaction with a solution of:

- a. Ammonium hydroxide
- b. Hydrochloric acid

c. Ammonium oxalate

- d. Sodium hydroxide
- e. Potassium iodide

1234. Calcium cations can be used as components of pharmaceuticals. Pharmacopoeial reaction for the detection of calcium cations is a reaction with a solution of:

- a. Hydrochloric acid
- b. Sodium hydroxide
- c. Ammonium hydroxide

d. Ammonium oxalate

- e. Potassium iodide

1235. Calcium cations can be used as components of pharmaceuticals. Pharmacopoeial reaction for the detection of calcium cations is a reaction with a solution of:

- a. Potassium iodide
- b. Ammonium hydroxide

c. Ammonium oxalate

- d. Hydrochloric acid
- e. Sodium hydroxide

1236. Calculation of thermal effects of chemical reactions at a pharmaceutical factory is based on the Hess law stating that reaction thermal effect is determined by:

- a. Mechanism by which the chemical change occurs
- b. Route by which the chemical change occurs
- c. Process duration
- d. Number of intermediate stages

e. Initial and final state of system

1237. Calculation of thermal effects of chemical reactions at a pharmaceutical factory is based on the Hess law stating that reaction thermal effect is determined by:

- a. Number of intermediate stages
- b. Route by which the chemical change occurs

c. Initial and final state of system

- d. Process duration
- e. Mechanism by which the chemical change occurs

1238. Calculation of thermal effects of chemical reactions at a pharmaceutical factory is based on the Hess law stating that reaction thermal effect is determined by:

- a. Route by which the chemical change occurs

- b. Process duration
- c. Number of intermediate stages
- d. Mechanism by which the chemical change occurs

e. Initial and final state of system

1239. *Calendula officinalis* as a representative of Asteraceae family can be characterized by the following type of inflorescence:

a. Capitulum

b. Anthodium

c. Corymb

d. Umbel

e. Catkin

1240. *Calendula officinalis* as a representative of Asteraceae family can be characterized by the following type of inflorescence:

a. Catkin

b. Anthodium

c. Capitulum

d. Corymb

e. Umbel

1241. *Calendula officinalis* as a representative of Asteraceae family can be characterized by the following type of inflorescence:

a. Corymb

b. Umbel

c. Anthodium

d. Capitulum

e. Catkin

1242. Cases of tonsillitis periodically occur in the children that attend a kindergarten. During preventive examination, a medical laboratory scientist obtained pharyngeal swabs from ten children and stained the obtained material using the Neisser technique. Microscopy detects thin yellow rod-shaped microorganisms with dark brown thickenings at their ends, arranged in the shape of Roman numerals X and V. What infectious disease can be caused by the detected causative agents?

a. Diphtheria

b. Infectious mononucleosis

c. Tuberculosis

d. Scarlet fever

e. Pneumonia

1243. Cases of tonsillitis periodically occur in the children that attend a kindergarten. During preventive examination, a medical laboratory scientist obtained pharyngeal swabs from ten children and stained the obtained material using the Neisser technique. Microscopy detects thin yellow rod-shaped microorganisms with dark brown thickenings at their ends, arranged in the shape of Roman numerals X and V. What infectious disease can be caused by the detected causative agents?

a. Scarlet fever

b. Diphtheria

c. Pneumonia

d. Infectious mononucleosis

e. Tuberculosis

1244. Cases of tonsillitis periodically occur in the children that attend a kindergarten. During preventive examination, a medical laboratory scientist obtained pharyngeal swabs from ten children and stained the obtained material using the Neisser technique. Microscopy detects thin yellow rod-shaped microorganisms with dark brown thickenings at their ends, arranged in the shape of Roman numerals X and V. What infectious disease can be caused by the detected causative agents?

a. Tuberculosis

b. Scarlet fever

c. Infectious mononucleosis

d. Diphtheria

e. Pneumonia

1245. Catabolism of body's own tissue proteins is intensified during such diseases as thyrotoxicosis and tuberculosis. This process is attended by a certain compound been intensively synthesized in liver and subsequently excreted with urine. Name this compound:

a. Acetone bodies

b. Urea

c. Nucleotides

d. Fatty acids

e. Glucose

1246. Catabolism of body's own tissue proteins is intensified during such diseases as thyrotoxicosis and tuberculosis. This process is attended by a certain compound been intensively synthesized in liver and subsequently excreted with urine. Name this compound:

a. Acetone bodies

b. Nucleotides

c. Fatty acids

d. Glucose

e. Urea

1247. Catabolism of body's own tissue proteins is intensified during such diseases as thyrotoxicosis and tuberculosis. This process is attended by a certain compound been intensively synthesized in liver and subsequently excreted with urine. Name this compound:

a. Glucose

b. Nucleotides

c. Fatty acids

d. Acetone bodies

e. Urea

1248. Catalysts are widely used in production of drugs. How can reaction acceleration in the presence of a catalyst be explained?

a. Activation energy increases

b. Collision frequency decreases

c. Total collision frequency increases

d. Activation energy decreases

e. Molecule speed increases

1249. Catalysts are widely used in production of drugs. How can reaction acceleration in the presence of a catalyst be explained?

a. Collision frequency decreases

b. Activation energy increases

c. Molecule speed increases

d. Total collision frequency increases

e. Activation energy decreases

1250. Catalysts are widely used in production of drugs. How can reaction acceleration in the presence of a catalyst be explained?

a. Total collision frequency increases

b. Collision frequency decreases

c. Activation energy decreases

d. Activation energy increases

e. Molecule speed increases

1251. Causative agents of infectious diseases can be carried both by humans and animals. Name the group of infections that affect animals and can be passed onto humans:

a. Mixed

b. Anthroponoses

c. Sapronoses

d. Zoonoses

e. Zooanthroponoses

1252. Causative agents of infectious diseases can be carried both by humans and animals. Name the group of infections that affect animals and can be passed onto humans:

a. Zoonoses

b. Zooanthroponoses

- c. Mixed
- d. Sapronoses
- e. Anthroponoses

1253. Causative agents of infectious diseases can be carried both by humans and animals. Name the group of infections that affect animals and can be passed onto humans:

- a. Zoonoses
- b. Mixed
- c. Anthroponoses
- d. Sapronoses

e. Zooanthroponoses

1254. Cellulose hydrolysis produces the following disaccharide:

a. Cellobiose

- b. Glucose
- c. Sucrose
- d. Lactose
- e. Maltose

1255. Cellulose hydrolysis produces the following disaccharide:

a. Cellobiose

- b. Maltose
- c. Glucose
- d. Sucrose
- e. Lactose

1256. Cellulose hydrolysis produces the following disaccharide:

- a. Maltose
- b. Sucrose

c. Cellobiose

- d. Lactose
- e. Glucose

1257. Cerebrospinal fluid of a patient diagnosed with meningitis was taken for analysis. To detect the causative agent the sample was inoculated in a nutrient medium. Prior to that a serum had been added to the medium. What causative agent is expected to be obtained in this case?

- a. Mycobacteria
- b. Viruses
- c. Rickettsia
- d. Staphylococcus

e. Meningococcus

1258. Cerebrospinal fluid of a patient diagnosed with meningitis was taken for analysis. To detect the causative agent the sample was inoculated in a nutrient medium. Prior to that a serum had been added to the medium. What causative agent is expected to be obtained in this case?

- a. Rickettsia
- b. Staphylococcus
- c. Viruses
- d. Mycobacteria

e. Meningococcus

1259. Cerebrospinal fluid of a patient diagnosed with meningitis was taken for analysis. To detect the causative agent the sample was inoculated in a nutrient medium. Prior to that a serum had been added to the medium. What causative agent is expected to be obtained in this case?

- a. Staphylococcus
- b. Rickettsia
- c. Viruses

d. Meningococcus

- e. Mycobacteria

1260. Certain amino acids decarboxylate in large intestine producing toxic substances. What compound is produced from ornithine?

a. Putrescine

- b. Phenol
- c. Arginine
- d. Lysine
- e. Indole

1261. Certain amino acids decarboxylate in large intestine producing toxic substances. What compound is produced from ornithine?

a. Putrescine

- b. Phenol
- c. Indole
- d. Lysine
- e. Arginine

1262. Certain amino acids decarboxylate in large intestine producing toxic substances. What compound is produced from ornithine?

- a. Lysine
- b. Arginine
- c. Phenol

d. Putrescine

- e. Indole

1263. Chemical equilibrium theory allows predicting the approaches that result in the maximum yield of medicines. What factor has no effect on the chemical equilibrium shift?

a. Addition of a catalyst

- b. Temperature change
- c. A change in the concentration of the initial substances
- d. Pressure change
- e. A change in the concentration of products

1264. Chemical equilibrium theory allows predicting the approaches that result in the maximum yield of medicines. What factor has no effect on the chemical equilibrium shift?

- a. A change in the concentration of the initial substances
- b. A change in the concentration of products
- c. Pressure change

d. Addition of a catalyst

- e. Temperature change

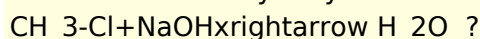
1265. Chloromethane is used in medicine as a local anesthetic. In the manufacturing of certain medicines, it is an intermediate product of the technological chain. What compound is formed as a result of alkaline hydrolysis of chloromethane according to the scheme given below?



a. Methanol

- b. Ethane
- c. Sodium formate
- d. Methane
- e. Methanal

1266. Chloromethane is used in medicine as a local anesthetic. In the manufacturing of certain medicines, it is an intermediate product of the technological chain. What compound is formed as a result of alkaline hydrolysis of chloromethane according to the scheme given below?

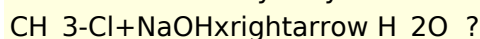


- a. Methanal

b. Methanol

- c. Sodium formate
- d. Ethane
- e. Methane

1267. Chloromethane is used in medicine as a local anesthetic. In the manufacturing of certain medicines, it is an intermediate product of the technological chain. What compound is formed as a result of alkaline hydrolysis of chloromethane according to the scheme given below?



- a. Methane
- b. Sodium formate
- c. Methanal

d. Methanol

- e. Ethane

1268. Chlorophyta division representatives have chromatophores of various shapes in their cells. What genus includes species with ribbon-shaped chromatophores?

a. Spirogyra

- b. Spirulina
- c. Chlamidomonas
- d. Volvox
- e. Chlorella

1269. Chlorophyta division representatives have chromatophores of various shapes in their cells. What genus includes species with ribbon-shaped chromatophores?

a. Spirogyra

- b. Volvox
- c. Chlamidomonas
- d. Spirulina
- e. Chlorella

1270. Chlorophyta division representatives have chromatophores of various shapes in their cells. What genus includes species with ribbon-shaped chromatophores?

- a. Chlorella
- b. Chlamidomonas
- c. Spirulina

d. Spirogyra

- e. Volvox

1271. Cholesterol synthesis inhibitors are used as antiatherosclerotic drugs. Select one such drug from the list:

a. Lovastatin

- b. Sulfanilamide
- c. Chloramphenicol
- d. Benzylpenicillin
- e. Pancreatin

1272. Cholesterol synthesis inhibitors are used as antiatherosclerotic drugs. Select one such drug from the list:

- a. Benzylpenicillin
- b. Pancreatin
- c. Chloramphenicol
- d. Sulfanilamide

e. Lovastatin

1273. Cholesterol synthesis inhibitors are used as antiatherosclerotic drugs. Select one such drug from the list:

- a. Sulfanilamide
- b. Chloramphenicol
- c. Pancreatin
- d. Benzylpenicillin

e. Lovastatin

1274. Choose the colloid surfactant out of the substances listed below:

a. Potassium oleate

- b. Iodine
- c. Gelatin
- d. Sodium chloride
- e. Polyethylene

1275. Choose the colloid surfactant out of the substances listed below:

a. Potassium oleate

- b. Polyethylene
- c. Sodium chloride
- d. Gelatin
- e. Iodine

1276. Choose the colloid surfactant out of the substances listed below:

- a. Iodine
- b. Polyethylene
- c. Gelatin
- d. Sodium chloride

e. Potassium oleate

1277. Choose the indicator and titration method to determine hydrogen carbonate ions in a drug:

- a. Methyl-orange, alkalimetry
- b. Methyl-orange, acidimetry**
- c. Phenolphthalein, alkalimetry
- d. Phenolphthalein, acidimetry
- e. Murexide, acidimetry

1278. Choose the indicator and titration method to determine hydrogen carbonate ions in a drug:

- a. Methyl-orange, alkalimetry
- b. Murexide, acidimetry
- c. Phenolphthalein, acidimetry
- d. Phenolphthalein, alkalimetry

e. Methyl-orange, acidimetry

1279. Choose the indicator and titration method to determine hydrogen carbonate ions in a drug:

- a. Phenolphthalein, alkalimetry
- b. Methyl-orange, alkalimetry
- c. Phenolphthalein, acidimetry

d. Methyl-orange, acidimetry

- e. Murexide, acidimetry

1280. Choose the most efficient way of convallariae glycoside administration for acute cardiac failure treatment:

a. Intravenous

- b. Subcutaneous
- c. Intramuscular
- d. Inhalational
- e. Oral

1281. Choose the most efficient way of convallariae glycoside administration for acute cardiac failure treatment:

- a. Intramuscular
- b. Inhalational

c. Intravenous

- d. Oral
- e. Subcutaneous

1282. Choose the most efficient way of convallariae glycoside administration for acute cardiac failure treatment:

- a. Oral

b. Intravenous

- c. Intramuscular
- d. Inhalational
- e. Subcutaneous

1283. Choose the potent fast-acting diuretic to induce forced diuresis:

- a. Hydrochlorothiazide
- b. Acetazolamide
- c. Triamterene
- d. Spironolactone

e. Furosemide

1284. Choose the potent fast-acting diuretic to induce forced diuresis:

- a. Spironolactone
- b. Furosemide**
- c. Triamterene
- d. Hydrochlorothiazide
- e. Acetazolamide

1285. Choose the potent fast-acting diuretic to induce forced diuresis:

- a. Spironolactone
- b. Triamterene
- c. Acetazolamide
- d. Furosemide**
- e. Hydrochlorothiazide

1286. Choose the weakest carboxylic acid basing on its pKa value:

- a. Propionic acid (pKa = 4.9)**
- b. Butyric acid (pKa = 4.82)
- c. Formic acid (pKa = 3.7)
- d. Acetic acid (pKa = 4.7)
- e. Lactic acid (pKa = 3.9)

1287. Choose the weakest carboxylic acid basing on its pKa value:

- a. Propionic acid (pKa = 4.9)**
- b. Formic acid (pKa = 3.7)
- c. Butyric acid (pKa = 4.82)
- d. Lactic acid (pKa = 3.9)
- e. Acetic acid (pKa = 4.7)

1288. Choose the weakest carboxylic acid basing on its pKa value:

- a. Butyric acid (pKa = 4.82)
- b. Lactic acid (pKa = 3.9)
- c. Formic acid (pKa = 3.7)
- d. Propionic acid (pKa = 4.9)**
- e. Acetic acid (pKa = 4.7)

1289. Chromatographic analysis methods differ in their mechanism of sorbent-sorbate interaction. What partition mechanism is used in ion-exchange chromatography?

- a. Different ion-exchange capacity of the substances**
- b. Different solubility of the solutes in the stationary phase
- c. Production of coordination compounds of different stability in the phase or on the sorbent surface
- d. Different adsorption capacity of the solid sorbent towards different substances
- e. Solute and sorbent producing precipitates of different solubility

1290. Chromatographic analysis methods differ in their mechanism of sorbent-sorbate interaction. What partition mechanism is used in ion-exchange chromatography?

- a. Different adsorption capacity of the solid sorbent towards different substances
- b. Solute and sorbent producing precipitates of different solubility
- c. Different ion-exchange capacity of the substances**
- d. Different solubility of the solutes in the stationary phase
- e. Production of coordination compounds of different stability in the phase or on the sorbent surface

1291. Chromatographic analysis methods differ in their mechanism of sorbent-sorbate interaction. What partition mechanism is used in ion-exchange chromatography?

- a. Solute and sorbent producing precipitates of different solubility
- b. Different ion-exchange capacity of the substances**
- c. Different solubility of the solutes in the stationary phase
- d. Production of coordination compounds of different stability in the phase or on the sorbent surface
- e. Different adsorption capacity of the solid sorbent towards different substances

1292. Chromatographic methods can be classified by the mechanism of the separation process. What type of chromatography includes the gas-liquid chromatographic method?

- a. Distribution chromatography**
- b. Ion exchange chromatography

- c. Gel chromatography
- d. Affinity chromatography
- e. Adsorption chromatography

1293. Chromatographic methods can be classified by the mechanism of the separation process. What type of chromatography includes the gas-liquid chromatographic method?

- a. Affinity chromatography
- b. Adsorption chromatography
- c. Ion exchange chromatography
- d. Gel chromatography

e. Distribution chromatography

1294. Chromatographic methods can be classified by the mechanism of the separation process. What type of chromatography includes the gas-liquid chromatographic method?

- a. Ion exchange chromatography
- b. Adsorption chromatography
- c. Affinity chromatography
- d. Gel chromatography

e. Distribution chromatography

1295. Chromatographic methods can be classified by the mechanism of the separation process. What type of chromatography is gas-liquid chromatography?

- a. Affinity chromatography
- b. Gel-filtration chromatography
- c. Adsorption chromatography

d. Distribution chromatography

e. Ion-exchange chromatography

1296. Chromatographic methods can be classified by the mechanism of the separation process. What type of chromatography is gas-liquid chromatography?

- a. Affinity chromatography
- b. Gel-filtration chromatography
- c. Adsorption chromatography
- d. Ion-exchange chromatography

e. Distribution chromatography

1297. Chromatographic methods can be classified by the mechanism of the separation process. What type of chromatography is gas-liquid chromatography?

- a. Ion-exchange chromatography
- b. Adsorption chromatography
- c. Gel-filtration chromatography
- d. Affinity chromatography

e. Distribution chromatography

1298. Classification of anions is based on different solubility of their salts with Ba^{2+} and Ag^{+} ions. Anions of the 1st analytical group form salts poorly soluble in water with the following ions:

- a. Ag^{+} (acid medium)
- b. Ag^{+} (alkaline medium)
- c. Ag^{+} (neutral medium)

d. Ba^{2+} (alkaline or neutral medium)

e. Ag^{+} (ammonia buffer medium)

1299. Classification of anions is based on different solubility of their salts with Ba^{2+} and Ag^{+} ions. Anions of the 1st analytical group form salts poorly soluble in water with the following ions:

- a. Ag^{+} (acid medium)
- b. Ag^{+} (ammonia buffer medium)
- c. Ag^{+} (alkaline medium)
- d. Ag^{+} (neutral medium)

e. Ba^{2+} (alkaline or neutral medium)

1300. Classification of anions is based on different solubility of their salts with Ba^{2+} and Ag^{+} ions. Anions of the 1st analytical group form salts poorly soluble in water with the following ions:

- a. Ag^{+} (neutral medium)

b. Ag^+ (alkaline medium)

c. Ba^{2+} (alkaline or neutral medium)

d. Ag^+ (acid medium)

e. Ag^+ (ammonia buffer medium)

1301. Coagulation of hydrophobic sols occurs after a certain amount of electrolyte is added. How do we call the minimal concentration of electrolyte that induces colloid solution coagulation?

a. Coagulation threshold

b. Concentration

c. Condensation

d. Coagulation ability

e. Neutralization

1302. Coagulation of hydrophobic sols occurs after a certain amount of electrolyte is added. How do we call the minimal concentration of electrolyte that induces colloid solution coagulation?

a. Concentration

b. Condensation

c. Neutralization

d. Coagulation threshold

e. Coagulation ability

1303. Coagulation of hydrophobic sols occurs after a certain amount of electrolyte is added. How do we call the minimal concentration of electrolyte that induces colloid solution coagulation?

a. Condensation

b. Coagulation threshold

c. Neutralization

d. Concentration

e. Coagulation ability

1304. Coagulation of sols under the effect of electrolytes can be determined by a general rule. Name this rule.

a. Schulze-Hardy rule

b. Gibbs rule

c. Duclos-Traube rule

d. Arrhenius law

e. Van't Hoff rule

1305. Coagulation of sols under the effect of electrolytes can be determined by a general rule. Name this rule.

a. Arrhenius law

b. Schulze-Hardy rule

c. Duclos-Traube rule

d. Van't Hoff rule

e. Gibbs rule

1306. Coagulation of sols under the effect of electrolytes can be determined by a general rule. Name this rule.

a. Arrhenius law

b. Gibbs rule

c. Duclos-Traube rule

d. Van't Hoff rule

e. Schulze-Hardy rule

1307. Collagen, gelatin, keratin, and myosin are the proteins that are formed with peptide bonds and resemble long threads in shape. Name this type of proteins:

a. Chain proteins

b. Fibrillar proteins

c. -

d. Structured proteins

e. Globular proteins

1308. Collagen, gelatin, keratin, and myosin are the proteins that are formed with peptide bonds and resemble long threads in shape. Name this type of proteins:

a. Chain proteins

b. -

c. Fibrillar proteins

d. Structured proteins

e. Globular proteins

1309. Collagen, gelatin, keratin, and myosin are the proteins that are formed with peptide bonds and resemble long threads in shape. Name this type of proteins:

a. Chain proteins

b. -

c. Globular proteins

d. Fibrillar proteins

e. Structured proteins

1310. Colloidal systems are widely used in medicine. In emulsions:

a. Dispersed medium - liquid, continuous medium - liquid

b. Dispersed medium - gas, continuous medium - liquid

c. Dispersed medium - liquid, continuous medium - gas

d. Dispersed medium - liquid, continuous medium - solid

e. Dispersed medium - gas, continuous medium - solid

1311. Colloidal systems are widely used in medicine. In emulsions:

a. Dispersed medium - gas, continuous medium - solid

b. Dispersed medium - gas, continuous medium - liquid

c. Dispersed medium - liquid, continuous medium - gas

d. Dispersed medium - liquid, continuous medium - liquid

e. Dispersed medium - liquid, continuous medium - solid

1312. Colloidal systems are widely used in medicine. In emulsions:

a. Dispersed medium - gas, continuous medium - solid

b. Dispersed medium - gas, continuous medium - liquid

c. Dispersed medium - liquid, continuous medium - solid

d. Dispersed medium - liquid, continuous medium - liquid

e. Dispersed medium - liquid, continuous medium - gas

1313. Colloidal systems are widely used in medicine. In pastes:

a. Dispersed medium - liquid, continuous medium - gas

b. Dispersed medium - solid, continuous medium - gas

c. Dispersed medium - solid, continuous medium - solid

d. Dispersed medium - liquid, continuous medium - liquid

e. Dispersed medium - solid, continuous medium - liquid

1314. Colloidal systems are widely used in medicine. In pastes:

a. Dispersed medium - liquid, continuous medium - liquid

b. Dispersed medium - solid, continuous medium - liquid

c. Dispersed medium - liquid, continuous medium - gas

d. Dispersed medium - solid, continuous medium - solid

e. Dispersed medium - solid, continuous medium - gas

1315. Colloidal systems are widely used in medicine. In pastes:

a. Dispersed medium - solid, continuous medium - gas

b. Dispersed medium - liquid, continuous medium - liquid

c. Dispersed medium - solid, continuous medium - liquid

d. Dispersed medium - liquid, continuous medium - gas

e. Dispersed medium - solid, continuous medium - solid

1316. Common nettle, hop, black elderberry relate to the plants that require soils rich in nitrogen compounds, that is, such plants are called:

a. Nitrophytes

b. Calciphiles

c. Calciphobes

d. Nitrophobes

e. Halophytes

1317. Common nettle, hop, black elderberry relate to the plants that require soils rich in nitrogen compounds, that is, such plants are called:

a. Nitrophytes

b. Calciphobes

c. Halophytes

d. Nitrophobes

e. Calciphiles

1318. Common nettle, hop, black elderberry relate to the plants that require soils rich in nitrogen compounds, that is, such plants are called:

a. Calciphiles

b. Calciphobes

c. Halophytes

d. Nitrophobes

e. Nitrophytes

1319. Complex biological systems contain components such as electrolytes, non-electrolytes, and proteins that together create osmotic pressure. What part of osmotic pressure is formed primarily by proteins?

a. Cellular pressure

b. -

c. Oncotic pressure

d. Internal pressure

e. Biological pressure

1320. Complex biological systems contain components such as electrolytes, non-electrolytes, and proteins that together create osmotic pressure. What part of osmotic pressure is formed primarily by proteins?

a. Cellular pressure

b. -

c. Biological pressure

d. Internal pressure

e. Oncotic pressure

1321. Complex biological systems contain components such as electrolytes, non-electrolytes, and proteins that together create osmotic pressure. What part of osmotic pressure is formed primarily by proteins?

a. Cellular pressure

b. -

c. Internal pressure

d. Oncotic pressure

e. Biological pressure

1322. Complexonometry is a titrimetric method of analysis based on the interaction of polydentate ligand complexes with cations of alkaline earth and heavy metals, which results in formation of strong, easily water-soluble compounds. Solution of what substance is used in complexonometry as a titrant?

a. Silver(I) nitrate

b. Trilon B (ethylenediaminetetraacetic acid tetrasodium salt)

c. Potassium dichromate

d. Sodium thiosulfate

e. Sulfuric acid

1323. Complexonometry is a titrimetric method of analysis based on the interaction of polydentate ligand complexes with cations of alkaline earth and heavy metals, which results in formation of strong, easily water-soluble compounds. Solution of what substance is used in complexonometry as a titrant?

a. Sodium thiosulfate

b. Trilon B (ethylenediaminetetraacetic acid tetrasodium salt)

c. Potassium dichromate

d. Sulfuric acid

e. Silver(I) nitrate

1324. Complexonometry is a titrimetric method of analysis based on the interaction of polydentate ligand complexes with cations of alkaline earth and heavy metals, which results in formation of strong, easily water-soluble compounds. Solution of what substance is used in complexonometry as a titrant?

a. Sodium thiosulfate

b. Sulfuric acid

c. Trilon B (ethylenediaminetetraacetic acid tetrasodium salt)

d. Silver(I) nitrate

e. Potassium dichromate

1325. Conducting tissue cells are live and connected to the sieve tube elements. It is characteristic of:

a. Collenchyma

b. Tracheids

c. Companion cells

d. Vessels

e. Sclerenchyma

1326. Conducting tissue cells are live and connected to the sieve tube elements. It is characteristic of:

a. Tracheids

b. Collenchyma

c. Vessels

d. Companion cells

e. Sclerenchyma

1327. Conducting tissue cells are live and connected to the sieve tube elements. It is characteristic of:

a. Vessels

b. Collenchyma

c. Companion cells

d. Sclerenchyma

e. Tracheids

1328. Corn stalks typically have adventitious roots in their lower parts. These roots combine the functions of:

a. Nutrition and support

b. Respiration and assimilation

c. Assimilation and absorption

d. Nutrition and respiration

e. Retraction or contraction

1329. Corn stalks typically have adventitious roots in their lower parts. These roots combine the functions of:

a. Nutrition and respiration

b. Nutrition and support

c. Respiration and assimilation

d. Retraction or contraction

e. Assimilation and absorption

1330. Corn stalks typically have adventitious roots in their lower parts. These roots combine the functions of:

a. Retraction or contraction

b. Respiration and assimilation

c. Nutrition and support

d. Assimilation and absorption

e. Nutrition and respiration

1331. Corolla of a zygomorphic bisexual flower consists of 5 petals: the largest one is called a banner, two lateral - wings, and two fused together - keel. This corolla is characteristic of Fabacea family and is called:

a. Papilionaceous

b. Funnelform

c. Lingulate

- d. Rotate
- e. Tubular

1332. Corolla of a zygomorphic bisexual flower consists of 5 petals: the largest one is called a banner, two lateral - wings, and two fused together - keel. This corolla is characteristic of Fabacea family and is called:

- a. Funnelform
- b. Lingulate
- c. Papilionaceous**

- d. Rotate
- e. Tubular

1333. Corolla of a zygomorphic bisexual flower consists of 5 petals: the largest one is called a banner, two lateral - wings, and two fused together - keel. This corolla is characteristic of Fabacea family and is called:

- a. Lingulate
- b. Rotate

c. Papilionaceous

- d. Funnelform
- e. Tubular

1334. Corolla of a zygomorphic monoecious flower consists of 5 petals, the biggest is "banner", two lateral are "wings", and the last two are fused together to form "keel". Name the described corolla that is characteristic of medicinal plants of the Fabaceae family.

a. Papilionaceous

- b. Tubular
- c. Ligulate
- d. Saucer-shaped
- e. Funnelform

1335. Corolla of a zygomorphic monoecious flower consists of 5 petals, the biggest is "banner", two lateral are "wings", and the last two are fused together to form "keel". Name the described corolla that is characteristic of medicinal plants of the Fabaceae family.

- a. Funnelform
- b. Tubular

c. Papilionaceous

- d. Ligulate
- e. Saucer-shaped

1336. Corolla of a zygomorphic monoecious flower consists of 5 petals, the biggest is "banner", two lateral are "wings", and the last two are fused together to form "keel". Name the described corolla that is characteristic of medicinal plants of the Fabaceae family.

- a. Ligulate
- b. Funnelform

c. Papilionaceous

- d. Tubular
- e. Saucer-shaped

1337. Coulometry is based on measuring the amount of electricity needed for an electrode reaction. What law is the basis for coulometric determination of substances?

- a. Beer-Bouguer-Lambert law
- b. Newton law

c. Faraday law

- d. Stokes law
- e. Coulomb law

1338. Coulometry is based on measuring the amount of electricity needed for an electrode reaction. What law is the basis for coulometric determination of substances?

- a. Coulomb law
- b. Beer-Bouguer-Lambert law

c. Faraday law

- d. Newton law

e. Stokes law

1339. Coulometry is based on measuring the amount of electricity needed for an electrode reaction. What law is the basis for coulometric determination of substances?

a. Stokes law

b. Faraday law

c. Beer-Bouguer-Lambert law

d. Newton law

e. Coulomb law

1340. Coumarins, vitamin K antagonists, suppress the processes of blood coagulation. What protein synthesis is blocked by coumarins?

a. Prothrombin

b. Ceruloplasmin

c. Gamma globulin

d. Albumin

e. Transferrin

1341. Coumarins, vitamin K antagonists, suppress the processes of blood coagulation. What protein synthesis is blocked by coumarins?

a. Albumin

b. Transferrin

c. Prothrombin

d. Ceruloplasmin

e. Gamma globulin

1342. Coumarins, vitamin K antagonists, suppress the processes of blood coagulation. What protein synthesis is blocked by coumarins?

a. Ceruloplasmin

b. Albumin

c. Transferrin

d. Prothrombin

e. Gamma globulin

1343. Cryoscopic constants of water, benzene, chloroform, acetic acid and camphor equal to 1,86; 5,12; 4,9; 3,9; 40,0 respectively. Which of these solvents should be selected for the most accurate determination of the molar mass of a drug substance (nonelectrolyte) by the cryoscopic method?

a. Benzene

b. Acetic acid

c. Camphor

d. Chloroform

e. Water

1344. Cryoscopic constants of water, benzene, chloroform, acetic acid and camphor equal to 1,86; 5,12; 4,9; 3,9; 40,0 respectively. Which of these solvents should be selected for the most accurate determination of the molar mass of a drug substance (nonelectrolyte) by the cryoscopic method?

a. Benzene

b. Water

c. Acetic acid

d. Camphor

e. Chloroform

1345. Cryoscopic constants of water, benzene, chloroform, acetic acid and camphor equal to 1,86; 5,12; 4,9; 3,9; 40,0 respectively. Which of these solvents should be selected for the most accurate determination of the molar mass of a drug substance (nonelectrolyte) by the cryoscopic method?

a. Chloroform

b. Camphor

c. Benzene

d. Acetic acid

e. Water

1346. Crystalline lead(IV) dioxide in the presence of concentrated nitric acid is used to detect the presence of manganese(II) cations in a solution. What visual analytical effect is observed in the

process?

- a. A blue precipitate is formed
- b. The solution colors green
- c. The solution colors yellow

d. The solution colors pink

- e. A white precipitate is formed

1347. Crystalline lead(IV) dioxide in the presence of concentrated nitric acid is used to detect the presence of manganese(II) cations in a solution. What visual analytical effect is observed in the process?

- a. A white precipitate is formed

b. The solution colors pink

- c. The solution colors green
- d. The solution colors yellow
- e. A blue precipitate is formed

1348. Crystalline lead(IV) dioxide in the presence of concentrated nitric acid is used to detect the presence of manganese(II) cations in a solution. What visual analytical effect is observed in the process?

- a. The solution colors green
- b. A white precipitate is formed
- c. A blue precipitate is formed

d. The solution colors pink

- e. The solution colors yellow

1349. Cytology has detected sex chromatin (Barr bodies) in interphase cell nuclei of a 23-year-old man. What chromosomal disorder is it characteristic of?

- a. Cri-du-chat syndrome
- b. Trisomy X
- c. Turner syndrome
- d. Down syndrome

e. Klinefelter syndrome

1350. Cytology has detected sex chromatin (Barr bodies) in interphase cell nuclei of a 23-year-old man. What chromosomal disorder is it characteristic of?

- a. Down syndrome
- b. Trisomy X
- c. Turner syndrome
- d. Cri-du-chat syndrome

e. Klinefelter syndrome

1351. Cytology has detected sex chromatin (Barr bodies) in interphase cell nuclei of a 23-year-old man. What chromosomal disorder is it characteristic of?

- a. Down syndrome
- b. Turner syndrome
- c. Trisomy X

d. Klinefelter syndrome

- e. Cri-du-chat syndrome

1352. *Datura stramonium* fruit is a:

- a. Legume with two seeds

b. Spiny capsule

- c. Pseudomonocarpous drupe
- d. Trihedral nutlet
- e. Silicular capsule

1353. *Datura stramonium* fruit is a:

- a. Pseudomonocarpous drupe
- b. Silicular capsule

c. Spiny capsule

- d. Legume with two seeds
- e. Trihedral nutlet

1354. *Datura stramonium* fruit is a:

- a. Silicular capsule
- b. Pseudomonocarpous drupe
- c. Spiny capsule**
- d. Trihedral nutlet
- e. Legume with two seeds

1355. Decarboxylation of histidine amino acid leads to formation of histamine in the cells. What enzyme ensures neutralization of this biogenic amine?

- a. Diamine oxidase (DAO)**
- b. Catalase
- c. Monoamine oxidase (MAO)
- d. Aminotransferase
- e. Aminopeptidase

1356. Decarboxylation of histidine amino acid leads to formation of histamine in the cells. What enzyme ensures neutralization of this biogenic amine?

- a. Aminotransferase
- b. Aminopeptidase
- c. Diamine oxidase (DAO)**
- d. Monoamine oxidase (MAO)
- e. Catalase

- d. Monoamine oxidase (MAO)
- e. Catalase

1357. Decarboxylation of histidine amino acid leads to formation of histamine in the cells. What enzyme ensures neutralization of this biogenic amine?

- a. Catalase
- b. Aminopeptidase
- c. Monoamine oxidase (MAO)
- d. Aminotransferase
- e. Diamine oxidase (DAO)**

1358. Dietary fiber is a component of plant foods that plays an important role in prevention of gastrointestinal diseases. What polysaccharide is a primary component of plant cell walls?

- a. Chitin
- b. Glycogen
- c. Chondroitin sulfate
- d. Cellulose**
- e. Starch

1359. Dietary fiber is a component of plant foods that plays an important role in prevention of gastrointestinal diseases. What polysaccharide is a primary component of plant cell walls?

- a. Chitin
- b. Starch
- c. Glycogen
- d. Chondroitin sulfate
- e. Cellulose**

1360. Dietary fiber is a component of plant foods that plays an important role in prevention of gastrointestinal diseases. What polysaccharide is a primary component of plant cell walls?

- a. Chondroitin sulfate
- b. Starch
- c. Chitin
- d. Glycogen
- e. Cellulose**

1361. Digestive enzymes produced in pancreas are inactive. What enzyme in intestines starts the transformation process of proenzymes into enzymes?

- a. Chymotrypsin
- b. Aminopeptidase
- c. Amylase
- d. Enterokinase**
- e. Lactase

1362. Digestive enzymes produced in pancreas are inactive. What enzyme in intestines starts the transformation process of proenzymes into enzymes?

- a. Chymotrypsin
- b. Lactase
- c. Amylase
- d. Aminopeptidase

e. Enterokinase

1363. Digestive enzymes produced in pancreas are inactive. What enzyme in intestines starts the transformation process of proenzymes into enzymes?

- a. Lactase
- b. Amylase
- c. Aminopeptidase

d. Enterokinase

e. Chymotrypsin

1364. Dimethylethylamine belongs to:

a. Tertiary amines

b. Secondary amines

c. -

d. Primary amines

e. Quaternary ammonium salts

1365. Dimethylethylamine belongs to:

a. Tertiary amines

b. Secondary amines

c. Primary amines

d. -

e. Quaternary ammonium salts

1366. Dimethylethylamine belongs to:

a. Quaternary ammonium salts

b. -

c. Primary amines

d. Secondary amines

e. Tertiary amines

1367. Direct complexometric titration is used to determine the concentration of:

a. Hydroxide ions

b. Hydrogen ions

c. Strong acid anions

d. Weak acid anions

e. Metal cations

1368. Direct complexometric titration is used to determine the concentration of:

a. Strong acid anions

b. Hydrogen ions

c. Metal cations

d. Hydroxide ions

e. Weak acid anions

1369. Direct complexometric titration is used to determine the concentration of:

a. Weak acid anions

b. Metal cations

c. Hydrogen ions

d. Hydroxide ions

e. Strong acid anions

1370. Disintegration of adenosine nucleotides results in release of ammonia. What enzyme plays the key role in ammonia synthesis from these compounds?

a. Amylase

b. Adenosine deaminase

c. Alanine transaminase

- d. Alcohol dehydrogenase
- e. Lactate dehydrogenase

1371. Disintegration of adenosine nucleotides results in release of ammonia. What enzyme plays the key role in ammonia synthesis from these compounds?

- a. Amylase
- b. Lactate dehydrogenase
- c. Alanine transaminase
- d. Alcohol dehydrogenase

e. Adenosine deaminase

1372. Disperse systems compose a large part of all dosage forms. Point out the bound disperse system:

- a. Aerosol
- b. Lyosol
- c. Emulsion
- d. Suspension

e. Gel

1373. Disperse systems compose a large part of all dosage forms. Point out the bound disperse system:

- a. Aerosol
- b. Suspension

c. Gel

- d. Emulsion
- e. Lyosol

1374. Disperse systems compose a large part of all dosage forms. Point out the bound disperse system:

- a. Lyosol
- b. Emulsion
- c. Suspension

d. Gel

- e. Aerosol

1375. Dissociation degree in 0.01 M water solution is the same for all the strong electrolytes listed below. Name the substance with the highest boiling temperature:

- a. $\text{Al}_2(\text{SO}_4)_3$**
- b. Na_3PO_4
- c. $\text{Cu}(\text{NO}_3)_2$
- d. KCl
- e. K_3PO_4

1376. Dissociation degree in 0.01 M water solution is the same for all the strong electrolytes listed below. Name the substance with the highest boiling temperature:

- a. KCl
- b. $\text{Cu}(\text{NO}_3)_2$
- c. K_3PO_4

d. $\text{Al}_2(\text{SO}_4)_3$

- e. Na_3PO_4

1377. Dissociation degree in 0.01 M water solution is the same for all the strong electrolytes listed below. Name the substance with the highest boiling temperature:

- a. K_3PO_4
- b. $\text{Cu}(\text{NO}_3)_2$
- c. Na_3PO_4
- d. KCl

e. $\text{Al}_2(\text{SO}_4)_3$

1378. Dopplerography detected bilateral stenosis of renal arteries in a patient with the blood pressure of 180/100 mm Hg. Activation of what system is the most likely cause of the persistently elevated blood pressure in this case?

a. Renin-angiotensin-aldosterone system

- b. Central nervous system
- c. Hypothalamic-pituitary-adrenal axis
- d. Kinin-kallikrein system
- e. Sympathoadrenal system

1379. Dopplerography detected bilateral stenosis of renal arteries in a patient with the blood pressure of 180/100 mm Hg. Activation of what system is the most likely cause of the persistently elevated blood pressure in this case?

a. Renin-angiotensin-aldosterone system

- b. Hypothalamic-pituitary-adrenal axis
- c. Kinin-kallikrein system
- d. Central nervous system
- e. Sympathoadrenal system

1380. Dopplerography detected bilateral stenosis of renal arteries in a patient with the blood pressure of 180/100 mm Hg. Activation of what system is the most likely cause of the persistently elevated blood pressure in this case?

- a. Hypothalamic-pituitary-adrenal axis
- b. Central nervous system
- c. Sympathoadrenal system

d. Renin-angiotensin-aldosterone system

- e. Kinin-kallikrein system

1381. Drafting of analytical normative documents requires skills in macro- and microscopical analysis of plant organs. If a microslide mount shows clearly visible multilayered palisade (columnar) parenchyma, it is characteristic of:

a. Leaves

- b. Fern rhizomes
- c. Stems of dicotyledons
- d. Adventitious roots
- e. Roots

1382. Drafting of analytical normative documents requires skills in macro- and microscopical analysis of plant organs. If a microslide mount shows clearly visible multilayered palisade (columnar) parenchyma, it is characteristic of:

- a. Adventitious roots
- b. Fern rhizomes
- c. Roots

d. Leaves

- e. Stems of dicotyledons

1383. Drafting of analytical normative documents requires skills in macro- and microscopical analysis of plant organs. If a microslide mount shows clearly visible multilayered palisade (columnar) parenchyma, it is characteristic of:

- a. Adventitious roots
- b. Fern rhizomes
- c. Stems of dicotyledons
- d. Roots

e. Leaves

1384. Due to a case of diphtheria in the kindergarten, all the children and personnel undergo examination for early detection of the disease and its carriers. What material must be taken for analysis?

a. Pharyngeal and nasal swabs

- b. Pharyngeal swab
- c. Blood
- d. Wound material
- e. Nasal swab

1385. Due to a case of diphtheria in the kindergarten, all the children and personnel undergo examination for early detection of the disease and its carriers. What material must be taken for analysis?

a. Pharyngeal and nasal swabs

- b. Wound material
- c. Blood
- d. Pharyngeal swab
- e. Nasal swab

1386. Due to a case of diphtheria in the kindergarten, all the children and personnel undergo examination for early detection of the disease and its carriers. What material must be taken for analysis?

- a. Blood

b. Pharyngeal and nasal swabs

- c. Wound material
- d. Pharyngeal swab
- e. Nasal swab

1387. Due to spleen rupture a woman has developed internal hemorrhage with signs of severe hypoxia. What anatomical structure is the most susceptible to hypoxia?

- a. Kidneys

b. Cerebral cortex

- c. Lungs
- d. Muscles
- e. Stomach

1388. Due to spleen rupture a woman has developed internal hemorrhage with signs of severe hypoxia. What anatomical structure is the most susceptible to hypoxia?

- a. Kidneys
- b. Muscles

c. Cerebral cortex

- d. Lungs
- e. Stomach

1389. Due to spleen rupture a woman has developed internal hemorrhage with signs of severe hypoxia. What anatomical structure is the most susceptible to hypoxia?

- a. Muscles
- b. Kidneys
- c. Lungs
- d. Stomach

e. Cerebral cortex

1390. During a hypertensive crisis, magnesium sulfate was administered to the patient, resulting in a sharp decrease of blood pressure. What drug can be administered to eliminate the side effects of magnesium sulfate?

- a. Potassium chloride

b. Calcium chloride

- c. Sodium bromide
- d. Trilon B (disodium EDTA)
- e. Sodium sulfate

1391. During a hypertensive crisis, magnesium sulfate was administered to the patient, resulting in a sharp decrease of blood pressure. What drug can be administered to eliminate the side effects of magnesium sulfate?

- a. Trilon B (disodium EDTA)
- b. Potassium chloride
- c. Sodium bromide

d. Calcium chloride

- e. Sodium sulfate

1392. During a hypertensive crisis, magnesium sulfate was administered to the patient, resulting in a sharp decrease of blood pressure. What drug can be administered to eliminate the side effects of magnesium sulfate?

- a. Trilon B (disodium EDTA)
- b. Potassium chloride

- c. Sodium sulfate
- d. Sodium bromide

e. Calcium chloride

1393. During a morphological description of *Salvia sclarea*, students noticed its bright bracts. They serve to attract pollinating insects and are a modification of a:

a. Leaf

- b. Pedicel
- c. Androecium
- d. Receptacle
- e. Shoot

1394. During a morphological description of *Salvia sclarea*, students noticed its bright bracts. They serve to attract pollinating insects and are a modification of a:

a. Shoot

b. Leaf

- c. Receptacle
- d. Androecium
- e. Pedicel

1395. During a morphological description of *Salvia sclarea*, students noticed its bright bracts. They serve to attract pollinating insects and are a modification of a:

- a. Shoot
- b. Receptacle
- c. Androecium

d. Leaf

e. Pedicel

1396. During a practical session in pharmaceutical botany, the students were studying herbarium specimens of Asteraceae family plants. What plant of this family has flowers that are all yellow, zygomorphic, ligulate, and bisexual?

a. *Taraxacum officinalis*

- b. *Centaurea cyanus*
- c. *Achillea millefolium*
- d. *Echinacea purpurea*
- e. *Bidens tripartita*

1397. During a practical session in pharmaceutical botany, the students were studying herbarium specimens of Asteraceae family plants. What plant of this family has flowers that are all yellow, zygomorphic, ligulate, and bisexual?

- a. *Achillea millefolium*
- b. *Echinacea purpurea*
- c. *Centaurea cyanus*
- d. *Bidens tripartita*

e. *Taraxacum officinalis*

1398. During a practical session in pharmaceutical botany, the students were studying herbarium specimens of Asteraceae family plants. What plant of this family has flowers that are all yellow, zygomorphic, ligulate, and bisexual?

- a. *Centaurea cyanus*
- b. *Echinacea purpurea*
- c. *Bidens tripartita*

d. *Taraxacum officinalis*

e. *Achillea millefolium*

1399. During a practical skill-building session, in the Konheim experiment, a student observes the dynamics of vascular reactions and changes in the blood circulation in an inflammatory focus. Name the correct sequence of the stages, characteristic of acute inflammation development:

- a. Arterial hyperemia, venous hyperemia, prestasis, stasis, spasm of arterioles
- b. Venous hyperemia, arterial hyperemia, prestasis, stasis, spasm of arterioles
- c. Prestasis, stasis, spasm of arterioles, arterial hyperemia, venous hyperemia
- d. Spasm of arterioles, arterial hyperemia, venous hyperemia, prestasis, stasis**

e. Venous hyperemia, stasis, spasm of arterioles, arterial hyperemia, prestasis

1400. During a practical skill-building session, in the Konheim experiment, a student observes the dynamics of vascular reactions and changes in the blood circulation in an inflammatory focus. Name the correct sequence of the stages, characteristic of acute inflammation development:

- a. Arterial hyperemia, venous hyperemia, prestasis, stasis, spasm of arterioles
- b. Venous hyperemia, arterial hyperemia, prestasis, stasis, spasm of arterioles
- c. Venous hyperemia, stasis, spasm of arterioles, arterial hyperemia, prestasis
- d. Prestasis, stasis, spasm of arterioles, arterial hyperemia, venous hyperemia

e. Spasm of arterioles, arterial hyperemia, venous hyperemia, prestasis, stasis

1401. During a practical skill-building session, in the Konheim experiment, a student observes the dynamics of vascular reactions and changes in the blood circulation in an inflammatory focus. Name the correct sequence of the stages, characteristic of acute inflammation development:

- a. Venous hyperemia, arterial hyperemia, prestasis, stasis, spasm of arterioles
- b. Venous hyperemia, stasis, spasm of arterioles, arterial hyperemia, prestasis
- c. Spasm of arterioles, arterial hyperemia, venous hyperemia, prestasis, stasis**
- d. Prestasis, stasis, spasm of arterioles, arterial hyperemia, venous hyperemia
- e. Arterial hyperemia, venous hyperemia, prestasis, stasis, spasm of arterioles

1402. During a preoperative examination, prothrombin deficiency was detected in the patient's blood. What must be prescribed in this case in advance to reduce the blood loss during the surgery?

a. Vicasol (Menadione)

- b. Contrykal (Aprotinin)
- c. Aminocaproic acid
- d. Phenylin (Phenindione)
- e. Thrombin

1403. During a preoperative examination, prothrombin deficiency was detected in the patient's blood. What must be prescribed in this case in advance to reduce the blood loss during the surgery?

- a. Thrombin
- b. Aminocaproic acid
- c. Contrykal (Aprotinin)

d. Vicasol (Menadione)

- e. Phenylin (Phenindione)

1404. During a preoperative examination, prothrombin deficiency was detected in the patient's blood. What must be prescribed in this case in advance to reduce the blood loss during the surgery?

- a. Thrombin
- b. Contrykal (Aprotinin)
- c. Aminocaproic acid
- d. Phenylin (Phenindione)

e. Vicasol (Menadione)

1405. During a surgery, narcosis overdose caused signs of acute hypoxia, indicated by increased heart rate of 124/min. and tachypnea. What type of hypoxia is observed in this case?

- a. Circulatory
- b. Hypoxic

c. Respiratory

- d. Tissue
- e. Mixed

1406. During a surgery, narcosis overdose caused signs of acute hypoxia, indicated by increased heart rate of 124/min. and tachypnea. What type of hypoxia is observed in this case?

- a. Mixed
- b. Tissue

c. Respiratory

- d. Circulatory
- e. Hypoxic

1407. During a surgery, narcosis overdose caused signs of acute hypoxia, indicated by increased heart rate of 124/min. and tachypnea. What type of hypoxia is observed in this case?

- a. Tissue

- b. Mixed
- c. Circulatory

d. Respiratory

- e. Hypoxic

1408. During a surgery, tubocurarin chloride was used as a muscle relaxant. What antagonist should the patient be given to restore spontaneous breathing?

a. Proserin (Neostigmine)

- b. Cytitone (Cytisine)
- c. Benzohexonium (Hexamethonium)
- d. Dithylin (Suxamethonium)
- e. Aethimizole (Methylamide)

1409. During a surgery, tubocurarin chloride was used as a muscle relaxant. What antagonist should the patient be given to restore spontaneous breathing?

a. Aethimizole (Methylamide)

b. Proserin (Neostigmine)

- c. Cytitone (Cytisine)
- d. Dithylin (Suxamethonium)
- e. Benzohexonium (Hexamethonium)

1410. During a surgery, tubocurarin chloride was used as a muscle relaxant. What antagonist should the patient be given to restore spontaneous breathing?

a. Benzohexonium (Hexamethonium)

b. Proserin (Neostigmine)

- c. Dithylin (Suxamethonium)
- d. Aethimizole (Methylamide)
- e. Cytitone (Cytisine)

1411. During absolute starvation, the body uses endogenous water. What substance is the source of endogenous water in the human body?

a. Fats

- b. Cellulose
- c. Glycogen
- d. Proteoglycans
- e. Proteins

1412. During absolute starvation, the body uses endogenous water. What substance is the source of endogenous water in the human body?

a. Fats

- b. Glycogen
- c. Proteoglycans
- d. Cellulose
- e. Proteins

1413. During absolute starvation, the body uses endogenous water. What substance is the source of endogenous water in the human body?

- a. Glycogen
- b. Cellulose

c. Fats

- d. Proteins
- e. Proteoglycans

1414. During active muscle work, anaerobic glycolysis is the main source of energy, causing the accumulation of lactate in the muscles, the level of which gradually decreases. During what interorgan cycle does the utilization of lactate take place afterwards?

a. Cori cycle

- b. Urea cycle
- c. Knoop-Lynen cycle
- d. Pentose phosphate cycle
- e. Krebs cycle

1415. During active muscle work, anaerobic glycolysis is the main source of energy, causing the

accumulation of lactate in the muscles, the level of which gradually decreases. During what interorgan cycle does the utilization of lactate take place afterwards?

a. Pentose phosphate cycle

b. Cori cycle

c. Urea cycle

d. Knoop-Lynen cycle

e. Krebs cycle

1416. During active muscle work, anaerobic glycolysis is the main source of energy, causing the accumulation of lactate in the muscles, the level of which gradually decreases. During what interorgan cycle does the utilization of lactate take place afterwards?

a. Pentose phosphate cycle

b. Knoop-Lynen cycle

c. Urea cycle

d. Krebs cycle

e. Cori cycle

1417. During anaerobic glycolysis, ATP synthesis occurs by means of substrate phosphorylation that uses the energy of other macroergic compounds. Name one such compound:

a. Phosphoenolpyruvate

b. Glucose

c. Glucose-6-phosphate

d. Lactate

e. Pyruvate

1418. During anaerobic glycolysis, ATP synthesis occurs by means of substrate phosphorylation that uses the energy of other macroergic compounds. Name one such compound:

a. Phosphoenolpyruvate

b. Lactate

c. Pyruvate

d. Glucose-6-phosphate

e. Glucose

1419. During anaerobic glycolysis, ATP synthesis occurs by means of substrate phosphorylation that uses the energy of other macroergic compounds. Name one such compound:

a. Lactate

b. Phosphoenolpyruvate

c. Glucose-6-phosphate

d. Pyruvate

e. Glucose

1420. During analysis of a herbal raw material, a culture was grown on a nutrient medium. The culture looks like a black furry plaque. Unseptated mycelial filaments with spherical thickenings at their ends were found in the smear preparations. Name these microorganisms:

a. Actinomyces

b. Candida

c. Penicillium

d. Mucor

e. Aspergillus

1421. During analysis of a herbal raw material, a culture was grown on a nutrient medium. The culture looks like a black furry plaque. Unseptated mycelial filaments with spherical thickenings at their ends were found in the smear preparations. Name these microorganisms:

a. Aspergillus

b. Penicillium

c. Candida

d. Mucor

e. Actinomyces

1422. During examination a woman presents with enlarged thyroid gland, exophthalmos, increased basal metabolism and heat production, tachycardia, tearfulness, and nervousness. This clinical presentation is characteristic of the following disease:

a. Addison's disease

b. Thyrotoxicosis

c. Hypothyroidism

d. Diabetes mellitus

e. Cushing's disease

1423. During examination a woman presents with enlarged thyroid gland, exophthalmos, increased basal metabolism and heat production, tachycardia, tearfulness, and nervousness. This clinical presentation is characteristic of the following disease:

a. Diabetes mellitus

b. Addison's disease

c. Cushing's disease

d. Hypothyroidism

e. Thyrotoxicosis

1424. During examination a woman presents with enlarged thyroid gland, exophthalmos, increased basal metabolism and heat production, tachycardia, tearfulness, and nervousness. This clinical presentation is characteristic of the following disease:

a. Diabetes mellitus

b. Cushing's disease

c. Hypothyroidism

d. Thyrotoxicosis

e. Addison's disease

1425. During examination of a patient the otolaryngologist noted that the patient's tonsils are extremely swollen, hyperemic, and have gray coating. Microscopy of the coating sample detects there gram-positive bacilli arranged at an angle to each other. What disease can be suspected?

a. Meningococcal nasopharyngitis

b. Diphtheria

c. Mumps

d. Scarlet fever

e. Tonsillitis

1426. During examination of a patient the otolaryngologist noted that the patient's tonsils are extremely swollen, hyperemic, and have gray coating. Microscopy of the coating sample detects there gram-positive bacilli arranged at an angle to each other. What disease can be suspected?

a. Tonsillitis

b. Mumps

c. Meningococcal nasopharyngitis

d. Diphtheria

e. Scarlet fever

1427. During examination of a patient the otolaryngologist noted that the patient's tonsils are extremely swollen, hyperemic, and have gray coating. Microscopy of the coating sample detects there gram-positive bacilli arranged at an angle to each other. What disease can be suspected?

a. Tonsillitis

b. Scarlet fever

c. Diphtheria

d. Meningococcal nasopharyngitis

e. Mumps

1428. During feces analysis of a 3-month-old child with signs of enteric infection, numerous dark-red colonies have grown on Endo agar. What microorganisms can be the causative agents of this enteric infection?

a. Gonococci

b. Salmonellae

c. Escherichia

d. Shigella

e. Streptococci

1429. During feces analysis of a 3-month-old child with signs of enteric infection, numerous dark-red colonies have grown on Endo agar. What microorganisms can be the causative agents of this enteric

infection?

- a. Salmonellae
- b. Gonococci
- c. Streptococci
- d. Escherichia**
- e. Shigella

1430. During feces analysis of a 3-month-old child with signs of enteric infection, numerous dark-red colonies have grown on Endo agar. What microorganisms can be the causative agents of this enteric infection?

- a. Streptococci
- b. Gonococci
- c. Salmonellae

d. Escherichia

e. Shigella

1431. During furosemide therapy of a patient with chronic edematous syndrome, his plasma-cation concentration was disturbed. What drug should be used in this case?

a. Potassium chloride

- b. Thiamine bromide
- c. Ascorutin (Ascorbic acid + Rutoside)
- d. Aspirin
- e. Magne B₆

1432. During furosemide therapy of a patient with chronic edematous syndrome, his plasma-cation concentration was disturbed. What drug should be used in this case?

- a. Ascorutin (Ascorbic acid + Rutoside)
- b. Thiamine bromide
- c. Aspirin
- d. Magne B₆

e. Potassium chloride

1433. During furosemide therapy of a patient with chronic edematous syndrome, his plasma-cation concentration was disturbed. What drug should be used in this case?

a. Magne B₆

b. Potassium chloride

- c. Thiamine bromide
- d. Ascorutin (Ascorbic acid + Rutoside)
- e. Aspirin

1434. During harvesting herbal raw materials, a marked mosaicism was noticed on the leaves of medicinal plants. What microorganisms cause this disease?

- a. Bacteria
- b. Protozoa

c. Viruses

- d. Microscopic fungi
- e. Viroids

1435. During harvesting herbal raw materials, a marked mosaicism was noticed on the leaves of medicinal plants. What microorganisms cause this disease?

- a. Protozoa
- b. Microscopic fungi
- c. Bacteria

d. Viruses

e. Viroids

1436. During harvesting herbal raw materials, a marked mosaicism was noticed on the leaves of medicinal plants. What microorganisms cause this disease?

- a. Viroids
- b. Bacteria

c. Viruses

d. Microscopic fungi

e. Protozoa

1437. During invasive surgery with muscle relaxant applied a patient developed breathing disruption that was normalised by administering proserin. How can this drug interaction be described?

- a. Cumulation
- b. Tachyphylaxis
- c. Synergism
- d. Incompatibility

e. Antagonism

1438. During invasive surgery with muscle relaxant applied a patient developed breathing disruption that was normalised by administering proserin. How can this drug interaction be described?

a. Incompatibility

b. Antagonism

- c. Tachyphylaxis
- d. Synergism
- e. Cumulation

1439. During invasive surgery with muscle relaxant applied a patient developed breathing disruption that was normalised by administering proserin. How can this drug interaction be described?

- a. Synergism
- b. Tachyphylaxis
- c. Cumulation
- d. Incompatibility

e. Antagonism

1440. During long-term carbon tetrachloride poisoning of animals significant activity drop of aminoacyl tRNA synthetase in hepatocytes was detected. What metabolic process is disrupted in this case?

a. Protein biosynthesis

- b. RNA transcription
- c. DNA replication
- d. Post-transcriptional modification of RNA
- e. Post-translational modification of peptides

1441. During long-term carbon tetrachloride poisoning of animals significant activity drop of aminoacyl tRNA synthetase in hepatocytes was detected. What metabolic process is disrupted in this case?

- a. DNA replication
- b. Post-transcriptional modification of RNA

c. Protein biosynthesis

- d. Post-translational modification of peptides
- e. RNA transcription

1442. During long-term carbon tetrachloride poisoning of animals significant activity drop of aminoacyl tRNA synthetase in hepatocytes was detected. What metabolic process is disrupted in this case?

- a. Post-transcriptional modification of RNA
- b. Post-translational modification of peptides

c. Protein biosynthesis

- d. DNA replication
- e. RNA transcription

1443. During morphological description of common periwinkle it was defined that it has shoot that trails on the ground and takes root. It allows to characterize such shoot as:

a. Creeping

- b. Tenent
- c. Scandent
- d. Recumbent
- e. Twining

1444. During morphological description of common periwinkle it was defined that it has shoot that trails on the ground and takes root. It allows to characterize such shoot as:

a. Tenent

b. Creeping

c. Recumbent

d. Scandent

e. Twining

1445. During morphological description of common periwinkle it was defined that it has shoot that trails on the ground and takes root. It allows to characterize such shoot as:

a. Twining

b. Creeping

c. Scandent

d. Recumbent

e. Tenent

1446. During practical field session students have detected plant with diversity of leaves that differ by their placement on stem, parts development, size, shape, lamina division. This phenomenon is called:

a. Heterophylly

b. Leaf mosaic

c. Venation

d. Phyllotaxy

e. Metamorphosis

1447. During practical field session students have detected plant with diversity of leaves that differ by their placement on stem, parts development, size, shape, lamina division. This phenomenon is called:

a. Leaf mosaic

b. Heterophylly

c. Phyllotaxy

d. Metamorphosis

e. Venation

1448. During practical field session students have detected plant with diversity of leaves that differ by their placement on stem, parts development, size, shape, lamina division. This phenomenon is called:

a. Phyllotaxy

b. Venation

c. Leaf mosaic

d. Metamorphosis

e. Heterophylly

1449. During skill building session in the field of microbiology, a student performed inoculation of microorganisms into the solid nutrient medium to obtain isolated colonies. How should inoculation loops be sterilized after that?

a. Heating in the burner flame

b. Soaking in 1% chloramine-B solution

c. Formaldehyde vapor sterilization

d. Dry heat sterilization under 160°C for 120-150 minutes

e. Boiling under 60°C five times

1450. During skill building session in the field of microbiology, a student performed inoculation of microorganisms into the solid nutrient medium to obtain isolated colonies. How should inoculation loops be sterilized after that?

a. Formaldehyde vapor sterilization

b. Dry heat sterilization under 160°C for 120-150 minutes

c. Heating in the burner flame

d. Boiling under 60°C five times

e. Soaking in 1% chloramine-B solution

1451. During skill building session in the field of microbiology, a student performed inoculation of microorganisms into the solid nutrient medium to obtain isolated colonies. How should inoculation loops be sterilized after that?

a. Formaldehyde vapor sterilization

b. Dry heat sterilization under 160°C for 120-150 minutes

c. Soaking in 1% chloramine-B solution

d. Heating in the burner flame

e. Boiling under 60°C five times

1452. During the microbiological diagnostics of syphilis, it became necessary to study the nature and degree of mobility of the causative agent. What type of microscopy is used for this purpose at a bacteriological laboratory?

- a. Electron microscopy
- b. Fluorescent microscopy

c. Dark-field microscopy

d. Light-field microscopy

e. X-ray microscopy

1453. During the microbiological diagnostics of syphilis, it became necessary to study the nature and degree of mobility of the causative agent. What type of microscopy is used for this purpose at a bacteriological laboratory?

- a. Light-field microscopy
- b. Electron microscopy
- c. X-ray microscopy
- d. Fluorescent microscopy

e. Dark-field microscopy

1454. During the microbiological diagnostics of syphilis, it became necessary to study the nature and degree of mobility of the causative agent. What type of microscopy is used for this purpose at a bacteriological laboratory?

- a. Light-field microscopy
- b. Fluorescent microscopy

c. Dark-field microscopy

d. X-ray microscopy

e. Electron microscopy

1455. During the morphological analysis of a flower, the presence of a reduced perianth in the form of two membranes - lodicules - was established. Its stamens have long staminal filaments. Its pistil has a feathery stigma. This description is characteristic of the plants that belong to the following family:

- a. Alliaceae
- b. Pinaceae
- c. Convallariaceae

d. Poaceae

e. Lamiaceae

1456. During the morphological analysis of a flower, the presence of a reduced perianth in the form of two membranes - lodicules - was established. Its stamens have long staminal filaments. Its pistil has a feathery stigma. This description is characteristic of the plants that belong to the following family:

- a. Convallariaceae
- b. Alliaceae
- c. Lamiaceae
- d. Pinaceae

e. Poaceae

1457. During the morphological analysis of a flower, the presence of a reduced perianth in the form of two membranes - lodicules - was established. Its stamens have long staminal filaments. Its pistil has a feathery stigma. This description is characteristic of the plants that belong to the following family:

- a. Convallariaceae
- b. Alliaceae
- c. Pinaceae

d. Poaceae

e. Lamiaceae

1458. During the study of home-made canned vegetables, microorganisms that resemble a tennis racket were inoculated on the Kitt-Tarozzi medium. What disease is likely to be caused by these pathogens?

a. Botulism

b. Escherichiosis

- c. Shigellosis
- d. Cholera
- e. Salmonellosis

1459. During the study of home-made canned vegetables, microorganisms that resemble a tennis racket were inoculated on the Kitt-Tarozzi medium. What disease is likely to be caused by these pathogens?

a. Shigellosis

b. Botulism

- c. Cholera
- d. Salmonellosis
- e. Escherichiosis

1460. During the study of home-made canned vegetables, microorganisms that resemble a tennis racket were inoculated on the Kitt-Tarozzi medium. What disease is likely to be caused by these pathogens?

a. Shigellosis

b. Botulism

- c. Escherichiosis
- d. Salmonellosis
- e. Cholera

1461. During ultrasound investigation a patient was diagnosed with bilateral renal artery stenosis of atherosclerotic genesis. Specify the bioactive substance that due to its excessive secretion is the key component of arterial hypertension pathogenesis in the given case:

a. Noradrenaline

b. Cortisol

c. Thyroxin

d. Renin

e. Vasopressin

1462. During ultrasound investigation a patient was diagnosed with bilateral renal artery stenosis of atherosclerotic genesis. Specify the bioactive substance that due to its excessive secretion is the key component of arterial hypertension pathogenesis in the given case:

a. Noradrenaline

b. Thyroxin

c. Cortisol

d. Vasopressin

e. Renin

1463. During ultrasound investigation a patient was diagnosed with bilateral renal artery stenosis of atherosclerotic genesis. Specify the bioactive substance that due to its excessive secretion is the key component of arterial hypertension pathogenesis in the given case:

a. Vasopressin

b. Thyroxin

c. Cortisol

d. Noradrenaline

e. Renin

1464. During what process does the entropy of a system decrease?

a. Polymerization

b. Sublimation

c. Evaporation

d. Dissolution

e. Dissociation

1465. During what process does the entropy of a system decrease?

a. Evaporation

b. Sublimation

c. Dissolution

d. Dissociation

e. Polymerization

1466. During what process does the entropy of a system decrease?

- a. Sublimation
- b. Evaporation
- c. Polymerization**
- d. Dissolution
- e. Dissociation

1467. Dysbiosis can be treated with drugs that contain living representatives of normal microflora as well as their metabolic products. Select the microorganisms that are used for the production of such drugs:

- a. Bifidus bacteria**
- b. Yersinia
- c. Staphylococcus aureus
- d. Proteus
- e. Providencia

1468. Dysbiosis can be treated with drugs that contain living representatives of normal microflora as well as their metabolic products. Select the microorganisms that are used for the production of such drugs:

- a. Providencia
- b. Staphylococcus aureus
- c. Yersinia
- d. Bifidus bacteria**
- e. Proteus

1469. Dysbiosis can be treated with drugs that contain living representatives of normal microflora as well as their metabolic products. Select the microorganisms that are used for the production of such drugs:

- a. Providencia
- b. Yersinia
- c. Bifidus bacteria**
- d. Staphylococcus aureus
- e. Proteus

1470. Each stem node of white deadnettle (*Lamium album*) has two leaves that grow perpendicularly to the leaves of the previous node. Such leaf arrangement is called:

- a. Spiral
- b. Verticillate
- c. Cross-opposite**
- d. Leaf mosaic
- e. Rosette

1471. Each stem node of white deadnettle (*Lamium album*) has two leaves that grow perpendicularly to the leaves of the previous node. Such leaf arrangement is called:

- a. Spiral
- b. Verticillate
- c. Rosette
- d. Cross-opposite**
- e. Leaf mosaic

1472. Each stem node of white deadnettle (*Lamium album*) has two leaves that grow perpendicularly to the leaves of the previous node. Such leaf arrangement is called:

- a. Verticillate
- b. Cross-opposite**
- c. Spiral
- d. Rosette
- e. Leaf mosaic

1473. Electrokinetic potential is a parameter that measures the charge of proteins, leukocytes, and erythrocytes. At what interface is the electrokinetic potential generated?

- a. Core-adsorption layer
- b. Granule-diffuse layer**

- c. Core-diffuse layer
- d. Micelle-dispersion medium
- e. Aggregate-potential-determining ions

1474. Electrokinetic potential is a parameter that measures the charge of proteins, leukocytes, and erythrocytes. At what interface is the electrokinetic potential generated?

- a. Core-adsorption layer
- b. Core-diffuse layer
- c. Micelle-dispersion medium

d. Granule-diffuse layer

- e. Aggregate-potential-determining ions

1475. Electrokinetic potential is a parameter that measures the charge of proteins, leukocytes, and erythrocytes. At what interface is the electrokinetic potential generated?

- a. Micelle-dispersion medium

b. Granule-diffuse layer

- c. Core-adsorption layer
- d. Aggregate-potential-determining ions
- e. Core-diffuse layer

1476. Electrolytic dissociation is one of the quantitative characteristics of electrolytes. What is used to determine the degree of electrolytic dissociation?

a. The ratio of the number of dissociated molecules to the total number of solute molecules

- b. The product of the number of dissociated and non-dissociated solute molecules
- c. The ratio of the solution concentration to the total number of dissociated solute molecules
- d. The ratio of the number of non-dissociated solute molecules to the total number of ions
- e. The ratio of the number of non-dissociated molecules to the number of dissociated solute molecules

1477. Electrolytic dissociation is one of the quantitative characteristics of electrolytes. What is used to determine the degree of electrolytic dissociation?

a. The ratio of the number of dissociated molecules to the total number of solute molecules

- b. The ratio of the number of non-dissociated solute molecules to the total number of ions
- c. The ratio of the number of non-dissociated molecules to the number of dissociated solute molecules
- d. The ratio of the solution concentration to the total number of dissociated solute molecules
- e. The product of the number of dissociated and non-dissociated solute molecules

1478. Electrolytic dissociation is one of the quantitative characteristics of electrolytes. What is used to determine the degree of electrolytic dissociation?

- a. The ratio of the solution concentration to the total number of dissociated solute molecules
- b. The ratio of the number of non-dissociated molecules to the number of dissociated solute molecules

c. The ratio of the number of dissociated molecules to the total number of solute molecules

- d. The ratio of the number of non-dissociated solute molecules to the total number of ions
- e. The product of the number of dissociated and non-dissociated solute molecules

1479. Emulsions are classified according to the volume concentration of dispersed phase. An emulsion with the concentration at the rate of 0,1-74,0% vol. relates to the following group of emulsions:

- a. Direct
- b. Diluted
- c. Highly concentrated
- d. Reversible

e. Concentrated

1480. Emulsions are classified according to the volume concentration of dispersed phase. An emulsion with the concentration at the rate of 0,1-74,0% vol. relates to the following group of emulsions:

- a. Reversible
- b. Diluted

c. Concentrated

- d. Highly concentrated
- e. Direct

1481. Emulsions are classified according to the volume concentration of dispersed phase. An emulsion with the concentration at the rate of 0,1-74,0% vol. relates to the following group of emulsions:

- a. Reversible
- b. Diluted
- c. Highly concentrated

d. Concentrated

- e. Direct

1482. Emulsions are thermodynamically unstable. In them, the droplets of dispersed phase merge together spontaneously, causing the emulsion to stratify. Name this phenomenon:

- a. Contraction
- b. Deformation
- c. Solubilization
- d. Wetting

e. Coalescence

1483. Emulsions are thermodynamically unstable. In them, the droplets of dispersed phase merge together spontaneously, causing the emulsion to stratify. Name this phenomenon:

- a. Solubilization
- b. Deformation

c. Coalescence

- d. Contraction
- e. Wetting

1484. Emulsions are thermodynamically unstable. In them, the droplets of dispersed phase merge together spontaneously, causing the emulsion to stratify. Name this phenomenon:

- a. Solubilization
- b. Wetting
- c. Contraction
- d. Deformation

e. Coalescence

1485. Emulsions containing less than 0,1% of dispersed phase (in volume) are classified as:

- a. Concentrated
- b. Water-in-oil type
- c. Oil-in-water type

d. Diluted

- e. High-concentration

1486. Emulsions containing less than 0,1% of dispersed phase (in volume) are classified as:

- a. High-concentration

b. Diluted

- c. Water-in-oil type
- d. Oil-in-water type
- e. Concentrated

1487. Emulsions containing less than 0,1% of dispersed phase (in volume) are classified as:

- a. High-concentration
- b. Oil-in-water type
- c. Concentrated
- d. Water-in-oil type

e. Diluted

1488. Emulsions, ointments, pastes, etc., can be made by comminuting solids and liquids in a suitable medium. This process is called:

a. Dispersion

- b. Condensation
- c. Adhesion
- d. Coagulation

e. Sedimentation

1489. Emulsions, ointments, pastes, etc., can be made by comminuting solids and liquids in a suitable medium. This process is called:

- a. Adhesion
- b. Sedimentation
- c. Coagulation

d. Dispersion

e. Condensation

1490. Emulsions, ointments, pastes, etc., can be made by comminuting solids and liquids in a suitable medium. This process is called:

- a. Condensation
- b. Adhesion

c. Dispersion

d. Sedimentation

e. Coagulation

1491. Endocrinological analysis detects growth hormone deficiency in a schoolboy. What pathology can develop in the child?

a. Acromegaly

b. Pituitary nanism

c. Pituitary cachexia

d. Pituitary gigantism

e. Adiposogenital dystrophy

1492. Endocrinological analysis detects growth hormone deficiency in a schoolboy. What pathology can develop in the child?

a. Adiposogenital dystrophy

b. Pituitary nanism

c. Pituitary gigantism

d. Acromegaly

e. Pituitary cachexia

1493. Endocrinological analysis detects growth hormone deficiency in a schoolboy. What pathology can develop in the child?

a. Pituitary gigantism

b. Acromegaly

c. Pituitary nanism

d. Pituitary cachexia

e. Adiposogenital dystrophy

1494. Enteral lipid metabolism is possible only under a certain set of conditions. What substance of those named below provides for emulsification of lipids, activation of lipase and absorption of fatty acids?

a. Amino acids

b. Bile acid

c. Hydrochloric acid

d. Cholesterol

e. Glucose

1495. Enteral lipid metabolism is possible only under a certain set of conditions. What substance of those named below provides for emulsification of lipids, activation of lipase and absorption of fatty acids?

a. Amino acids

b. Glucose

c. Bile acid

d. Hydrochloric acid

e. Cholesterol

1496. Enteral lipid metabolism is possible only under a certain set of conditions. What substance of those named below provides for emulsification of lipids, activation of lipase and absorption of fatty acids?

- a. Hydrochloric acid
- b. Glucose
- c. Cholesterol

d. Bile acid

- e. Amino acids

1497. Entropy, as one of the main thermodynamic functions, is a measure of:

- a. Enthalpy
- b. Energy that can be used to perform work
- c. Total energy of a system
- d. Internal energy of a system

e. Dissipated energy

1498. Entropy, as one of the main thermodynamic functions, is a measure of:

- a. Internal energy of a system

b. Dissipated energy

- c. Energy that can be used to perform work
- d. Total energy of a system
- e. Enthalpy

1499. Entropy, as one of the main thermodynamic functions, is a measure of:

- a. Internal energy of a system
- b. Enthalpy
- c. Energy that can be used to perform work
- d. Total energy of a system

e. Dissipated energy

1500. Enzyme activity is measured to diagnose diseases of the pancreas. What enzyme must be used in acute pancreatitis?

- a. Aldolase
- b. Deoxyribonuclease
- c. Ribonuclease
- d. Alanine aminotransferase

e. Amylase

1501. Enzyme activity is measured to diagnose diseases of the pancreas. What enzyme must be used in acute pancreatitis?

- a. Deoxyribonuclease
- b. Alanine aminotransferase
- c. Aldolase
- d. Ribonuclease

e. Amylase

1502. Enzyme activity is measured to diagnose diseases of the pancreas. What enzyme must be used in acute pancreatitis?

- a. Ribonuclease
- b. Aldolase
- c. Alanine aminotransferase

d. Amylase

- e. Deoxyribonuclease

1503. Enzymes accelerate biochemical reactions by over 10^8 times. What equation describes the rate of enzymatic catalysis?

a. Michaelis-Menten equation

- b. Law of mass action
- c. Arrhenius equation
- d. Van't Hoff equation
- e. Van't Hoff isotherm equation

1504. Enzymes accelerate biochemical reactions by over 10^8 times. What equation describes the rate of enzymatic catalysis?

- a. Arrhenius equation
- b. Van't Hoff isotherm equation

- c. Law of mass action
- d. Van't Hoff equation

e. Michaelis-Menten equation

1505. Enzymes accelerate biochemical reactions by over 10^8 times. What equation describes the rate of enzymatic catalysis?

- a. Law of mass action
- b. Arrhenius equation
- c. Van't Hoff equation
- d. Van't Hoff isotherm equation

e. Michaelis-Menten equation

1506. Enzymes accelerate biochemical reactions, making them occur more than 10^8 times faster. What equation describes the rate of enzyme catalysis?

- a. Arrhenius equation
- b. Van't Hoff equation

c. Michaelis-Menten equation

- d. Law of mass action
- e. Van't Hoff reaction isotherm

1507. Enzymes accelerate biochemical reactions, making them occur more than 10^8 times faster. What equation describes the rate of enzyme catalysis?

- a. Arrhenius equation
- b. Van't Hoff reaction isotherm
- c. Van't Hoff equation

d. Michaelis-Menten equation

- e. Law of mass action

1508. Enzymes accelerate biochemical reactions, making them occur more than 10^8 times faster. What equation describes the rate of enzyme catalysis?

- a. Van't Hoff equation
- b. Law of mass action
- c. Van't Hoff reaction isotherm

d. Michaelis-Menten equation

- e. Arrhenius equation

1509. Enzymes are widely used as drugs in pharmacy. What is the main feature that separates enzymes from non-biological catalysts?

a. High specificity and selectivity

- b. Low universality
- c. High dispersion
- d. High homogeneity
- e. High universality

1510. Enzymes are widely used as drugs in pharmacy. What is the main feature that separates enzymes from non-biological catalysts?

- a. High universality
- b. Low universality
- c. High dispersion
- d. High homogeneity

e. High specificity and selectivity

1511. Enzymes are widely used as drugs in pharmacy. What is the main feature that separates enzymes from non-biological catalysts?

- a. Low universality
- b. High universality
- c. High dispersion
- d. High homogeneity

e. High specificity and selectivity

1512. Essential oils are used both in pharmaceutical and cosmetic industry. To extract essential oils from herbal raw material, the following technology is used:

a. Steam distillation

- b. Calorimetry
- c. Conductometry
- d. Potentiometry
- e. Colorimetry

1513. Essential oils are used both in pharmaceutical and cosmetic industry. To extract essential oils from herbal raw material, the following technology is used:

- a. Calorimetry
- b. Conductometry
- c. Steam distillation**
- d. Colorimetry
- e. Potentiometry

1514. Essential oils are used both in pharmaceutical and cosmetic industry. To extract essential oils from herbal raw material, the following technology is used:

- a. Potentiometry
- b. Colorimetry
- c. Calorimetry
- d. Conductometry

e. Steam distillation

1515. Etiological factors of infectious diseases can be infectious agents with diverse ultrastructure. Which of the following groups does textbfNOT have cellular structure, protein synthesis, enzymatic and energy systems?

- a. Viruses**
- b. Rickettsia
- c. Protozoa
- d. Fungi
- e. Bacteria

1516. Etiological factors of infectious diseases can be infectious agents with diverse ultrastructure. Which of the following groups does textbfNOT have cellular structure, protein synthesis, enzymatic and energy systems?

- a. Bacteria
- b. Viruses**
- c. Rickettsia
- d. Fungi
- e. Protozoa

1517. Etiological factors of infectious diseases can be infectious agents with diverse ultrastructure. Which of the following groups does textbfNOT have cellular structure, protein synthesis, enzymatic and energy systems?

- a. Fungi
- b. Rickettsia
- c. Protozoa
- d. Viruses**
- e. Bacteria

1518. Every year in autumn a coniferous tree from the Gymnospermae subdivision undergoes defoliation of its soft needles situated on short shoots. It is characteristic of the following genus:

- a. Larix**
- b. Picea
- c. Pinus
- d. Abies
- e. Cedrus

1519. Every year in autumn a coniferous tree from the Gymnospermae subdivision undergoes defoliation of its soft needles situated on short shoots. It is characteristic of the following genus:

- a. Abies
- b. Picea
- c. Cedrus
- d. Larix**

e. Pinus

1520. Every year in autumn a coniferous tree from the Gymnospermae subdivision undergoes defoliation of its soft needles situated on short shoots. It is characteristic of the following genus:

a. Picea

b. Abies

c. Cedrus

d. Larix

e. Pinus

1521. Examination of a 45-year-old man, who for a long time kept to a vegetarian plant-based diet, revealed him to have negative nitrogen balance. What peculiarity of his diet has caused such developments?

a. Excessive carbohydrate content

b. Insufficient fat content

c. Insufficient protein content

d. Excessive water content

e. Insufficient vitamin content

1522. Examination of a 45-year-old man, who for a long time kept to a vegetarian plant-based diet, revealed him to have negative nitrogen balance. What peculiarity of his diet has caused such developments?

a. Insufficient fat content

b. Insufficient protein content

c. Excessive water content

d. Insufficient vitamin content

e. Excessive carbohydrate content

1523. Examination of a 45-year-old man, who for a long time kept to a vegetarian plant-based diet, revealed him to have negative nitrogen balance. What peculiarity of his diet has caused such developments?

a. Insufficient vitamin content

b. Excessive carbohydrate content

c. Insufficient protein content

d. Excessive water content

e. Insufficient fat content

1524. Examination of a child revealed enlarged abdomen, curved legs, increased excitability of the nervous system, and increased excretion of phosphates with the urine. Deficiency of what food component can cause such clinical changes?

a. Vitamin D

b. Vitamin K

c. Vitamin A

d. Vitamin F

e. Vitamin C

1525. Examination of a child revealed enlarged abdomen, curved legs, increased excitability of the nervous system, and increased excretion of phosphates with the urine. Deficiency of what food component can cause such clinical changes?

a. Vitamin A

b. Vitamin C

c. Vitamin D

d. Vitamin F

e. Vitamin K

1526. Examination of a child revealed enlarged abdomen, curved legs, increased excitability of the nervous system, and increased excretion of phosphates with the urine. Deficiency of what food component can cause such clinical changes?

a. Vitamin K

b. Vitamin C

c. Vitamin F

d. Vitamin A

e. Vitamin D

1527. Examination of a patient by a neurologist has detected the presence of ataxia in the patient. What signs are characteristic of this nervous system disorder?

a. Impaired initiation and planning of movements

b. Impaired temporal and spatial movement orientation

c. No movements in one half of the torso

d. Excessive movements

e. No movements in the upper limbs

1528. Examination of a patient by a neurologist has detected the presence of ataxia in the patient.

What signs are characteristic of this nervous system disorder?

a. Impaired initiation and planning of movements

b. No movements in the upper limbs

c. No movements in one half of the torso

d. Excessive movements

e. Impaired temporal and spatial movement orientation

1529. Examination of a patient by a neurologist has detected the presence of ataxia in the patient.

What signs are characteristic of this nervous system disorder?

a. No movements in one half of the torso

b. No movements in the upper limbs

c. Excessive movements

d. Impaired temporal and spatial movement orientation

e. Impaired initiation and planning of movements

1530. Examination of a patient detects excessive growth of bones and soft tissues of the face, enlarged tongue and internal organs, and widened interdental spaces. The patient's condition could have been caused by increased secretion of a certain hormone. Name this hormone.

a. Adrenaline

b. Vasopressin

c. Thyroxine

d. Somatotropin

e. Prolactin

1531. Examination of a patient detects excessive growth of bones and soft tissues of the face, enlarged tongue and internal organs, and widened interdental spaces. The patient's condition could have been caused by increased secretion of a certain hormone. Name this hormone.

a. Thyroxine

b. Adrenaline

c. Somatotropin

d. Vasopressin

e. Prolactin

1532. Examination of a patient detects excessive growth of bones and soft tissues of the face, enlarged tongue and internal organs, and widened interdental spaces. The patient's condition could have been caused by increased secretion of a certain hormone. Name this hormone.

a. Vasopressin

b. Somatotropin

c. Thyroxine

d. Prolactin

e. Adrenaline

1533. Examination of a sputum sample obtained from a patient provisionally diagnosed with tuberculosis revealed thin, long, slightly curved, rod-shaped microorganisms in the specimen. The microorganisms were stained ruby-red and arranged in strands. What staining method was used in this case?

a. Gram

b. Ozheshko

c. Ziehl-Neelsen

d. Romanowsky-Giemsa

e. Loeffler

1534. Examination of a sputum sample obtained from a patient provisionally diagnosed with tuberculosis revealed thin, long, slightly curved, rod-shaped microorganisms in the specimen. The microorganisms were stained ruby-red and arranged in strands. What staining method was used in this case?

- a. Romanowsky-Giemsa
- b. Ziehl-Neelsen**
- c. Loeffler
- d. Gram
- e. Ozheshko

1535. Examination of a sputum sample obtained from a patient provisionally diagnosed with tuberculosis revealed thin, long, slightly curved, rod-shaped microorganisms in the specimen. The microorganisms were stained ruby-red and arranged in strands. What staining method was used in this case?

- a. Romanowsky-Giemsa
- b. Gram
- c. Loeffler
- d. Ziehl-Neelsen**
- e. Ozheshko

1536. Examination of an underground organ of *Poligonatum odoratum* shows that it is horizontally oriented, uniformly thick and has nodes, internodes, round indentations, and an apical bud. Therefore, it is a:

- a. Main root
- b. Rhizome**
- c. Root crop
- d. Underground stolon
- e. Root tuber

1537. Examination of an underground organ of *Poligonatum odoratum* shows that it is horizontally oriented, uniformly thick and has nodes, internodes, round indentations, and an apical bud. Therefore, it is a:

- a. Root crop
- b. Rhizome**
- c. Underground stolon
- d. Root tuber
- e. Main root

1538. Examination of an underground organ of *Poligonatum odoratum* shows that it is horizontally oriented, uniformly thick and has nodes, internodes, round indentations, and an apical bud. Therefore, it is a:

- a. Underground stolon
- b. Rhizome**
- c. Root tuber
- d. Main root
- e. Root crop

1539. Examination of children with kwashiorkor revealed facial edema, ascites, weight loss, and stunted growth. What is the most likely cause of this disease?

- a. Carbohydrate deficiency
- b. Excess protein in the diet
- c. Alimentary protein deficiency**
- d. Excess fats and carbohydrates
- e. Deficiency of unsaturated fatty acids

1540. Examination of children with kwashiorkor revealed facial edema, ascites, weight loss, and stunted growth. What is the most likely cause of this disease?

- a. Carbohydrate deficiency
- b. Excess protein in the diet
- c. Excess fats and carbohydrates
- d. Alimentary protein deficiency**

e. Deficiency of unsaturated fatty acids

1541. Examination of children with kwashiorkor revealed facial edema, ascites, weight loss, and stunted growth. What is the most likely cause of this disease?

a. Deficiency of unsaturated fatty acids

b. Carbohydrate deficiency

c. Excess fats and carbohydrates

d. Alimentary protein deficiency

e. Excess protein in the diet

1542. Examination of the lower limbs of a 40-year-old patient with coronary artery disease and vascular disease of the lower limbs (obliterating endarteritis) revealed skin pallor and dystrophy, local temperature decrease, sense shock, pain. The patient is likely to have the following disorder of the peripheral blood circulation:

a. Obstruction ischemia

b. Angiospastic ischemia

c. Arterial hyperaemia

d. Venous hyperaemia

e. Compression ischemia

1543. Examination of the lower limbs of a 40-year-old patient with coronary artery disease and vascular disease of the lower limbs (obliterating endarteritis) revealed skin pallor and dystrophy, local temperature decrease, sense shock, pain. The patient is likely to have the following disorder of the peripheral blood circulation:

a. Compression ischemia

b. Arterial hyperaemia

c. Angiospastic ischemia

d. Obstruction ischemia

e. Venous hyperaemia

1544. Examination of the lower limbs of a 40-year-old patient with coronary artery disease and vascular disease of the lower limbs (obliterating endarteritis) revealed skin pallor and dystrophy, local temperature decrease, sense shock, pain. The patient is likely to have the following disorder of the peripheral blood circulation:

a. Venous hyperaemia

b. Angiospastic ischemia

c. Arterial hyperaemia

d. Compression ischemia

e. Obstruction ischemia

1545. Examination of the patient's oral cavity detects roseola rash, pustules, and papules on the mucosa of the soft palate. Microscopy of the smears prepared from the discharge and stained according to Romanowsky-Giemsa revealed pale pink wavy microorganisms. What microorganisms are the likely cause of this pathology?

a. Treponema pallidum

b. Staphylococci

c. Candida fungi

d. Streptococci

e. Meningococci

1546. Examination of the patient's oral cavity detects roseola rash, pustules, and papules on the mucosa of the soft palate. Microscopy of the smears prepared from the discharge and stained according to Romanowsky-Giemsa revealed pale pink wavy microorganisms. What microorganisms are the likely cause of this pathology?

a. Candida fungi

b. Treponema pallidum

c. Meningococci

d. Staphylococci

e. Streptococci

1547. Examination of the patient's oral cavity detects roseola rash, pustules, and papules on the mucosa of the soft palate. Microscopy of the smears prepared from the discharge and stained

according to Romanowsky-Giemsa revealed pale pink wavy microorganisms. What microorganisms are the likely cause of this pathology?

- a. Staphylococci
- b. Streptococci
- c. Treponema pallidum**

- d. Meningococci
- e. Candida fungi

1548. Examination of the patient's oral cavity detects the signs of aphthous stomatitis. Microscopy of the smears prepared from the contents of the aphthous ulcers shows gram-positive round and oval cells that vary in size and exhibit signs of budding pattern of cell division. What microorganisms are the likely cause of this pathology?

- a. Staphylococci
- b. Meningococci
- c. Pneumococci
- d. Streptococci

e. Candida fungi

1549. Examination of the patient's oral cavity detects the signs of aphthous stomatitis. Microscopy of the smears prepared from the contents of the aphthous ulcers shows gram-positive round and oval cells that vary in size and exhibit signs of budding pattern of cell division. What microorganisms are the likely cause of this pathology?

- a. Staphylococci
- b. Streptococci
- c. Pneumococci
- d. Meningococci

e. Candida fungi

1550. Examination of the patient's oral cavity detects the signs of aphthous stomatitis. Microscopy of the smears prepared from the contents of the aphthous ulcers shows gram-positive round and oval cells that vary in size and exhibit signs of budding pattern of cell division. What microorganisms are the likely cause of this pathology?

- a. Streptococci
- b. Pneumococci

c. Candida fungi

- d. Staphylococci
- e. Meningococci

1551. Examination of the sputum of a patient with suspected pneumonia detects blue-violet lanceolate cocci with a capsule, arranged in pairs. What staining method has been used to detect the capsule?

- a. Gram stain
- b. Neisser stain
- c. Ziehl-Neelsen stain

d. Burri-Gins stain

- e. Ozheshko stain

1552. Examination of the sputum of a patient with suspected pneumonia detects blue-violet lanceolate cocci with a capsule, arranged in pairs. What staining method has been used to detect the capsule?

- a. Neisser stain
- b. Gram stain

c. Burri-Gins stain

- d. Ziehl-Neelsen stain
- e. Ozheshko stain

1553. Examination of the sputum of a patient with suspected pneumonia detects blue-violet lanceolate cocci with a capsule, arranged in pairs. What staining method has been used to detect the capsule?

- a. Ozheshko stain
- b. Gram stain

c. Burri-Gins stain

d. Ziehl-Neelsen stain

e. Neisser stain

1554. Explain to a doctor, what drug has the effect, closest to acetylcysteine, and can be used as its substitute, if acetylcysteine is not available in a pharmacy:

a. Ambroxol

b. Libexin (Prenoxdiazine)

c. Codeine phosphate

d. Sodium chloride

e. Sodium bicarbonate

1555. Explain to a doctor, what drug has the effect, closest to acetylcysteine, and can be used as its substitute, if acetylcysteine is not available in a pharmacy:

a. Ambroxol

b. Sodium bicarbonate

c. Sodium chloride

d. Codeine phosphate

e. Libexin (Prenoxdiazine)

1556. Explain to a doctor, what drug has the effect, closest to acetylcysteine, and can be used as its substitute, if acetylcysteine is not available in a pharmacy:

a. Ambroxol

b. Sodium chloride

c. Sodium bicarbonate

d. Libexin (Prenoxdiazine)

e. Codeine phosphate

1557. Explain to a pharmacy student, why group III anions have no group reagent:

a. They belong to toxic elements

b. They have large ionic radii

c. They have close ionic radii

d. They form water-soluble salts with most cations

e. They can form soluble acids

1558. Explain to a pharmacy student, why group III anions have no group reagent:

a. They have large ionic radii

b. They form water-soluble salts with most cations

c. They have close ionic radii

d. They can form soluble acids

e. They belong to toxic elements

1559. Explain to a pharmacy student, why group III anions have no group reagent:

a. They have large ionic radii

b. They have close ionic radii

c. They belong to toxic elements

d. They can form soluble acids

e. They form water-soluble salts with most cations

1560. Explain to a young physician, how to prevent withdrawal syndrome in a patient after completion of glucocorticoid therapy:

a. Immunostimulating therapy

b. Gradual decrease of the dose

c. CNS stimulants

d. Vitamin preparations

e. Antidotal therapy

1561. Explain to a young physician, how to prevent withdrawal syndrome in a patient after completion of glucocorticoid therapy:

a. Immunostimulating therapy

b. Vitamin preparations

c. Antidotal therapy

d. CNS stimulants

e. Gradual decrease of the dose

1562. Explain to a young physician, how to prevent withdrawal syndrome in a patient after completion of glucocorticoid therapy:

- a. Vitamin preparations
- b. Immunostimulating therapy
- c. Antidotal therapy

d. Gradual decrease of the dose

e. CNS stimulants

1563. Extraction is often used in analysis of medicinal substances. In this method, the degree of extraction of the substance that is being determined depends on the following:

a. Distribution coefficient

- b. The mass of the substance being extracted
- c. pH of the solution
- d. The amount of the substance being extracted
- e. Temperature

1564. Extraction is often used in analysis of medicinal substances. In this method, the degree of extraction of the substance that is being determined depends on the following:

- a. Temperature
- b. The amount of the substance being extracted
- c. The mass of the substance being extracted

d. Distribution coefficient

e. pH of the solution

1565. Extraction is often used in analysis of medicinal substances. In this method, the degree of extraction of the substance that is being determined depends on the following:

a. pH of the solution

b. Distribution coefficient

- c. The mass of the substance being extracted
- d. The amount of the substance being extracted
- e. Temperature

1566. Extreme therapeutic effect of activated carbon is due to its high specific surface area. Name the phenomenon when gases are absorbed only by the surface of a solid body:

a. Adsorption

- b. Adhesion
- c. Cohesion
- d. Recuperation
- e. Desorption

1567. Extreme therapeutic effect of activated carbon is due to its high specific surface area. Name the phenomenon when gases are absorbed only by the surface of a solid body:

- a. Adhesion
- b. Desorption

c. Adsorption

- d. Recuperation
- e. Cohesion

1568. Extreme therapeutic effect of activated carbon is due to its high specific surface area. Name the phenomenon when gases are absorbed only by the surface of a solid body:

- a. Recuperation
- b. Desorption

c. Adsorption

- d. Cohesion
- e. Adhesion

1569. Exudation is an effect of inflammation-caused disruption of blood circulation. In the course of inflammatory process it starts at the following stage of vascular disorder:

a. Prestasis

b. Arterial hyperemia

c. Stasis

- d. Arterioles spasm
- e. Venous hyperemia

1570. Exudation is an effect of inflammation-caused disruption of blood circulation. In the course of inflammatory process it starts at the following stage of vascular disorder:

- a. Prestasis
- b. Venous hyperemia

c. Arterial hyperemia

- d. Stasis
- e. Arterioles spasm

1571. Exudation is an effect of inflammation-caused disruption of blood circulation. In the course of inflammatory process it starts at the following stage of vascular disorder:

- a. Venous hyperemia
- b. Prestasis

c. Arterial hyperemia

- d. Arterioles spasm
- e. Stasis

1572. Fatty acids are being synthesized in human body. What compound is initial in this synthesis process?

- a. Cholesterol

b. Acetyl-CoA

- c. Succinate
- d. Glycine
- e. Vitamin C

1573. Fatty acids are being synthesized in human body. What compound is initial in this synthesis process?

- a. Succinate
- b. Vitamin C
- c. Cholesterol
- d. Glycine

e. Acetyl-CoA

1574. Fatty acids are being synthesized in human body. What compound is initial in this synthesis process?

- a. Vitamin C

b. Acetyl-CoA

- c. Glycine
- d. Succinate
- e. Cholesterol

1575. Fatty degeneration of liver is prevented by lipotropic substances. Which of the following substances belongs to them?

- a. Bilirubin
- b. Cholesterol
- c. Glucose
- d. Glycine

e. Methionine

1576. Fatty degeneration of liver is prevented by lipotropic substances. Which of the following substances belongs to them?

- a. Cholesterol
- b. Glucose
- c. Bilirubin

d. Methionine

- e. Glycine

1577. Fatty degeneration of liver is prevented by lipotropic substances. Which of the following substances belongs to them?

- a. Glucose
- b. Bilirubin

c. Cholesterol

d. Methionine

e. Glycine

1578. Fenofibrate belongs to the following pharmacological group:

a. Hypnotics

b. Indirect-acting anticoagulants

c. Antihypertensive drugs

d. Hypolipidemic drugs

e. Fibrinolysis inhibitors

1579. Fenofibrate belongs to the following pharmacological group:

a. Indirect-acting anticoagulants

b. Antihypertensive drugs

c. Hypolipidemic drugs

d. Fibrinolysis inhibitors

e. Hypnotics

1580. Fenofibrate belongs to the following pharmacological group:

a. Indirect-acting anticoagulants

b. Antihypertensive drugs

c. Hypolipidemic drugs

d. Hypnotics

e. Fibrinolysis inhibitors

1581. Fibrillar proteins can be characterized by the presence of several parallel polypeptide chains in their structure. What fibrillar protein is a component of hair, skin, and nails?

a. Keratin

b. Globulin

c. Prothrombin

d. Albumin

e. Histone

1582. Fibrillar proteins can be characterized by the presence of several parallel polypeptide chains in their structure. What fibrillar protein is a component of hair, skin, and nails?

a. Albumin

b. Globulin

c. Prothrombin

d. Keratin

e. Histone

1583. Fibrillar proteins can be characterized by the presence of several parallel polypeptide chains in their structure. What fibrillar protein is a component of hair, skin, and nails?

a. Prothrombin

b. Albumin

c. Histone

d. Globulin

e. Keratin

1584. Flowers with cruciform (cross-shaped) flower-cup and corolla, tetradynamous androecium, pod and silicle seeds are characteristic of the following family:

a. Papaveraceae

b. Ranunculaceae

c. Rosaceae

d. Brassicaceae

e. Asteraceae

1585. Flowers with cruciform (cross-shaped) flower-cup and corolla, tetradynamous androecium, pod and silicle seeds are characteristic of the following family:

a. Papaveraceae

b. Rosaceae

c. Ranunculaceae

d. Asteraceae

e. Brassicaceae

1586. Flowers with cruciform (cross-shaped) flower-cup and corolla, tetradynamous androecium, pod and silicle seeds are characteristic of the following family:

- a. Ranunculaceae
- b. Asteraceae
- c. Rosaceae
- d. Papaveraceae

e. Brassicaceae

1587. Foam aerosols are used for burn treatment. What type of dispersed systems are foams?

a. Gas-liquid

- b. Liquid-solid
- c. Liquid-liquid
- d. Solid-solid
- e. Solid-liquid

1588. Foam aerosols are used for burn treatment. What type of dispersed systems are foams?

- a. Liquid-solid
- b. Solid-liquid

c. Gas-liquid

- d. Solid-solid
- e. Liquid-liquid

1589. Foam aerosols are used for burn treatment. What type of dispersed systems are foams?

- a. Solid-liquid
- b. Liquid-liquid

c. Gas-liquid

- d. Solid-solid
- e. Liquid-solid

1590. For a humoral immune response to form, a number of cells of the immune system must interact with the antigen. What cells are the first to encounter the antigen?

a. Macrophages

- b. NK cells
- c. B lymphocytes
- d. Suppressor T cells
- e. Helper T cells

1591. For a humoral immune response to form, a number of cells of the immune system must interact with the antigen. What cells are the first to encounter the antigen?

- a. B lymphocytes
- b. Helper T cells

c. Macrophages

- d. Suppressor T cells
- e. NK cells

1592. For a humoral immune response to form, a number of cells of the immune system must interact with the antigen. What cells are the first to encounter the antigen?

- a. NK cells

b. Macrophages

- c. Helper T cells
- d. B lymphocytes
- e. Suppressor T cells

1593. For diagnostics of meningitis, smears of the cerebrospinal fluid sediment, stained using the Gram technique are being studied. What finding can confirm the diagnosis of meningococcal infection?

- a. Diplococci surrounded by a capsule
- b. Lancet-shaped Gram-positive diplococci
- c. Gram-negative cocci bacteria located within leukocytes
- d. Gram-positive diplococci located within leukocytes
- e. Gram-negative diplococci located within leukocytes and outside of them**

1594. For diagnostics of meningitis, smears of the cerebrospinal fluid sediment, stained using the Gram technique are being studied. What finding can confirm the diagnosis of meningococcal infection?

- a. Gram-positive diplococci located within leukocytes
- b. Gram-negative diplococci located within leukocytes and outside of them**
- c. Lancet-shaped Gram-positive diplococci
- d. Gram-negative cocci bacteria located within leukocytes
- e. Diplococci surrounded by a capsule

1595. For diagnostics of meningitis, smears of the cerebrospinal fluid sediment, stained using the Gram technique are being studied. What finding can confirm the diagnosis of meningococcal infection?

- a. Lancet-shaped Gram-positive diplococci
- b. Gram-negative cocci bacteria located within leukocytes
- c. Gram-positive diplococci located within leukocytes
- d. Gram-negative diplococci located within leukocytes and outside of them**
- e. Diplococci surrounded by a capsule

1596. For eczema treatment, a doctor has prescribed the patient a medicine that must be applied transdermally. What is the maximum number of microbial bodies allowed in 1 g of this product, according to the regulations of the WHO and the Pharmacopoeia?

- a. A total of 500 bacteria and fungi
- b. 100 bacteria and 50 fungi
- c. A total of 1000 bacteria and fungi
- d. 100 bacteria and 100 fungi
- e. A total of 100 bacteria and fungi**

1597. For eczema treatment, a doctor has prescribed the patient a medicine that must be applied transdermally. What is the maximum number of microbial bodies allowed in 1 g of this product, according to the regulations of the WHO and the Pharmacopoeia?

- a. A total of 500 bacteria and fungi
- b. A total of 1000 bacteria and fungi
- c. 100 bacteria and 50 fungi
- d. 100 bacteria and 100 fungi
- e. A total of 100 bacteria and fungi**

1598. For eczema treatment, a doctor has prescribed the patient a medicine that must be applied transdermally. What is the maximum number of microbial bodies allowed in 1 g of this product, according to the regulations of the WHO and the Pharmacopoeia?

- a. A total of 1000 bacteria and fungi
- b. 100 bacteria and 100 fungi
- c. 100 bacteria and 50 fungi
- d. A total of 100 bacteria and fungi**
- e. A total of 500 bacteria and fungi

1599. For the specific prevention of influenza, the employees of an enterprise were vaccinated with "Influvac". What type of immunity will develop in the body of the vaccinated?

- a. Innate congenital
- b. Artificial passive
- c. Natural active
- d. Natural passive
- e. Artificial active**

1600. For the specific prevention of influenza, the employees of an enterprise were vaccinated with "Influvac". What type of immunity will develop in the body of the vaccinated?

- a. Natural active
- b. Natural passive
- c. Artificial passive
- d. Artificial active**
- e. Innate congenital

1601. For the specific prevention of influenza, the employees of an enterprise were vaccinated with

"Influvac". What type of immunity will develop in the body of the vaccinated?

- a. Natural passive
- b. Artificial active**
- c. Natural active
- d. Innate congenital
- e. Artificial passive

1602. For two weeks, a man has been taking tetracycline without a doctor's prescription for treatment of furunculosis. A yellowish color of the skin and sclera is observed in this man. When interviewing this person, a pharmacist determined that his condition developed after taking the medicines. What type of jaundice has developed in this case?

- a. Hepatic**
- b. Subhepatic
- c. Hereditary
- d. Cholestatic
- e. Hemolytic

1603. For two weeks, a man has been taking tetracycline without a doctor's prescription for treatment of furunculosis. A yellowish color of the skin and sclera is observed in this man. When interviewing this person, a pharmacist determined that his condition developed after taking the medicines. What type of jaundice has developed in this case?

- a. Cholestatic
- b. Hemolytic
- c. Hereditary
- d. Subhepatic

e. Hepatic

1604. For two weeks, a man has been taking tetracycline without a doctor's prescription for treatment of furunculosis. A yellowish color of the skin and sclera is observed in this man. When interviewing this person, a pharmacist determined that his condition developed after taking the medicines. What type of jaundice has developed in this case?

- a. Subhepatic
- b. Hemolytic
- c. Cholestatic

d. Hepatic

e. Hereditary

1605. Formation enthalpy equals zero for the following substance:

a. O₂

- b. H₂O₂
- c. CaCO₃
- d. H₂SO₄
- e. CO₂

1606. Formation enthalpy equals zero for the following substance:

a. O₂

- b. H₂O₂
- c. H₂SO₄
- d. CaCO₃
- e. CO₂

1607. Formation enthalpy equals zero for the following substance:

a. O₂

- b. H₂SO₄
- c. CO₂
- d. H₂O₂
- e. CaCO₃

1608. Friedel-Crafts alkylation takes place in the presence of catalysts - Lewis acids. What compounds are included in the list of Lewis acids?

- a. H₂O, H₂O₂
- b. KOH, CaO

c. AlCl_3 , FeBr_3

d. KMnO_4 , $\text{Na}_2\text{S}_2\text{O}_3$

e. H_2SO_4 , HNO_3

1609. Friedel-Crafts alkylation takes place in the presence of catalysts - Lewis acids. What compounds are included in the list of Lewis acids?

a. KMnO_4 , $\text{Na}_2\text{S}_2\text{O}_3$

b. AlCl_3 , FeBr_3

c. H_2SO_4 , HNO_3

d. KOH , CaO

e. H_2O , H_2O_2

1610. Friedel-Crafts alkylation takes place in the presence of catalysts - Lewis acids. What compounds are included in the list of Lewis acids?

a. KOH , CaO

b. AlCl_3 , FeBr_3

c. KMnO_4 , $\text{Na}_2\text{S}_2\text{O}_3$

d. H_2O , H_2O_2

e. H_2SO_4 , HNO_3

1611. From the patient's pleural cavity, an exudate sample was obtained. This sample has the following composition: protein -- 34 g/L, blood corpuscles -- 3600 in mL, predominantly neutrophils, pH -- 6.8. What type of exudate is it?

a. Purulent

b. Fibrinous

c. Serous

d. Hemorrhagic

e. Mixed

1612. From the patient's pleural cavity, an exudate sample was obtained. This sample has the following composition: protein -- 34 g/L, blood corpuscles -- 3600 in mL, predominantly neutrophils, pH -- 6.8. What type of exudate is it?

a. Fibrinous

b. Serous

c. Mixed

d. Purulent

e. Hemorrhagic

1613. From the patient's pleural cavity, an exudate sample was obtained. This sample has the following composition: protein -- 34 g/L, blood corpuscles -- 3600 in mL, predominantly neutrophils, pH -- 6.8. What type of exudate is it?

a. Serous

b. Hemorrhagic

c. Purulent

d. Mixed

e. Fibrinous

1614. Gelatin expands the most in the following solvent:

a. Diethyl ether

b. Acetic acid solution

c. Ethanol

d. Benzene

e. Water

1615. Gelatin expands the most in the following solvent:

a. Diethyl ether

b. Ethanol

c. Acetic acid solution

d. Benzene

e. Water

1616. Gout develops when purine nucleotide metabolism is disturbed. The doctor prescribed the patient allopurinol that is a competitive inhibitor of:

a. Alcohol dehydrogenase

b. Xanthine oxidase

c. Lactate dehydrogenase

d. Hexokinase

e. Succinate dehydrogenase

1617. Gout develops when purine nucleotide metabolism is disturbed. The doctor prescribed the patient allopurinol that is a competitive inhibitor of:

a. Hexokinase

b. Succinate dehydrogenase

c. Lactate dehydrogenase

d. Xanthine oxidase

e. Alcohol dehydrogenase

1618. Gout develops when purine nucleotide metabolism is disturbed. The doctor prescribed the patient allopurinol that is a competitive inhibitor of:

a. Succinate dehydrogenase

b. Alcohol dehydrogenase

c. Xanthine oxidase

d. Lactate dehydrogenase

e. Hexokinase

1619. Gravimetric titration was used to determine aluminium mass fraction in a medicinal preparation. Ammonium hydroxide solution was used as a precipitant. In this case the gravimetric form will be:

a. Aluminium oxide

b. Aluminium hydroxide

c. Aluminium carbonate

d. Ammonium chloride

e. Ammonium nitrate

1620. Gravimetric titration was used to determine aluminium mass fraction in a medicinal preparation. Ammonium hydroxide solution was used as a precipitant. In this case the gravimetric form will be:

a. Aluminium hydroxide

b. Ammonium chloride

c. Aluminium carbonate

d. Ammonium nitrate

e. Aluminium oxide

1621. Gravimetric titration was used to determine aluminium mass fraction in a medicinal preparation. Ammonium hydroxide solution was used as a precipitant. In this case the gravimetric form will be:

a. Ammonium nitrate

b. Aluminium hydroxide

c. Aluminium oxide

d. Aluminium carbonate

e. Ammonium chloride

1622. Gravimetry was used to analyze sodium sulfate crystalline hydrate by precipitating sulfate ions with a barium chloride solution. After its maturation, the barium sulfate precipitate must be washed using decantation. What is used as a washing liquid for this purpose?

a. Barium chloride solution

b. Ammonium sulfate solution

c. Distilled water

d. Sodium sulfate solution

e. Dilute solution of sulfuric acid

1623. Gravimetry was used to analyze sodium sulfate crystalline hydrate by precipitating sulfate ions with a barium chloride solution. After its maturation, the barium sulfate precipitate must be washed using decantation. What is used as a washing liquid for this purpose?

a. Distilled water

b. Ammonium sulfate solution

c. Sodium sulfate solution

d. Dilute solution of sulfuric acid

e. Barium chloride solution

1624. Gravimetry was used to analyze sodium sulfate crystalline hydrate by precipitating sulfate ions with a barium chloride solution. After its maturation, the barium sulfate precipitate must be washed using decantation. What is used as a washing liquid for this purpose?

a. Sodium sulfate solution

b. Distilled water

c. Barium chloride solution

d. Ammonium sulfate solution

e. Dilute solution of sulfuric acid

1625. Gypsum water is added to a test solution for analytical determination of barium ions. What visual effect is observed in this case?

a. A characteristic odor appearing

b. Formation of a white precipitate

c. Production of a brown gas

d. Yellow coloring of the solution

e. Formation of a blue precipitate

1626. Gypsum water is added to a test solution for analytical determination of barium ions. What visual effect is observed in this case?

a. A characteristic odor appearing

b. Yellow coloring of the solution

c. Formation of a white precipitate

d. Formation of a blue precipitate

e. Production of a brown gas

1627. Gypsum water is added to a test solution for analytical determination of barium ions. What visual effect is observed in this case?

a. Yellow coloring of the solution

b. Production of a brown gas

c. A characteristic odor appearing

d. Formation of a blue precipitate

e. Formation of a white precipitate

1628. HIV-infection occupational risk groups include people of various professions, healthcare workers included. Specify the most likely route of infection transmission for healthcare workers:

a. Parenteral transmission

b. Droplet transmission

c. Vector-borne transmission

d. Transmission via airborne dust particles

e. Fecal-oral transmission

1629. HIV-infection occupational risk groups include people of various professions, healthcare workers included. Specify the most likely route of infection transmission for healthcare workers:

a. Fecal-oral transmission

b. Vector-borne transmission

c. Droplet transmission

d. Parenteral transmission

e. Transmission via airborne dust particles

1630. HIV-infection occupational risk groups include people of various professions, healthcare workers included. Specify the most likely route of infection transmission for healthcare workers:

a. Vector-borne transmission

b. Parenteral transmission

c. Transmission via airborne dust particles

d. Fecal-oral transmission

e. Droplet transmission

1631. Halogen atoms can be detected in an organic compound, if the following test is performed:

a. Beilstein's test

- b. Lucas' test
- c. Molisch's test
- d. Baeyer's test
- e. Iodoform test

1632. Halogen atoms can be detected in an organic compound, if the following test is performed:

- a. Lucas' test

b. Beilstein's test

- c. Iodoform test
- d. Molisch's test
- e. Baeyer's test

1633. Halogen atoms can be detected in an organic compound, if the following test is performed:

- a. Lucas' test
- b. Iodoform test
- c. Baeyer's test
- d. Molisch's test

e. Beilstein's test

1634. Having matured, pistillate catkins of *Betula pendula* fall apart freeing nutlet seeds with:

- a. Bristly hooks
- b. Villous coma
- c. One large wing petal
- d. Two air vesicles

e. Two membranous wing petals

1635. Having matured, pistillate catkins of *Betula pendula* fall apart freeing nutlet seeds with:

- a. One large wing petal

b. Two membranous wing petals

- c. Villous coma
- d. Bristly hooks
- e. Two air vesicles

1636. Having matured, pistillate catkins of *Betula pendula* fall apart freeing nutlet seeds with:

- a. Two air vesicles
- b. Bristly hooks
- c. Villous coma
- d. One large wing petal

e. Two membranous wing petals

1637. Having prepared a nutrient medium with carbohydrate solutions, the laboratory assistant sterilized it. What sterilization method was used?

- a. Dry heat
- b. One-time boiling

c. Fractional, using flowing steam

- d. Steam under pressure
- e. Ultraviolet irradiation

1638. Having prepared a nutrient medium with carbohydrate solutions, the laboratory assistant sterilized it. What sterilization method was used?

- a. Dry heat
- b. One-time boiling
- c. Ultraviolet irradiation

d. Fractional, using flowing steam

- e. Steam under pressure

1639. Having prepared a nutrient medium with carbohydrate solutions, the laboratory assistant sterilized it. What sterilization method was used?

- a. One-time boiling
- b. Steam under pressure
- c. Dry heat

d. Fractional, using flowing steam

e. Ultraviolet irradiation

1640. Heating of sodium phenolate in CO₂ stream results in production of a certain carboxylic acid. Name the resulting compound:

a. Salicylic acid

b. Ethyl salicylate

c. Benzoic acid

d. Aminophenol

e. Phenyl salicylate

1641. Heating of sodium phenolate in CO₂ stream results in production of a certain carboxylic acid. Name the resulting compound:

a. Ethyl salicylate

b. Salicylic acid

c. Aminophenol

d. Phenyl salicylate

e. Benzoic acid

1642. Heating of sodium phenolate in CO₂ stream results in production of a certain carboxylic acid. Name the resulting compound:

a. Ethyl salicylate

b. Phenyl salicylate

c. Benzoic acid

d. Salicylic acid

e. Aminophenol

1643. Hemoglobin breakdown begins in the cells of reticuloendothelial system. What enzyme catalyzes the reduction reaction of biliverdine into bilirubin?

a. Heme oxygenase

b. Xanthine oxidase

c. Hexokinase

d. beta-glucuronidase

e. Biliverdine reductase

1644. Hemoglobin breakdown begins in the cells of reticuloendothelial system. What enzyme catalyzes the reduction reaction of biliverdine into bilirubin?

a. Hexokinase

b. Heme oxygenase

c. Biliverdine reductase

d. Xanthine oxidase

e. beta-glucuronidase

1645. Hemoglobin breakdown begins in the cells of reticuloendothelial system. What enzyme catalyzes the reduction reaction of biliverdine into bilirubin?

a. Xanthine oxidase

b. beta-glucuronidase

c. Heme oxygenase

d. Biliverdine reductase

e. Hexokinase

1646. Hemoglobin catabolism results in release of iron that is transported to the bone marrow by a certain transfer protein and used again for the synthesis of hemoglobin. Specify this transfer protein:

a. Transferrin (siderophilin)

b. Ceruloplasmin

c. Albumin

d. Haptoglobin

e. Transcobalamin

1647. Hemoglobin catabolism results in release of iron that is transported to the bone marrow by a certain transfer protein and used again for the synthesis of hemoglobin. Specify this transfer protein:

a. Albumin

b. Ceruloplasmin

c. Haptoglobin

d. Transcobalamin

e. Transferrin (siderophilin)

1648. Hemoglobin catabolism results in release of iron that is transported to the bone marrow by a certain transfer protein and used again for the synthesis of hemoglobin. Specify this transfer protein:

- a. Haptoglobin
- b. Ceruloplasmin
- c. Albumin

d. Transferrin (siderophilin)

e. Transcobalamin

1649. Heparin is a direct-acting anticoagulant that decreases blood clotting and prevents formation of the thrombus. This substance activity is based on the phenomenon of:

- a. Micelle formation
- b. Syneresis
- c. Thixotropy

d. "Colloidal protection"

e. Dialysis

1650. Heparin is a direct-acting anticoagulant that decreases blood clotting and prevents formation of the thrombus. This substance activity is based on the phenomenon of:

- a. Micelle formation
- b. Thixotropy
- c. Syneresis
- d. Dialysis

e. "Colloidal protection"

1651. Heparin is a direct-acting anticoagulant that decreases blood clotting and prevents formation of the thrombus. This substance activity is based on the phenomenon of:

- a. Syneresis
- b. Thixotropy
- c. Dialysis

d. "Colloidal protection"

e. Micelle formation

1652. Heparin is a potent natural anticoagulant, synthesized in mast cells. What is the chemical nature of this compound?

a. Heteropolysaccharide

- b. Phospholipid
- c. Homopolysaccharide
- d. Simple protein
- e. Steroid

1653. Heparin is a potent natural anticoagulant, synthesized in mast cells. What is the chemical nature of this compound?

a. Homopolysaccharide

b. Heteropolysaccharide

- c. Steroid
- d. Phospholipid
- e. Simple protein

1654. Heparin is a potent natural anticoagulant, synthesized in mast cells. What is the chemical nature of this compound?

- a. Homopolysaccharide
- b. Steroid
- c. Phospholipid

d. Heteropolysaccharide

e. Simple protein

1655. Heparin was prescribed as a part of complex therapy for myocardial infarction. This drug belongs to the following group:

a. Detoxifiers

b. Direct anticoagulants

- c. Coagulants
- d. Vitamin preparations
- e. Hormonal preparations

1656. Heparin was prescribed as a part of complex therapy for myocardial infarction. This drug belongs to the following group:

a. Hormonal preparations

b. Direct anticoagulants

- c. Detoxifiers
- d. Coagulants
- e. Vitamin preparations

1657. Heparin was prescribed as a part of complex therapy for myocardial infarction. This drug belongs to the following group:

a. Hormonal preparations

b. Detoxifiers

c. Vitamin preparations

d. Direct anticoagulants

e. Coagulants

1658. Herbarium specimens of medicinal plants are being studied. Which one of them belongs to Rosaceae family?

a. *Conium maculatum*

b. *Melilotus officinalis*

c. *Crataegus sanguinea*

d. *Capsella bursa-pastoris*

e. *Polygonum persicaria*

1659. Herbarium specimens of medicinal plants are being studied. Which one of them belongs to Rosaceae family?

a. *Melilotus officinalis*

b. *Conium maculatum*

c. *Capsella bursa-pastoris*

d. *Polygonum persicaria*

e. *Crataegus sanguinea*

1660. Herbarium specimens of medicinal plants are being studied. Which one of them belongs to Rosaceae family?

a. *Polygonum persicaria*

b. *Capsella bursa-pastoris*

c. *Crataegus sanguinea*

d. *Melilotus officinalis*

e. *Conium maculatum*

1661. High-molecular substances can be isolated from the solution using electrolytes. Name this process.

a. Salting out

b. Swelling

c. Coagulation

d. Aggregation

e. Sedimentation

1662. High-molecular substances can be isolated from the solution using electrolytes. Name this process.

a. Salting out

b. Swelling

c. Sedimentation

d. Coagulation

e. Aggregation

1663. High-molecular substances can be isolated from the solution using electrolytes. Name this process.

a. Coagulation

- b. Swelling
- c. Aggregation

d. Salting out

- e. Sedimentation

1664. Hormone-like substances from the group of eicosanoids can be used to stimulate labor activity during childbirth and as contraceptives. What substances have this effect?

a. Prostaglandins

- b. Endorphins
- c. Interleukins
- d. Enkephalins
- e. Angiotensins

1665. Hormone-like substances from the group of eicosanoids can be used to stimulate labor activity during childbirth and as contraceptives. What substances have this effect?

- a. Endorphins
- b. Angiotensins
- c. Enkephalins

d. Prostaglandins

- e. Interleukins

1666. Hormone-like substances from the group of eicosanoids can be used to stimulate labor activity during childbirth and as contraceptives. What substances have this effect?

- a. Enkephalins
- b. Angiotensins

c. Prostaglandins

- d. Endorphins
- e. Interleukins

1667. Hormones regulate numerous metabolic processes. What hormone activates glycogen synthesis?

a. Insulin

- b. Adrenaline
- c. Vasopressin
- d. Thyroxine
- e. Oxytocin

1668. Hormones regulate numerous metabolic processes. What hormone activates glycogen synthesis?

- a. Thyroxine
- b. Adrenaline
- c. Vasopressin
- d. Oxytocin

e. Insulin

1669. Hormones regulate numerous metabolic processes. What hormone activates glycogen synthesis?

- a. Vasopressin
- b. Oxytocin
- c. Thyroxine

d. Insulin

- e. Adrenaline

1670. How according to the Pharmacopoeia is pH determined?

a. Potentiometry

- b. Polarography
- c. Conductometry
- d. Spectrophotometry
- e. Indicator

1671. How according to the Pharmacopoeia is pH determined?

- a. Conductometry
- b. Indicator

c. Potentiometry

- d. Polarography
- e. Spectrophotometry

1672. How according to the Pharmacopoeia is pH determined?

- a. Indicator
- b. Polarography
- c. Spectrophotometry
- d. Conductometry

e. Potentiometry

1673. How does the value of the critical micelle concentration in homologous series change with an increase in the molecular mass of the surfactant?

a. Decreases

- b. Sharply increases
- c. Remains unchanged
- d. Reaches its maximum and then decreases
- e. Increases

1674. How does the value of the critical micelle concentration in homologous series change with an increase in the molecular mass of the surfactant?

- a. Sharply increases
- b. Increases
- c. Remains unchanged
- d. Reaches its maximum and then decreases

e. Decreases

1675. How does the value of the critical micelle concentration in homologous series change with an increase in the molecular mass of the surfactant?

- a. Sharply increases
- b. Reaches its maximum and then decreases
- c. Remains unchanged
- d. Increases

e. Decreases

1676. How is the radial type of leaf blade different from the dorsiventral type?

- a. It has spongy parenchyma
- b. It has a vascular bundle
- c. It has stomata

d. It has hypodermis

- e. It has trichomes

1677. How is the radial type of leaf blade different from the dorsiventral type?

- a. It has spongy parenchyma
- b. It has trichomes
- c. It has stomata

d. It has hypodermis

- e. It has a vascular bundle

1678. How is the radial type of leaf blade different from the dorsiventral type?

- a. It has stomata
- b. It has trichomes

c. It has hypodermis

- d. It has spongy parenchyma
- e. It has a vascular bundle

1679. How many atoms does a furanose cycle consist of?

- a. 4
- b. 7

c. 5

- d. 3
- e. 6

1680. How many atoms does a furanose cycle consist of?

- a. 6
- b. 4
- c. 7

d. 5

- e. 3

1681. How many atoms does a furanose cycle consist of?

- a. 7

b. 5

- c. 3

- d. 6

- e. 4

1682. How will the rate of the chemical reaction $2\text{NO}(\text{gas}) + \text{O}_2(\text{gas}) = 2\text{NO}_2(\text{gas})$ change if the pressure increases by three times?

a. The rate will increase by 27 times

b. The rate will increase by three times

c. The rate will remain unchanged

d. The rate will decrease by 27 times

e. The rate will decrease by three times

1683. How will the rate of the chemical reaction $2\text{NO}(\text{gas}) + \text{O}_2(\text{gas}) = 2\text{NO}_2(\text{gas})$ change if the pressure increases by three times?

a. The rate will increase by three times

b. The rate will decrease by three times

c. The rate will remain unchanged

d. The rate will increase by 27 times

e. The rate will decrease by 27 times

1684. How will the rate of the chemical reaction $2\text{NO}(\text{gas}) + \text{O}_2(\text{gas}) = 2\text{NO}_2(\text{gas})$ change if the pressure increases by three times?

a. The rate will remain unchanged

b. The rate will increase by 27 times

c. The rate will increase by three times

d. The rate will decrease by 27 times

e. The rate will decrease by three times

1685. Human body assimilates fats only as emulsions. Vegetable oils and animal fats contained in food are emulsified when exposed to bile (an emulsifier). How does interface tension change in this case?

a. First increases, than decreases

b. Increases

c. Decreases

d. Remains unchanged

e. First decreases, than increases

1686. Human body assimilates fats only as emulsions. Vegetable oils and animal fats contained in food are emulsified when exposed to bile (an emulsifier). How does interface tension change in this case?

a. Remains unchanged

b. First decreases, than increases

c. Increases

d. First increases, than decreases

e. Decreases

1687. Human body assimilates fats only as emulsions. Vegetable oils and animal fats contained in food are emulsified when exposed to bile (an emulsifier). How does interface tension change in this case?

a. Remains unchanged

b. First increases, than decreases

c. Increases

d. First decreases, than increases

e. Decreases

1688. Hydrochloric acid was added into the solution under investigation. The resulting precipitate was filtered, then this filter cake was processed with hot water; after the filtrate cooled, KI solution was added into it. What cation was present in the solution, if the precipitate was colored yellow?

a. Pb^{2+}

- b. Ag^{+}
- c. Hg^{2+}
- d. Ba^{2+}
- e. Ca^{2+}

1689. Hydrochloric acid was added into the solution under investigation. The resulting precipitate was filtered, then this filter cake was processed with hot water; after the filtrate cooled, KI solution was added into it. What cation was present in the solution, if the precipitate was colored yellow?

a. Ba^{2+}

b. Pb^{2+}

- c. Ag^{+}
- d. Ca^{2+}
- e. Hg^{2+}

1690. Hydrochloric acid was added into the solution under investigation. The resulting precipitate was filtered, then this filter cake was processed with hot water; after the filtrate cooled, KI solution was added into it. What cation was present in the solution, if the precipitate was colored yellow?

- a. Ca^{2+}
- b. Ba^{2+}

c. Pb^{2+}

- d. Hg^{2+}
- e. Ag^{+}

1691. Hydrolysis reaction will **NOT** occur with:

a. Cellulose

b. Glycerol

- c. Fat
- d. Starch
- e. Protein

1692. Hydrolysis reaction will **NOT** occur with:

a. Fat

b. Glycerol

- c. Cellulose
- d. Protein
- e. Starch

1693. Hydrolysis reaction will **NOT** occur with:

a. Fat

b. Glycerol

- c. Protein
- d. Cellulose
- e. Starch

1694. Hydrolytic destruction of compounds is carried out by a certain class of enzymes - hydrolases. What compounds are being hydrolyzed with proteases?

- a. Glucose
- b. Higher fatty acids

c. Proteins

- d. Carbon dioxide
- e. Pyruvic acid

1695. Hydrolytic destruction of compounds is carried out by a certain class of enzymes - hydrolases. What compounds are being hydrolyzed with proteases?

- a. Higher fatty acids
- b. Carbon dioxide
- c. Pyruvic acid

d. Glucose

e. Proteins

1696. Hydrolytic destruction of compounds is carried out by a certain class of enzymes - hydrolases. What compounds are being hydrolyzed with proteases?

a. Higher fatty acids

b. Glucose

c. Pyruvic acid

d. Proteins

e. Carbon dioxide

1697. Hyperlipemia is observed in a patient 2-3 hours after eating greasy food. 9 hours later lipid ratio becomes normal again. How can this condition be characterised?

a. Hyperplastic obesity

b. Retention hyperlipemia

c. Transport hyperlipemia

d. Alimentary hyperlipemia

e. Hypertrophic obesity

1698. Hyperlipemia is observed in a patient 2-3 hours after eating greasy food. 9 hours later lipid ratio becomes normal again. How can this condition be characterised?

a. Hypertrophic obesity

b. Hyperplastic obesity

c. Retention hyperlipemia

d. Alimentary hyperlipemia

e. Transport hyperlipemia

1699. Hyperlipemia is observed in a patient 2-3 hours after eating greasy food. 9 hours later lipid ratio becomes normal again. How can this condition be characterised?

a. Retention hyperlipemia

b. Alimentary hyperlipemia

c. Hyperplastic obesity

d. Transport hyperlipemia

e. Hypertrophic obesity

1700. If addition of an alkali solution and heating provokes the release of ammonia in an analyzed solution, it indicates that the analyzed solution contains the following ions:

a. NH_4^+

b. NO_2^-

c. NO_3^-

d. Na^+

e. K^+

1701. If addition of an alkali solution and heating provokes the release of ammonia in an analyzed solution, it indicates that the analyzed solution contains the following ions:

a. K^+

b. NO_2^-

c. NH_4^+

d. NO_3^-

e. Na^+

1702. If addition of an alkali solution and heating provokes the release of ammonia in an analyzed solution, it indicates that the analyzed solution contains the following ions:

a. Na^+

b. NO_3^-

c. NH_4^+

d. K^+

e. NO_2^-

1703. If in the process of molecular adsorption the solute is being adsorbed more than the solvent, then the following occurs:

a. Ion adsorption

b. No adsorption

c. Positive adsorption

d. Selective adsorption

e. Negative adsorption

1704. If in the process of molecular adsorption the solute is being adsorbed more than the solvent, then the following occurs:

a. Negative adsorption

b. No adsorption

c. Positive adsorption

d. Ion adsorption

e. Selective adsorption

1705. If in the process of molecular adsorption the solute is being adsorbed more than the solvent, then the following occurs:

a. Selective adsorption

b. No adsorption

c. Ion adsorption

d. Positive adsorption

e. Negative adsorption

1706. If the amount of a high molecular substance added into a sol is very small, then a decrease in its stability, instead of an increase, can occur. What is the name of this phenomenon?

a. Sensitization

b. Sedimentation

c. Syneresis

d. Synergism

e. Solubilization

1707. If the amount of a high molecular substance added into a sol is very small, then a decrease in its stability, instead of an increase, can occur. What is the name of this phenomenon?

a. Sensitization

b. Sedimentation

c. Synergism

d. Syneresis

e. Solubilization

1708. If the amount of a high molecular substance added into a sol is very small, then a decrease in its stability, instead of an increase, can occur. What is the name of this phenomenon?

a. Sensitization

b. Solubilization

c. Sedimentation

d. Syneresis

e. Synergism

1709. If the amount of high-molecular substance added to the given sol is extremely small, it is possible its stability will decrease, instead of increase. What is this phenomenon called?

a. Sedimentation

b. Syneresis

c. Sensitization

d. Solubilization

e. Synergism

1710. If the amount of high-molecular substance added to the given sol is extremely small, it is possible its stability will decrease, instead of increase. What is this phenomenon called?

a. Sedimentation

b. Syneresis

c. Sensitization

d. Synergism

e. Solubilization

1711. If the amount of high-molecular substance added to the given sol is extremely small, it is possible its stability will decrease, instead of increase. What is this phenomenon called?

a. Syneresis

- b. Synergism
- c. Sedimentation

d. Sensitization

- e. Solubilization

1712. If there is no strophanthin in the pharmacy stock, the following cardiac glycoside can be used as its substitute:

a. Corglycon (Convallatoxin)

- b. Digitoxin
- c. Izolanid (Lanatoside C)
- d. -
- e. Adonisid (Adonis vernalis glycosides)

1713. If there is no strophanthin in the pharmacy stock, the following cardiac glycoside can be used as its substitute:

- a. -

b. Corglycon (Convallatoxin)

- c. Izolanid (Lanatoside C)
- d. Digitoxin
- e. Adonisid (Adonis vernalis glycosides)

1714. If there is no strophanthin in the pharmacy stock, the following cardiac glycoside can be used as its substitute:

- a. Digitoxin
- b. -
- c. Izolanid (Lanatoside C)
- d. Adonisid (Adonis vernalis glycosides)

e. Corglycon (Convallatoxin)

1715. IgM to rubella virus were detected in the blood serum of a sick child. What stage of the disease progression is indicated by this sign?

- a. Incubation
- b. Persistent
- c. Post-vaccination

d. Acute

- e. Chronic

1716. IgM to rubella virus were detected in the blood serum of a sick child. What stage of the disease progression is indicated by this sign?

- a. Incubation
- b. Post-vaccination
- c. Chronic
- d. Persistent

e. Acute

1717. IgM to rubella virus were detected in the blood serum of a sick child. What stage of the disease progression is indicated by this sign?

- a. Post-vaccination

b. Acute

- c. Persistent
- d. Chronic
- e. Incubation

1718. Illegal emigrants from Somalia were detained at the Ukrainian border. During medical examination, their 3-year-old child presents with muscle hypotonia and dystrophy, skin depigmentation, decreased turgor, and enlarged abdomen. The child is underweight. The diagnosis of kwashiorkor was made. This pathology is a type of partial starvation, namely the deficiency of:

a. Proteins

- b. Lipids
- c. Energy
- d. Carbohydrates
- e. Vitamins

1719. Illegal emigrants from Somalia were detained at the Ukrainian border. During medical examination, their 3-year-old child presents with muscle hypotonia and dystrophy, skin depigmentation, decreased turgor, and enlarged abdomen. The child is underweight. The diagnosis of kwashiorkor was made. This pathology is a type of partial starvation, namely the deficiency of:

- a. Energy
- b. Lipids
- c. Vitamins
- d. Carbohydrates

e. Proteins

1720. Illegal emigrants from Somalia were detained at the Ukrainian border. During medical examination, their 3-year-old child presents with muscle hypotonia and dystrophy, skin depigmentation, decreased turgor, and enlarged abdomen. The child is underweight. The diagnosis of kwashiorkor was made. This pathology is a type of partial starvation, namely the deficiency of:

- a. Vitamins
- b. Lipids

c. Proteins

- d. Carbohydrates
- e. Energy

1721. In *Allium cepa*, the main axis ends in an inflorescence, in which peduncles of the same length emerge from one point. What type of inflorescence is it characteristic of?

- a. Flat capitulum

b. Umbel

- c. Corymb
- d. Spike
- e. Raceme

1722. In *Allium cepa*, the main axis ends in an inflorescence, in which peduncles of the same length emerge from one point. What type of inflorescence is it characteristic of?

- a. Flat capitulum
- b. Corymb
- c. Spike
- d. Raceme

e. Umbel

1723. In *Allium cepa*, the main axis ends in an inflorescence, in which peduncles of the same length emerge from one point. What type of inflorescence is it characteristic of?

- a. Raceme
- b. Spike
- c. Flat capitulum
- d. Corymb

e. Umbel

1724. In March, the children in a kindergarten were given a salad made from fresh cabbage stored in a cold cellar. Several hours later, many of these children developed signs of food poisoning. What microorganisms are the likely cause of poisoning in this case, considering the conditions in which they were reproducing?

- a. Facultative
- b. Resident
- c. Mesophiles

d. Psychrophiles

- e. Thermophiles

1725. In March, the children in a kindergarten were given a salad made from fresh cabbage stored in a cold cellar. Several hours later, many of these children developed signs of food poisoning. What microorganisms are the likely cause of poisoning in this case, considering the conditions in which they were reproducing?

- a. Resident
- b. Facultative
- c. Mesophiles

d. Psychrophiles

e. Thermophiles

1726. In March, the children in a kindergarten were given a salad made from fresh cabbage stored in a cold cellar. Several hours later, many of these children developed signs of food poisoning. What microorganisms are the likely cause of poisoning in this case, considering the conditions in which they were reproducing?

- a. Resident
- b. Mesophiles
- c. Thermophiles
- d. Facultative

e. Psychrophiles

1727. In Ukraine all vaccinations are conducted according to the Ministry of Health decree "On preventive immunization in Ukraine and control of quality and turnover of immunobiological medical products". Which of the listed diseases is included in the national routine immunization schedule?

- a. Botulism
- b. Rickettsiosis
- c. HIV infection

d. Poliomyelitis

e. Influenza

1728. In Ukraine all vaccinations are conducted according to the Ministry of Health decree "On preventive immunization in Ukraine and control of quality and turnover of immunobiological medical products". Which of the listed diseases is included in the national routine immunization schedule?

- a. Botulism
- b. Rickettsiosis
- c. HIV infection
- d. Influenza

e. Poliomyelitis

1729. In Ukraine all vaccinations are conducted according to the Ministry of Health decree "On preventive immunization in Ukraine and control of quality and turnover of immunobiological medical products". Which of the listed diseases is included in the national routine immunization schedule?

- a. Rickettsiosis
- b. HIV infection
- c. Influenza

d. Poliomyelitis

e. Botulism

1730. In a maternity hospital infants are vaccinated against tuberculosis on the 5-7 day. What vaccine is used specifically for prevention of tuberculosis?

a. BCG vaccine

- b. STI vaccine
- c. TABTe vaccine
- d. DPT vaccine
- e. EV vaccine

1731. In a maternity hospital infants are vaccinated against tuberculosis on the 5-7 day. What vaccine is used specifically for prevention of tuberculosis?

a. DPT vaccine

b. BCG vaccine

- c. EV vaccine
- d. STI vaccine
- e. TABTe vaccine

1732. In a maternity hospital infants are vaccinated against tuberculosis on the 5-7 day. What vaccine is used specifically for prevention of tuberculosis?

- a. EV vaccine
- b. STI vaccine

c. BCG vaccine

- d. TABTe vaccine

e. DPT vaccine

1733. In a nursery-garden some medicinal plants developed signs of a disease: there are yellow spots and necrotic foci on the leaves. Sap of the diseased plants remained infectious even after passing through a bacteria-excluding filter. No microorganisms growth was detected on the nutrient medium. What microorganisms could be the cause of this disease?

- a. Bacteria
- b. Fungi
- c. Ray fungi

d. Viruses

e. Mycoplasma

1734. In a nursery-garden some medicinal plants developed signs of a disease: there are yellow spots and necrotic foci on the leaves. Sap of the diseased plants remained infectious even after passing through a bacteria-excluding filter. No microorganisms growth was detected on the nutrient medium. What microorganisms could be the cause of this disease?

- a. Bacteria
- b. Mycoplasma
- c. Fungi

d. Viruses

e. Ray fungi

1735. In a nursery-garden some medicinal plants developed signs of a disease: there are yellow spots and necrotic foci on the leaves. Sap of the diseased plants remained infectious even after passing through a bacteria-excluding filter. No microorganisms growth was detected on the nutrient medium. What microorganisms could be the cause of this disease?

- a. Ray fungi
- b. Bacteria
- c. Fungi
- d. Mycoplasma

e. Viruses

1736. In a patient with jaundice, increased levels of direct bilirubin and cholemia were detected in the blood. No stercobilinogen was detected in urine. What disorder is observed in this case?

a. Mechanical jaundice

- b. Crigler-Najjar syndrome
- c. Parenchymal jaundice
- d. Gilbert's syndrome
- e. Hemolytic jaundice

1737. In a patient with jaundice, increased levels of direct bilirubin and cholemia were detected in the blood. No stercobilinogen was detected in urine. What disorder is observed in this case?

a. Mechanical jaundice

- b. Parenchymal jaundice
- c. Gilbert's syndrome
- d. Crigler-Najjar syndrome
- e. Hemolytic jaundice

1738. In a patient with jaundice, increased levels of direct bilirubin and cholemia were detected in the blood. No stercobilinogen was detected in urine. What disorder is observed in this case?

- a. Hemolytic jaundice
- b. Gilbert's syndrome
- c. Parenchymal jaundice
- d. Crigler-Najjar syndrome

e. Mechanical jaundice

1739. In a plant being studied, epidermis of some of the leaves has a thick cuticle and a layer of wax on the surface, while epidermis of the other leaves has scales or numerous trichomes and only a few stomata. What group does this plant belong to?

a. Xerophytes

- b. Ephemerals
- c. Hygrophytes

- d. Mesophytes
- e. Hydrophytes

1740. In a plant being studied, epidermis of some of the leaves has a thick cuticle and a layer of wax on the surface, while epidermis of the other leaves has scales or numerous trichomes and only a few stomata. What group does this plant belong to?

a. Hydrophytes

b. Xerophytes

- c. Mesophytes
- d. Ephemerals
- e. Hygrophytes

1741. In a plant being studied, epidermis of some of the leaves has a thick cuticle and a layer of wax on the surface, while epidermis of the other leaves has scales or numerous trichomes and only a few stomata. What group does this plant belong to?

a. Hygrophytes

b. Hydrophytes

c. Ephemerals

d. Mesophytes

e. Xerophytes

1742. In acidimetry, titrants are prepared using the method of determined titer. What substance is used for their standardization according to the State Pharmacopoeia of Ukraine?

a. Sodium carbonate

b. Metallic zinc

c. Metallic iron

d. Sodium chloride

e. Potassium chloride

1743. In acidimetry, titrants are prepared using the method of determined titer. What substance is used for their standardization according to the State Pharmacopoeia of Ukraine?

a. Metallic iron

b. Metallic zinc

c. Sodium chloride

d. Potassium chloride

e. Sodium carbonate

1744. In acidimetry, titrants are prepared using the method of determined titer. What substance is used for their standardization according to the State Pharmacopoeia of Ukraine?

a. Potassium chloride

b. Sodium chloride

c. Sodium carbonate

d. Metallic zinc

e. Metallic iron

1745. In case of excessive consumption of carbohydrates, insulin stimulates the transformation of carbohydrates into lipids in the cells of adipose tissue. What process is involved in this transformation?

a. Heme synthesis

b. Gluconeogenesis

c. Lipolysis

d. Synthesis of higher fatty acids

e. Uric acid synthesis

1746. In case of excessive consumption of carbohydrates, insulin stimulates the transformation of carbohydrates into lipids in the cells of adipose tissue. What process is involved in this transformation?

a. Heme synthesis

b. Gluconeogenesis

c. Uric acid synthesis

d. Lipolysis

e. Synthesis of higher fatty acids

1747. In case of excessive consumption of carbohydrates, insulin stimulates the transformation of carbohydrates into lipids in the cells of adipose tissue. What process is involved in this transformation?

- a. Heme synthesis
- b. Uric acid synthesis
- c. Lipolysis
- d. Gluconeogenesis
- e. Synthesis of higher fatty acids**

1748. In cases of long-term intoxication, a significant decrease in the activity of aminoacyl-tRNA synthetases can be observed. What metabolic process becomes disturbed in such cases?

- a. Biosynthesis of proteins**
- b. DNA repair
- c. RNA processing
- d. Genetic recombination
- e. DNA replication

1749. In cases of long-term intoxication, a significant decrease in the activity of aminoacyl-tRNA synthetases can be observed. What metabolic process becomes disturbed in such cases?

- a. RNA processing
- b. DNA repair
- c. Genetic recombination
- d. DNA replication
- e. Biosynthesis of proteins**

1750. In cases of long-term intoxication, a significant decrease in the activity of aminoacyl-tRNA synthetases can be observed. What metabolic process becomes disturbed in such cases?

- a. RNA processing
- b. DNA replication
- c. Biosynthesis of proteins**
- d. DNA repair
- e. Genetic recombination

1751. In cases of systemic connective tissue diseases, protein and polysaccharide fragments of the connective tissue become destroyed. What protein is the main component of this tissue?

- a. Collagen**
- b. Keratin
- c. Albumin
- d. Actin
- e. Myosin

1752. In cases of systemic connective tissue diseases, protein and polysaccharide fragments of the connective tissue become destroyed. What protein is the main component of this tissue?

- a. Actin
- b. Keratin
- c. Myosin
- d. Collagen**
- e. Albumin

1753. In cases of systemic connective tissue diseases, protein and polysaccharide fragments of the connective tissue become destroyed. What protein is the main component of this tissue?

- a. Myosin
- b. Collagen**
- c. Keratin
- d. Actin
- e. Albumin

1754. In course of long-term treatment of an infectious patient with penicillin, the pathogen transformed into the L-form. What changes occur in the pathogen cell in case of L-transformation?

- a. Absence of a cell wall**
- b. Absence of flagella
- c. Absence of a capsule

- d. Absence of a spore
- e. Absence of inclusions

1755. In course of long-term treatment of an infectious patient with penicillin, the pathogen transformed into the L-form. What changes occur in the pathogen cell in case of L-transformation?

- a. Absence of a spore
- b. Absence of flagella
- c. Absence of a cell wall**
- d. Absence of a capsule
- e. Absence of inclusions

1756. In course of long-term treatment of an infectious patient with penicillin, the pathogen transformed into the L-form. What changes occur in the pathogen cell in case of L-transformation?

- a. Absence of inclusions
- b. Absence of a cell wall**
- c. Absence of a capsule
- d. Absence of flagella
- e. Absence of a spore

1757. In dental practice liquid dosage forms that contain camphor and chloralhydrate are used. What phases are in equilibrium in the eutectic point of fusibility curve of the camphor-chloralhydrate mixture?

- a. Eutectic melt, camphor crystals, chloralhydrate crystals**
- b. Eutectic melt
- c. Eutectic melt, chloralhydrate crystals
- d. Eutectic melt, camphor crystals
- e. Camphor crystals, chloralhydrate crystals

1758. In dental practice liquid dosage forms that contain camphor and chloralhydrate are used. What phases are in equilibrium in the eutectic point of fusibility curve of the camphor-chloralhydrate mixture?

- a. Eutectic melt
- b. Eutectic melt, chloralhydrate crystals
- c. Eutectic melt, camphor crystals
- d. Eutectic melt, camphor crystals, chloralhydrate crystals**
- e. Camphor crystals, chloralhydrate crystals

1759. In dental practice liquid dosage forms that contain camphor and chloralhydrate are used. What phases are in equilibrium in the eutectic point of fusibility curve of the camphor-chloralhydrate mixture?

- a. Eutectic melt, camphor crystals
- b. Eutectic melt, camphor crystals, chloralhydrate crystals**
- c. Eutectic melt
- d. Camphor crystals, chloralhydrate crystals
- e. Eutectic melt, chloralhydrate crystals

1760. In gas-liquid chromatography the substances being analyzed are entered into the stream of a carrier gas. This gas must meet the following condition:

- a. Affinity for the stationary phase
- b. High molecular weight
- c. High thermal conductivity
- d. Inert to the stationary phase and the substances being analyzed**
- e. Rate of movement through the column

1761. In gas-liquid chromatography the substances being analyzed are entered into the stream of a carrier gas. This gas must meet the following condition:

- a. Rate of movement through the column
- b. High thermal conductivity
- c. Inert to the stationary phase and the substances being analyzed**
- d. High molecular weight
- e. Affinity for the stationary phase

1762. In gas-liquid chromatography the substances being analyzed are entered into the stream of a

carrier gas. This gas must meet the following condition:

- a. Rate of movement through the column
- b. High thermal conductivity
- c. Affinity for the stationary phase
- d. High molecular weight

e. Inert to the stationary phase and the substances being analyzed

1763. In hot weather on the leaf tips of *Tilia cordata* and on the crenations along its leaf edges, drops of liquid are released through the water stomata. Name the structures located on the plant leaves, through which liquid water can be passively released:

a. Hydathodes

- b. Osmophores
- c. Nectaries
- d. Glandules
- e. Hydropotes

1764. In hot weather on the leaf tips of *Tilia cordata* and on the crenations along its leaf edges, drops of liquid are released through the water stomata. Name the structures located on the plant leaves, through which liquid water can be passively released:

- a. Hydropotes
- b. Nectaries
- c. Osmophores

d. Hydathodes

e. Glandules

1765. In hot weather on the leaf tips of *Tilia cordata* and on the crenations along its leaf edges, drops of liquid are released through the water stomata. Name the structures located on the plant leaves, through which liquid water can be passively released:

- a. Hydropotes
- b. Osmophores
- c. Glandules
- d. Nectaries

e. Hydathodes

1766. In human body, thyroxine is an important thyroid hormone. What microelement is necessary to synthesize this hormone?

a. Iodine

- b. Potassium
- c. Copper
- d. Iron
- e. Calcium

1767. In human body, thyroxine is an important thyroid hormone. What microelement is necessary to synthesize this hormone?

- a. Calcium
- b. Iron
- c. Potassium
- d. Copper

e. Iodine

1768. In human body, thyroxine is an important thyroid hormone. What microelement is necessary to synthesize this hormone?

- a. Iron
- b. Copper

c. Iodine

- d. Potassium
- e. Calcium

1769. In hypoxia, lactic acid accumulates in the blood. Name the end product of anaerobic glycolysis.

- a. Malate
- b. CO₂ and H₂O

c. Lactate

- d. Oxaloacetate
- e. Alanine

1770. In hypoxia, lactic acid accumulates in the blood. Name the end product of anaerobic glycolysis.

- a. Malate
- b. CO₂ and H₂O
- c. Alanine
- d. Oxaloacetate

e. Lactate

1771. In hypoxia, lactic acid accumulates in the blood. Name the end product of anaerobic glycolysis.

- a. CO₂ and H₂O

b. Lactate

- c. Malate
- d. Alanine
- e. Oxaloacetate

1772. In iodometry, titrimetric quantitative analysis is used to measure the amount of iodine utilized for the oxidation of a reducing agent or released as a result of iodide oxidation. What salt is used to make an iodide solution for iodometry?

a. Potassium iodide

- b. Lithium iodide
- c. Magnesium iodide
- d. Sodium iodide
- e. Calcium iodide

1773. In iodometry, titrimetric quantitative analysis is used to measure the amount of iodine utilized for the oxidation of a reducing agent or released as a result of iodide oxidation. What salt is used to make an iodide solution for iodometry?

- a. Calcium iodide
- b. Lithium iodide
- c. Sodium iodide

d. Potassium iodide

- e. Magnesium iodide

1774. In iodometry, titrimetric quantitative analysis is used to measure the amount of iodine utilized for the oxidation of a reducing agent or released as a result of iodide oxidation. What salt is used to make an iodide solution for iodometry?

- a. Magnesium iodide

b. Potassium iodide

- c. Sodium iodide
- d. Lithium iodide
- e. Calcium iodide

1775. In medical and pharmaceutical practice the phenomena of adsorption, wetting, and adhesion are regularly observed. Name this group of phenomena:

- a. Electrokinetic phenomena

b. Surface phenomena

- c. Optical phenomena
- d. Molecular-kinetic phenomena
- e. Physico-chemical phenomena

1776. In medical and pharmaceutical practice the phenomena of adsorption, wetting, and adhesion are regularly observed. Name this group of phenomena:

- a. Physico-chemical phenomena
- b. Molecular-kinetic phenomena
- c. Electrokinetic phenomena
- d. Optical phenomena

e. Surface phenomena

1777. In medical and pharmaceutical practice the phenomena of adsorption, wetting, and adhesion are regularly observed. Name this group of phenomena:

- a. Physico-chemical phenomena

- b. Optical phenomena
- c. Electrokinetic phenomena
- d. Molecular-kinetic phenomena

e. Surface phenomena

1778. In medicine, various dosage forms are used: emulsions, foams, powders, etc. that can be classified as disperse systems. What determines the dispersion in such systems?

a. The degree of the dispersed material comminution

- b. The volume of the continuous medium
- c. The mass of the comminuted substance
- d. The nature of the dispersed material
- e. The shape of the particles

1779. In medicine, various dosage forms are used: emulsions, foams, powders, etc. that can be classified as disperse systems. What determines the dispersion in such systems?

a. The nature of the dispersed material

b. The degree of the dispersed material comminution

- c. The shape of the particles
- d. The volume of the continuous medium
- e. The mass of the comminuted substance

1780. In medicine, various dosage forms are used: emulsions, foams, powders, etc. that can be classified as disperse systems. What determines the dispersion in such systems?

- a. The shape of the particles
- b. The volume of the continuous medium
- c. The nature of the dispersed material
- d. The mass of the comminuted substance

e. The degree of the dispersed material comminution

1781. In microbiology class students have been growing pure bacterial culture. Bacterial inoculation of solid medium was performed to obtain separate visible colonies, resulting in two colonies, R-type and S-type, grown in thermostat after one day of incubation. What properties of microorganisms were described by students?

a. Cultural

- b. Antigenic
- c. Tinctorial
- d. Biochemical
- e. Morphologic

1782. In microbiology class students have been growing pure bacterial culture. Bacterial inoculation of solid medium was performed to obtain separate visible colonies, resulting in two colonies, R-type and S-type, grown in thermostat after one day of incubation. What properties of microorganisms were described by students?

a. Biochemical

b. Cultural

- c. Tinctorial
- d. Antigenic
- e. Morphologic

1783. In microbiology class students have been growing pure bacterial culture. Bacterial inoculation of solid medium was performed to obtain separate visible colonies, resulting in two colonies, R-type and S-type, grown in thermostat after one day of incubation. What properties of microorganisms were described by students?

- a. Morphologic
- b. Antigenic
- c. Tinctorial

d. Cultural

e. Biochemical

1784. In microbiology, the Gram method is the main method for bacteria differentiation by means of staining. In this method, bacteria differentiation into Gram-positive and Gram-negative ones is based on their:

- a. Cell size
- b. Chemical composition of the capsule

c. Cell wall structure

- d. Presence of ribosomes
- e. Cytoplasmic membrane structure

1785. In microbiology, the Gram method is the main method for bacteria differentiation by means of staining. In this method, bacteria differentiation into Gram-positive and Gram-negative ones is based on their:

- a. Cytoplasmic membrane structure
- b. Chemical composition of the capsule
- c. Cell size

d. Cell wall structure

- e. Presence of ribosomes

1786. In microbiology, the Gram method is the main method for bacteria differentiation by means of staining. In this method, bacteria differentiation into Gram-positive and Gram-negative ones is based on their:

- a. Presence of ribosomes
- b. Cell size
- c. Chemical composition of the capsule

d. Cell wall structure

- e. Cytoplasmic membrane structure

1787. In nitritometry, titrant is a 0.1 M solution of sodium nitrite that is prepared as a secondary standard solution. What acid is used to determine the exact concentration of sodium nitrite?

a. Sulfanilic

- b. Acetic
- c. Sulfuric
- d. Oxalic
- e. Hydrochloric

1788. In nitritometry, titrant is a 0.1 M solution of sodium nitrite that is prepared as a secondary standard solution. What acid is used to determine the exact concentration of sodium nitrite?

a. Sulfanilic

- b. Hydrochloric
- c. Acetic
- d. Sulfuric
- e. Oxalic

1789. In nitritometry, titrant is a 0.1 M solution of sodium nitrite that is prepared as a secondary standard solution. What acid is used to determine the exact concentration of sodium nitrite?

a. Sulfanilic

- b. Oxalic
- c. Hydrochloric
- d. Acetic
- e. Sulfuric

1790. In order to bind hydrogen ions with tartaric acid during identification of potassium ions the following solution is used:

a. Sodium acetate

- b. Hydrochloric acid
- c. Sodium hydroxide
- d. Sulfuric acid
- e. Ammonia

1791. In order to bind hydrogen ions with tartaric acid during identification of potassium ions the following solution is used:

- a. Hydrochloric acid
- b. Sodium hydroxide
- c. Sulfuric acid
- d. Ammonia

e. Sodium acetate

1792. In order to bind hydrogen ions with tartaric acid during identification of potassium ions the following solution is used:

- a. Sodium hydroxide
- b. Hydrochloric acid
- c. Sulfuric acid

d. Sodium acetate

e. Ammonia

1793. In order to identify the cations of zinc (II) an analytical chemist used the reagent solution of hexacyanoferrate (II) potassium (Pharmacopeia reaction). What colour would the precipitate have in this reaction?

a. White

- b. Yellow
- c. Black
- d. Red
- e. Green

1794. In order to identify the cations of zinc (II) an analytical chemist used the reagent solution of hexacyanoferrate (II) potassium (Pharmacopeia reaction). What colour would the precipitate have in this reaction?

- a. Green
- b. Red
- c. Yellow
- d. Black

e. White

1795. In order to identify the cations of zinc (II) an analytical chemist used the reagent solution of hexacyanoferrate (II) potassium (Pharmacopeia reaction). What colour would the precipitate have in this reaction?

- a. Green
- b. Yellow
- c. Red

d. White

e. Black

1796. In permanganatometry, KMnO_4 is used as a titrant. What is the equivalence factor of this compound, if the titration is performed in an acidic medium?

a. 1/5

- b. 1/4
- c. 1/3
- d. 1/2
- e. 1

1797. In permanganatometry, KMnO_4 is used as a titrant. What is the equivalence factor of this compound, if the titration is performed in an acidic medium?

a. 1/4

b. 1/5

- c. 1/3
- d. 1
- e. 1/2

1798. In permanganatometry, KMnO_4 is used as a titrant. What is the equivalence factor of this compound, if the titration is performed in an acidic medium?

- a. 1/4
- b. 1/3
- c. 1

d. 1/5

e. 1/2

1799. In pharmaceutical production the oxyethylated derivatives of fatty acid esters (FAEs) are used, which undergo colloid dissolution in sufficiently concentrated solutions. This process is called:

- a. Syneresis
- b. Colloid protection
- c. Synergism

d. Solubilization

- e. Sensitization

1800. In pharmaceutical production the oxyethylated derivatives of fatty acid esters (FAEs) are used, which undergo colloid dissolution in sufficiently concentrated solutions. This process is called:

- a. Syneresis
- b. Colloid protection
- c. Synergism
- d. Sensitization

e. Solubilization

1801. In pharmaceutical production the oxyethylated derivatives of fatty acid esters (FAEs) are used, which undergo colloid dissolution in sufficiently concentrated solutions. This process is called:

- a. Syneresis
- b. Synergism
- c. Sensitization

d. Solubilization

- e. Colloid protection

1802. In pharmaceutical technology, analysis of the phase diagram of systems is of practical importance. What type of equilibrium is characterized by the figurative point on the phase diagram of water?

a. One-component, three-phase, non-variant

- b. One-component, two-phase, non-variant
- c. Two-component, one-phase, one-variant
- d. One-component, one-phase, non-variant
- e. Two-component, two-phase, one-variant

1803. In pharmaceutical technology, analysis of the phase diagram of systems is of practical importance. What type of equilibrium is characterized by the figurative point on the phase diagram of water?

- a. One-component, one-phase, non-variant
- b. One-component, two-phase, non-variant
- c. Two-component, two-phase, one-variant

d. One-component, three-phase, non-variant

- e. Two-component, one-phase, one-variant

1804. In pharmaceutical technology, analysis of the phase diagram of systems is of practical importance. What type of equilibrium is characterized by the figurative point on the phase diagram of water?

- a. One-component, one-phase, non-variant
- b. Two-component, one-phase, one-variant
- c. One-component, two-phase, non-variant

d. One-component, three-phase, non-variant

- e. Two-component, two-phase, one-variant

1805. In pharmacy, extraction is used to extract bioactive substances from herbal raw materials. What law underlies this process?

a. Distribution law

- b. Law of mass action
- c. Konovalov's law
- d. Ostwald's law
- e. Poiseulle's law

1806. In pharmacy, extraction is used to extract bioactive substances from herbal raw materials. What law underlies this process?

- a. Law of mass action

b. Distribution law

- c. Poiseulle's law

d. Konovalov's law

e. Ostwald's law

1807. In pharmacy, extraction is used to extract bioactive substances from herbal raw materials.

What law underlies this process?

a. Poiseulle's law

b. Distribution law

c. Ostwald's law

d. Konovalov's law

e. Law of mass action

1808. In pine wood, essential oils accumulate in the passages that inside are lined with a layer of secretory cells. Name these structures:

a. Schizogenous cavities

b. Non-articulated laticifers

c. Articulated laticifers

d. Glandules

e. Lysigenous cavities

1809. In pine wood, essential oils accumulate in the passages that inside are lined with a layer of secretory cells. Name these structures:

a. Glandules

b. Lysigenous cavities

c. Schizogenous cavities

d. Non-articulated laticifers

e. Articulated laticifers

1810. In pine wood, essential oils accumulate in the passages that inside are lined with a layer of secretory cells. Name these structures:

a. Non-articulated laticifers

b. Articulated laticifers

c. Schizogenous cavities

d. Glandules

e. Lysigenous cavities

1811. In potentiometric titration the following indicator electrode is used for chloride and borate acids quantitative determination in their mixture:

a. Calomel

b. Silver

c. Glass

d. Platinum

e. Silver-chlorine

1812. In potentiometric titration the following indicator electrode is used for chloride and borate acids quantitative determination in their mixture:

a. Platinum

b. Calomel

c. Silver

d. Glass

e. Silver-chlorine

1813. In potentiometric titration the following indicator electrode is used for chloride and borate acids quantitative determination in their mixture:

a. Silver-chlorine

b. Platinum

c. Calomel

d. Glass

e. Silver

1814. In practical classes the group of students have to explore the chemical structure of glucose molecule. Which of the following suits most for simultaneous detection of aldehyde group and glycol fragment in previously mentioned molecule?

a. Cu(OH)₂

- b. Br₂
- c. AlCl₃
- d. FeCl₃
- e. KMnO₄

1815. In practical classes the group of students have to explore the chemical structure of glucose molecule. Which of the following suits most for simultaneous detection of aldehyde group and glycol fragment in previously mentioned molecule?

- a. FeCl₃
- b. Cu(OH)₂**
- c. KMnO₄
- d. Br₂
- e. AlCl₃

1816. In practical classes the group of students have to explore the chemical structure of glucose molecule. Which of the following suits most for simultaneous detection of aldehyde group and glycol fragment in previously mentioned molecule?

- a. KMnO₄
- b. Cu(OH)₂**
- c. Br₂
- d. FeCl₃
- e. AlCl₃

1817. In qualitative analysis, a reaction with an iodine solution is used to detect arsenite ions. What is used to create the medium for this purpose?

- a. Acetic acid solution
- b. Nitric acid solution
- c. Saturated solution of sodium hydrogencarbonate**
- d. Sulfuric acid solution
- e. Ammonia solution

1818. In qualitative analysis, a reaction with an iodine solution is used to detect arsenite ions. What is used to create the medium for this purpose?

- a. Ammonia solution
- b. Saturated solution of sodium hydrogencarbonate**
- c. Acetic acid solution
- d. Sulfuric acid solution
- e. Nitric acid solution

1819. In qualitative analysis, a reaction with an iodine solution is used to detect arsenite ions. What is used to create the medium for this purpose?

- a. Nitric acid solution
- b. Ammonia solution
- c. Acetic acid solution
- d. Saturated solution of sodium hydrogencarbonate**
- e. Sulfuric acid solution

1820. In recent decades, the etiological role of viruses in the occurrence of cervical cancer has been proven. Name these viruses.

- a. Adenoviruses
- b. Human papillomaviruses**
- c. Herpes simplex virus type 2
- d. HTLV-1 and HTLV-2
- e. Cytomegalovirus

1821. In recent decades, the etiological role of viruses in the occurrence of cervical cancer has been proven. Name these viruses.

- a. Cytomegalovirus
- b. Human papillomaviruses**
- c. HTLV-1 and HTLV-2
- d. Herpes simplex virus type 2
- e. Adenoviruses

1822. In recent decades, the etiological role of viruses in the occurrence of cervical cancer has been proven. Name these viruses.

- a. HTLV-1 and HTLV-2
- b. Adenoviruses
- c. Cytomegalovirus
- d. Human papillomaviruses**
- e. Herpes simplex virus type 2

1823. In spring a perennial plant of Asteraceae family produces floral shoots with golden-yellow flowers. After blossom-fall, shoots with large leaves appear. Name this plant:

- a. Datura stramonium
- b. Potentilla erecta
- c. Petroselinum crispum
- d. Hypericum perforatum
- e. Tussilago farfara**

1824. In spring a perennial plant of Asteraceae family produces floral shoots with golden-yellow flowers. After blossom-fall, shoots with large leaves appear. Name this plant:

- a. Petroselinum crispum
- b. Tussilago farfara**
- c. Datura stramonium
- d. Potentilla erecta
- e. Hypericum perforatum

1825. In spring a perennial plant of Asteraceae family produces floral shoots with golden-yellow flowers. After blossom-fall, shoots with large leaves appear. Name this plant:

- a. Potentilla erecta
- b. Datura stramonium
- c. Tussilago farfara**
- d. Petroselinum crispum
- e. Hypericum perforatum

1826. In the age of 5 months the child had measles antibodies in the blood. By the age of 1 year these antibodies disappeared from the child's blood. Why were these antibodies present in the child's blood?

- a. Acquired natural passive immunity**
- b. Innate immunity
- c. Artificial immunity
- d. Acquired natural active immunity
- e. Non-specific resistance

1827. In the age of 5 months the child had measles antibodies in the blood. By the age of 1 year these antibodies disappeared from the child's blood. Why were these antibodies present in the child's blood?

- a. Acquired natural active immunity
- b. Non-specific resistance
- c. Innate immunity
- d. Artificial immunity
- e. Acquired natural passive immunity**

1828. In the age of 5 months the child had measles antibodies in the blood. By the age of 1 year these antibodies disappeared from the child's blood. Why were these antibodies present in the child's blood?

- a. Innate immunity
- b. Non-specific resistance
- c. Acquired natural active immunity
- d. Artificial immunity
- e. Acquired natural passive immunity**

1829. In the course of bronchitis pharmacotherapy a patient has developed dyspeptic disorders, photodermatitis and hepatic failure. What drug can cause such disorders?

- a. Acetylcysteine

b. Paracetamol

c. Doxycycline

d. Codeine phosphate

e. Ascorbic acid

1830. In the course of bronchitis pharmacotherapy a patient has developed dyspeptic disorders, photodermatitis and hepatic failure. What drug can cause such disorders?

a. Codeine phosphate

b. Paracetamol

c. Acetylcysteine

d. Doxycycline

e. Ascorbic acid

1831. In the course of bronchitis pharmacotherapy a patient has developed dyspeptic disorders, photodermatitis and hepatic failure. What drug can cause such disorders?

a. Paracetamol

b. Acetylcysteine

c. Ascorbic acid

d. Codeine phosphate

e. Doxycycline

1832. In the dentist's office, a patient developed asphyxia caused by aspiration of a small instrument. What type of respiratory failure is observed in this case?

a. Obstructive

b. Dysregulatory

c. Restrictive

d. Diffusion

e. Perfusion

1833. In the dentist's office, a patient developed asphyxia caused by aspiration of a small instrument. What type of respiratory failure is observed in this case?

a. Diffusion

b. Dysregulatory

c. Perfusion

d. Obstructive

e. Restrictive

1834. In the dentist's office, a patient developed asphyxia caused by aspiration of a small instrument. What type of respiratory failure is observed in this case?

a. Diffusion

b. Perfusion

c. Dysregulatory

d. Restrictive

e. Obstructive

1835. In the drug manufacture it is necessary to follow a complex of measures aimed at prevention of their microbial contamination. What is the name of this complex of measures?

a. Deratisation

b. Asepsis

c. Antisepsis

d. Disinfection

e. Sterilization

1836. In the drug manufacture it is necessary to follow a complex of measures aimed at prevention of their microbial contamination. What is the name of this complex of measures?

a. Deratisation

b. Asepsis

c. Sterilization

d. Antisepsis

e. Disinfection

1837. In the drug manufacture it is necessary to follow a complex of measures aimed at prevention of their microbial contamination. What is the name of this complex of measures?

- a. Deratisation
- b. Antisepsis
- c. Sterilization

d. Asepsis

- e. Disinfection

1838. In the epidemiology of certain diseases, a great attention must be paid to fleas as disease carriers. Particularly, the fleas play a major role in the spread of:

- a. Anthrax

b. Plague

- c. Typhus
- d. Relapsing fever
- e. Leptospirosis

1839. In the epidemiology of certain diseases, a great attention must be paid to fleas as disease carriers. Particularly, the fleas play a major role in the spread of:

- a. Anthrax
- b. Typhus
- c. Leptospirosis

d. Plague

- e. Relapsing fever

1840. In the epidemiology of certain diseases, a great attention must be paid to fleas as disease carriers. Particularly, the fleas play a major role in the spread of:

- a. Relapsing fever

b. Plague

- c. Leptospirosis
- d. Anthrax
- e. Typhus

1841. In the patient's blood plasma there are high levels of low-density and very low-density lipoproteins. These changes can indicate the following pathology:

a. Atherosclerosis

- b. Jaundice
- c. Leukaemia
- d. Arthrosis
- e. Gout

1842. In the patient's blood plasma there are high levels of low-density and very low-density lipoproteins. These changes can indicate the following pathology:

- a. Gout

b. Atherosclerosis

- c. Arthrosis
- d. Jaundice
- e. Leukaemia

1843. In the patient's blood plasma there are high levels of low-density and very low-density lipoproteins. These changes can indicate the following pathology:

- a. Gout

b. Atherosclerosis

- c. Leukaemia
- d. Jaundice
- e. Arthrosis

1844. In the patient's blood, increased activity of AST, LDH1, LDH2, and CPK was detected. In what organ is a pathological process possible in this case?

a. Heart muscle

- b. Skeletal muscles
- c. Kidneys
- d. Adrenal glands
- e. Liver

1845. In the patient's blood, increased activity of AST, LDH1, LDH2, and CPK was detected. In what

organ is a pathological process possible in this case?

- a. Adrenal glands
- b. Kidneys
- c. Skeletal muscles
- d. Heart muscle**
- e. Liver

1846. In the patient's blood, increased activity of AST, LDH1, LDH2, and CPK was detected. In what organ is a pathological process possible in this case?

- a. Skeletal muscles
- b. Adrenal glands
- c. Kidneys
- d. Heart muscle**
- e. Liver

1847. In the postoperative period, the patient was receiving an antibiotic. Over time, the patient started complaining of impaired hearing and vestibular disorders. What group of antibiotics has such side effects?

- a. Aminoglycosides**
- b. Tetracyclines
- c. Macrolides
- d. Penicillins
- e. Cephalosporins

1848. In the postoperative period, the patient was receiving an antibiotic. Over time, the patient started complaining of impaired hearing and vestibular disorders. What group of antibiotics has such side effects?

- a. Macrolides
- b. Tetracyclines
- c. Cephalosporins
- d. Aminoglycosides**
- e. Penicillins

1849. In the postoperative period, the patient was receiving an antibiotic. Over time, the patient started complaining of impaired hearing and vestibular disorders. What group of antibiotics has such side effects?

- a. Penicillins
- b. Cephalosporins
- c. Tetracyclines
- d. Aminoglycosides**
- e. Macrolides

1850. In the practice of harvesting herbal raw material of Asteraceae family the term "flowers" means both individual flowers and inflorescences. However, the notion of "flowers" is botanically correct only for:

- a. Centaurea cyanus**
- b. Echinops ritro
- c. Gnaphalium uliginosum
- d. Arnica montana
- e. Bidens tripartita

1851. In the practice of harvesting herbal raw material of Asteraceae family the term "flowers" means both individual flowers and inflorescences. However, the notion of "flowers" is botanically correct only for:

- a. Bidens tripartita
- b. Gnaphalium uliginosum
- c. Echinops ritro
- d. Centaurea cyanus**
- e. Arnica montana

1852. In the practice of harvesting herbal raw material of Asteraceae family the term "flowers" means both individual flowers and inflorescences. However, the notion of "flowers" is botanically correct only

for:

- a. Echinops ritro
- b. Centaurea cyanus**
- c. Bidens tripartita
- d. Gnaphalium uliginosum
- e. Arnica montana

1853. In the process of breathing oxygen joins with hemoglobin in lungs and makes up oxyhemoglobin as a result, which leads to release of protons from hemoglobin and production of carbonic acid. What enzyme catalyzes further transformation of carbonic acid into carbon dioxide that is exhaled from lungs?

- a. Carbonic anhydrase**
- b. Pyruvate kinase
- c. Heme oxygenase (haem oxygenase)
- d. Lipase
- e. Catalase

1854. In the process of breathing oxygen joins with hemoglobin in lungs and makes up oxyhemoglobin as a result, which leads to release of protons from hemoglobin and production of carbonic acid. What enzyme catalyzes further transformation of carbonic acid into carbon dioxide that is exhaled from lungs?

- a. Carbonic anhydrase**
- b. Pyruvate kinase
- c. Lipase
- d. Heme oxygenase (haem oxygenase)
- e. Catalase

1855. In the process of breathing oxygen joins with hemoglobin in lungs and makes up oxyhemoglobin as a result, which leads to release of protons from hemoglobin and production of carbonic acid. What enzyme catalyzes further transformation of carbonic acid into carbon dioxide that is exhaled from lungs?

- a. Heme oxygenase (haem oxygenase)
- b. Carbonic anhydrase**
- c. Pyruvate kinase
- d. Catalase
- e. Lipase

1856. In the process of coagulation by mixtures of different electrolytes, they seem to counteract each other's effect. Name this phenomenon:

- a. Antagonism**
- b. Sedimentation
- c. Synergism
- d. Mutual coagulation
- e. Additivity

1857. In the process of coagulation by mixtures of different electrolytes, they seem to counteract each other's effect. Name this phenomenon:

- a. Mutual coagulation
- b. Antagonism**
- c. Sedimentation
- d. Synergism
- e. Additivity

1858. In the process of coagulation by mixtures of different electrolytes, they seem to counteract each other's effect. Name this phenomenon:

- a. Mutual coagulation
- b. Sedimentation
- c. Antagonism**
- d. Additivity
- e. Synergism

1859. In the process of conductometric titration of HCl and CH₃COOH acids mixture 0,1 M solution of

NaOH is used to measure:

a. Electrical conduction in solution

b. pH of medium

c. Rotation angle of polarized light plane

d. Potential difference

e. Refractive index

1860. In the process of conductometric titration of HCl and CH₃COOH acids mixture 0,1 M solution of NaOH is used to measure:

a. Electrical conduction in solution

b. pH of medium

c. Rotation angle of polarized light plane

d. Refractive index

e. Potential difference

1861. In the process of conductometric titration of HCl and CH₃COOH acids mixture 0,1 M solution of NaOH is used to measure:

a. pH of medium

b. Electrical conduction in solution

c. Rotation angle of polarized light plane

d. Refractive index

e. Potential difference

1862. In the process of manufacturing live vaccines, the biofactories dry the bacteria and viruses in vacuum at low temperatures, to ensure stability and long shelf-life of the vaccines. Name this method:

a. Photoreactivation

b. Tyndalization

c. Sublimation

d. Sterilization

e. Lyophilization

1863. In the process of manufacturing live vaccines, the biofactories dry the bacteria and viruses in vacuum at low temperatures, to ensure stability and long shelf-life of the vaccines. Name this method:

a. Sterilization

b. Sublimation

c. Tyndalization

d. Lyophilization

e. Photoreactivation

1864. In the process of manufacturing live vaccines, the biofactories dry the bacteria and viruses in vacuum at low temperatures, to ensure stability and long shelf-life of the vaccines. Name this method:

a. Sublimation

b. Photoreactivation

c. Sterilization

d. Tyndalization

e. Lyophilization

1865. In the process of silver cations identification reaction HCl and then ammonia solution have been added to the solution. What compound has been produced as a result?

a. [Ag₂(NH₃)₃]Cl

b. AgCl

c. [Ag(NH₃)₃]Cl

d. [Ag(NH₃)₂]Cl

e. AgOH

1866. In the process of silver cations identification reaction HCl and then ammonia solution have been added to the solution. What compound has been produced as a result?

a. [Ag₂(NH₃)₃]Cl

b. [Ag(NH₃)₃]Cl

- c. AgCl
- d. AgOH

e. $[\text{Ag}(\text{NH}_3)_2]\text{Cl}$

1867. In the process of silver cations identification reaction HCl and then ammonia solution have been added to the solution. What compound has been produced as a result?

- a. $[\text{Ag}_2(\text{NH}_3)_3]\text{Cl}$
- b. $[\text{Ag}(\text{NH}_3)_3]\text{Cl}$
- c. AgOH
- d. AgCl

e. $[\text{Ag}(\text{NH}_3)_2]\text{Cl}$

1868. In the process of systematic analysis of a cation mixture, iron(III) cations can be determined using the fractional method. What reagent is used for this purpose?

a. Potassium hexacyanoferrate(II)

- b. Sodium dihydrogen phosphate
- c. Potassium chloride
- d. Hydrochloric acid
- e. Nitric acid

1869. In the process of systematic analysis of a cation mixture, iron(III) cations can be determined using the fractional method. What reagent is used for this purpose?

- a. Potassium chloride
- b. Hydrochloric acid
- c. Sodium dihydrogen phosphate

d. Potassium hexacyanoferrate(II)

e. Nitric acid

1870. In the process of systematic analysis of a cation mixture, iron(III) cations can be determined using the fractional method. What reagent is used for this purpose?

- a. Sodium dihydrogen phosphate
- b. Potassium chloride
- c. Nitric acid

d. Potassium hexacyanoferrate(II)

e. Hydrochloric acid

1871. In the process of systematic analysis there is a need to separate PbSO_4 from mixture of the 3rd analytical group cation sulphates. Which of the following suits most towards this end?

- a. Processing precipitate with acetate acid solution
- b. Processing precipitate with 30% ammonium acetate solution

- c. Processing precipitate with ammonia solution
- d. Precipitate recrystallization
- e. Processing precipitate with concentrated sulfate acid

1872. In the process of systematic analysis there is a need to separate PbSO_4 from mixture of the 3rd analytical group cation sulphates. Which of the following suits most towards this end?

- a. Processing precipitate with acetate acid solution
- b. Precipitate recrystallization
- c. Processing precipitate with concentrated sulfate acid
- d. Processing precipitate with ammonia solution

e. Processing precipitate with 30% ammonium acetate solution

1873. In the process of systematic analysis there is a need to separate PbSO_4 from mixture of the 3rd analytical group cation sulphates. Which of the following suits most towards this end?

- a. Processing precipitate with concentrated sulfate acid
- b. Precipitate recrystallization
- c. Processing precipitate with ammonia solution
- d. Processing precipitate with acetate acid solution

e. Processing precipitate with 30% ammonium acetate solution

1874. In the qualitative analysis which involves precipitation of sulphates of the third analytical group cations (Ca^{2+} , Sr^{2+} , Ba^{2+}) the solubility of sulphates can be reduced by adding:

a. Ethyl alcohol

- b. Chloroform
- c. Amyl alcohol
- d. Benzene
- e. Distilled water

1875. In the qualitative analysis which involves precipitation of sulphates of the third analytical group cations (Ca^{2+} , Sr^{2+} , Ba^{2+}) the solubility of sulphates can be reduced by adding:

- a. Benzene
- b. Distilled water
- c. Ethyl alcohol**
- d. Chloroform
- e. Amyl alcohol

1876. In the qualitative analysis which involves precipitation of sulphates of the third analytical group cations (Ca^{2+} , Sr^{2+} , Ba^{2+}) the solubility of sulphates can be reduced by adding:

- a. Chloroform
- b. Ethyl alcohol**
- c. Distilled water
- d. Benzene
- e. Amyl alcohol

1877. In what taxonomic division is the gametophyte predominant over the sporophyte during the plant's life cycle?

- a. Lycopodiophyta
- b. Magnoliophyta
- c. Polypodiophyta
- d. Pynophyta

e. Bryophyta

1878. In what taxonomic division is the gametophyte predominant over the sporophyte during the plant's life cycle?

- a. Magnoliophyta
- b. Pynophyta

c. Bryophyta

- d. Lycopodiophyta
- e. Polypodiophyta

1879. In what taxonomic division is the gametophyte predominant over the sporophyte during the plant's life cycle?

- a. Magnoliophyta
- b. Pynophyta

c. Bryophyta

- d. Polypodiophyta
- e. Lycopodiophyta

1880. Increased concentration of active oxygen forms is a mechanism of pathogenesis in a number of diseases. To prevent this process, antioxidants are prescribed. Select an antioxidant from the list below:

- a. Calciferol
- b. Cobalamine
- c. alpha-tocopherol**
- d. Glicerol
- e. Glucose

1881. Increased concentration of active oxygen forms is a mechanism of pathogenesis in a number of diseases. To prevent this process, antioxidants are prescribed. Select an antioxidant from the list below:

- a. Calciferol
- b. Glucose
- c. Glicerol
- d. alpha-tocopherol**
- e. Cobalamine

1882. Increased concentration of active oxygen forms is a mechanism of pathogenesis in a number of diseases. To prevent this process, antioxidants are prescribed. Select an antioxidant from the list below:

- a. Cobalamine
- b. Glicerol
- c. Calciferol
- d. Glucose

e. alpha-tocopherol

1883. Indicator microorganisms are being analyzed in the process of sanitary microbiological assessment of the environment, food, water, and commodities. Quantitative indicators of pollution are being measured, as well as the presence of certain microbial species. What value characterizes total microbial contamination in 1 gram of a solid substance or in 1 milliliter of a liquid?

a. Microbial count

- b. Perfringens titer
- c. Coli index
- d. Perfringens index
- e. Coli titer

1884. Indicator microorganisms are being analyzed in the process of sanitary microbiological assessment of the environment, food, water, and commodities. Quantitative indicators of pollution are being measured, as well as the presence of certain microbial species. What value characterizes total microbial contamination in 1 gram of a solid substance or in 1 milliliter of a liquid?

a. Coli titer

b. Microbial count

- c. Perfringens index
- d. Perfringens titer
- e. Coli index

1885. Indicator microorganisms are being analyzed in the process of sanitary microbiological assessment of the environment, food, water, and commodities. Quantitative indicators of pollution are being measured, as well as the presence of certain microbial species. What value characterizes total microbial contamination in 1 gram of a solid substance or in 1 milliliter of a liquid?

- a. Coli titer
- b. Coli index
- c. Perfringens index
- d. Perfringens titer

e. Microbial count

1886. Inheritable genetic disorders can result in disturbed enzyme synthesis in the human body. What enzyme deficiency results in disturbed break-up of lactose:

- a. Lipase
- b. Maltase

c. Lactase

- d. Peptidase
- e. Invertase

1887. Inheritable genetic disorders can result in disturbed enzyme synthesis in the human body. What enzyme deficiency results in disturbed break-up of lactose:

a. Peptidase

b. Lactase

- c. Maltase
- d. Invertase
- e. Lipase

1888. Inheritable genetic disorders can result in disturbed enzyme synthesis in the human body. What enzyme deficiency results in disturbed break-up of lactose:

- a. Peptidase
- b. Lipase
- c. Maltase
- d. Invertase

e. Lactase

1889. Inhibitors of a certain enzyme from amines metabolism are used to treat depression. What enzyme is inhibited to achieve this effect?

- a. Formylkynureninase (Arylformamidase)
- b. Acetylcholinesterase

c. Monoamine oxidase with flavine adenine dinucleotide

- d. Kynurenine-3-hydroxylase
- e. Lactate dehydrogenase

1890. Inhibitors of a certain enzyme from amines metabolism are used to treat depression. What enzyme is inhibited to achieve this effect?

- a. Kynurenine-3-hydroxylase
- b. Monoamine oxidase with flavine adenine dinucleotide**
- c. Formylkynureninase (Arylformamidase)
- d. Acetylcholinesterase
- e. Lactate dehydrogenase

1891. Inhibitors of a certain enzyme from amines metabolism are used to treat depression. What enzyme is inhibited to achieve this effect?

- a. Lactate dehydrogenase
- b. Formylkynureninase (Arylformamidase)
- c. Kynurenine-3-hydroxylase
- d. Monoamine oxidase with flavine adenine dinucleotide**
- e. Acetylcholinesterase

1892. Insulin production in beta-cells involves many substances. What substance gives the main signal for insulin synthesis when its concentration changes?

- a. Hemoglobin
- b. Urea
- c. Heparin

d. Glucose

- e. Carbon dioxide

1893. Insulin production in beta-cells involves many substances. What substance gives the main signal for insulin synthesis when its concentration changes?

- a. Heparin
- b. Hemoglobin
- c. Urea

d. Glucose

- e. Carbon dioxide

1894. Insulin production in beta-cells involves many substances. What substance gives the main signal for insulin synthesis when its concentration changes?

- a. Urea

b. Glucose

- c. Heparin
- d. Carbon dioxide
- e. Hemoglobin

1895. Integumentary tissue of roots consists of cells with thin cellulose mebranes and protuberances - root hairs. This tissue is:

- a. Periderm
- b. Phelloderm
- c. Plerome

d. Epiblema

- e. Periblem

1896. Integumentary tissue of roots consists of cells with thin cellulose mebranes and protuberances - root hairs. This tissue is:

- a. Periderm
- b. Plerome
- c. Periblem

d. Phelloderm

e. Epiblema

1897. Integumentary tissue of roots consists of cells with thin cellulose mebranes and protuberances - root hairs. This tissue is:

a. Plerome

b. Epiblema

c. Periderm

d. Phelloderm

e. Periblem

1898. Interaction between dispersed phase and dispersion medium is different for different systems. If dispersed phase has low interaction with medium, the system is called:

a. Bound disperse

b. Free disperse

c. Hydrophilic

d. Lyophobic

e. Lyophilic

1899. Interaction between dispersed phase and dispersion medium is different for different systems. If dispersed phase has low interaction with medium, the system is called:

a. Hydrophilic

b. Bound disperse

c. Lyophobic

d. Lyophilic

e. Free disperse

1900. Interaction between dispersed phase and dispersion medium is different for different systems. If dispersed phase has low interaction with medium, the system is called:

a. Hydrophilic

b. Free disperse

c. Bound disperse

d. Lyophobic

e. Lyophilic

1901. Interferons have the properties of antiviral antibiotics and natural antitumor factors, which is why they are widely used in medical practice. Their protective effects are realized by influencing a certain stage of protein biosynthesis. Name this stage.

a. Transcription termination

b. Translation elongation

c. Transcription initiation

d. Translation initiation

e. Translation termination

1902. Interferons have the properties of antiviral antibiotics and natural antitumor factors, which is why they are widely used in medical practice. Their protective effects are realized by influencing a certain stage of protein biosynthesis. Name this stage.

a. Translation elongation

b. Translation termination

c. Transcription termination

d. Transcription initiation

e. Translation initiation

1903. Interferons have the properties of antiviral antibiotics and natural antitumor factors, which is why they are widely used in medical practice. Their protective effects are realized by influencing a certain stage of protein biosynthesis. Name this stage.

a. Translation termination

b. Translation elongation

c. Transcription termination

d. Translation initiation

e. Transcription initiation

1904. Interleukin-1 is one of the secondary pyrogens in a fever. What cells are the main producers of

this pyrogen?

a. Macrophages

- b. Eosinophils
- c. Lymphocytes
- d. Tissue basophils
- e. Platelets

1905. Interleukin-1 is one of the secondary pyrogens in a fever. What cells are the main producers of this pyrogen?

a. Macrophages

- b. Eosinophils
- c. Platelets
- d. Tissue basophils
- e. Lymphocytes

1906. Interleukin-1 is one of the secondary pyrogens in a fever. What cells are the main producers of this pyrogen?

a. Lymphocytes

b. Macrophages

- c. Tissue basophils
- d. Eosinophils
- e. Platelets

1907. Introduction of immune preparation allows to form artificial acquired immunity. What preparation of those listed below is used to form artificial passive immunity?

- a. BCG vaccine
- b. Cholera-anatoxin
- c. DPT vaccine

d. Antitetanus serum

e. Brucellosis vaccine

1908. Introduction of immune preparation allows to form artificial acquired immunity. What preparation of those listed below is used to form artificial passive immunity?

- a. Cholera-anatoxin
- b. BCG vaccine
- c. Brucellosis vaccine
- d. DPT vaccine

e. Antitetanus serum

1909. Introduction of immune preparation allows to form artificial acquired immunity. What preparation of those listed below is used to form artificial passive immunity?

- a. DPT vaccine
- b. Cholera-anatoxin
- c. Brucellosis vaccine

d. Antitetanus serum

e. BCG vaccine

1910. Investigation of bacterial contamination of indoor air in a pharmacy takes into account the total number of microorganisms present in a certain air volume, as well as qualitative content of indoor air microflora. Name the sanitary-indicative microorganisms for indoor air:

a. Chromobacterium

b. Staphylococcus and streptococcus

- c. Fungi and yeasts
- d. Sarcina
- e. Colibacillus

1911. Investigation of bacterial contamination of indoor air in a pharmacy takes into account the total number of microorganisms present in a certain air volume, as well as qualitative content of indoor air microflora. Name the sanitary-indicative microorganisms for indoor air:

- a. Chromobacterium
- b. Sarcina
- c. Fungi and yeasts

d. Staphylococcus and streptococcus

e. Colibacillus

1912. Investigation of bacterial contamination of indoor air in a pharmacy takes into account the total number of microorganisms present in a certain air volume, as well as qualitative content of indoor air microflora. Name the sanitary-indicative microorganisms for indoor air:

a. Fungi and yeasts

b. Staphylococcus and streptococcus

c. Colibacillus

d. Chromobacterium

e. Sarcina

1913. Iodimetry involves use of standard solutions of iodine and $\text{Na}_2\text{S}_2\text{O}_3$. What substance is used to standardize the sodium thiosulfate solution?

a. K_2CO_3

b. As_2O_3

c. $\text{N}_2\text{B}_4\text{O}_7$

d. $\text{K}_2\text{Cr}_2\text{O}_7$

e. NaCl

1914. Iodimetry involves use of standard solutions of iodine and $\text{Na}_2\text{S}_2\text{O}_3$. What substance is used to standardize the sodium thiosulfate solution?

a. $\text{N}_2\text{B}_4\text{O}_7$

b. K_2CO_3

c. As_2O_3

d. $\text{K}_2\text{Cr}_2\text{O}_7$

e. NaCl

1915. Iodimetry involves use of standard solutions of iodine and $\text{Na}_2\text{S}_2\text{O}_3$. What substance is used to standardize the sodium thiosulfate solution?

a. $\text{N}_2\text{B}_4\text{O}_7$

b. NaCl

c. $\text{K}_2\text{Cr}_2\text{O}_7$

d. K_2CO_3

e. As_2O_3

1916. Ion-exchange adsorption is widely used for water softening and demineralization. Through what ionite columns should the water be passed for its demineralization?

a. Through the cationite in the RH-form, and then through the anionite in the ROH-form

b. Through the cationite in the RK-form, and then through the anionite in the ROH-form

c. Through the cationite in the RH-form, and then through the cationite in the RK-form

d. Through the anionite in the R_2SO_4 -form, and then through the cationite in the ROH-form

e. Through the anionite in the ROH-form, and then through the cationite in the R_2Ca -form

1917. Ion-exchange adsorption is widely used for water softening and demineralization. Through what ionite columns should the water be passed for its demineralization?

a. Through the anionite in the R_2SO_4 -form, and then through the cationite in the ROH-form

b. Through the cationite in the RH-form, and then through the cationite in the RK-form

c. Through the cationite in the RK-form, and then through the anionite in the ROH-form

d. Through the anionite in the ROH-form, and then through the cationite in the R_2Ca -form

e. Through the cationite in the RH-form, and then through the anionite in the ROH-form

1918. Ion-exchange adsorption is widely used for water softening and demineralization. Through what ionite columns should the water be passed for its demineralization?

a. Through the anionite in the ROH-form, and then through the cationite in the R_2Ca -form

b. Through the cationite in the RK-form, and then through the anionite in the ROH-form

c. Through the anionite in the R_2SO_4 -form, and then through the cationite in the ROH-form

d. Through the cationite in the RH-form, and then through the cationite in the RK-form

e. Through the cationite in the RH-form, and then through the anionite in the ROH-form

1919. Isoelectric state of protein molecules depends on the:

a. Mass of the solute

b. pH of the medium

- c. Solution preparation technique
- d. Shape of the protein molecule
- e. Concentration of the solvent

1920. Isoelectric state of protein molecules depends on the:

- a. Solution preparation technique
- b. Shape of the protein molecule
- c. Concentration of the solvent

d. pH of the medium

- e. Mass of the solute

1921. Isoelectric state of protein molecules depends on the:

- a. Concentration of the solvent
- b. Shape of the protein molecule
- c. Mass of the solute
- d. Solution preparation technique

e. pH of the medium

1922. It can be safely assumed that the infants born from the mothers with the history of measles will not be affected by the measles outbreak during their stay in the maternity ward. What classes of antibodies provide the infants with the resistance to this disease?

- a. IgE
- b. IgA

c. IgG

- d. IgM
- e. IgD

1923. It can be safely assumed that the infants born from the mothers with the history of measles will not be affected by the measles outbreak during their stay in the maternity ward. What classes of antibodies provide the infants with the resistance to this disease?

- a. IgE
- b. IgM
- c. IgD
- d. IgA

e. IgG

1924. It can be safely assumed that the infants born from the mothers with the history of measles will not be affected by the measles outbreak during their stay in the maternity ward. What classes of antibodies provide the infants with the resistance to this disease?

- a. IgM
- b. IgD
- c. IgE

d. IgG

- e. IgA

1925. It is a known fact, that human body in a day synthesizes approximately 80 g of glucose due to gluconeogenesis. What organ performs this process primarily?

- a. Heart
- b. Stomach

c. Liver

- d. Brain
- e. Skeletal muscles

1926. It is a known fact, that human body in a day synthesizes approximately 80 g of glucose due to gluconeogenesis. What organ performs this process primarily?

- a. Stomach
- b. Brain
- c. Heart
- d. Skeletal muscles

e. Liver

1927. It is a known fact, that human body in a day synthesizes approximately 80 g of glucose due to gluconeogenesis. What organ performs this process primarily?

- a. Stomach
- b. Heart

c. Liver

- d. Skeletal muscles
- e. Brain

1928. It is determined that genetic basis of extrachromosomal stability is defined by the elements containing genes that provide for cell resistance to certain drugs, primarily antibiotics. What elements are these?

- a. Golgi apparatus
- b. Cytoplasm

c. R-plasmids

- d. Nucleoid
- e. Mitochondrion

1929. It is determined that genetic basis of extrachromosomal stability is defined by the elements containing genes that provide for cell resistance to certain drugs, primarily antibiotics. What elements are these?

- a. Golgi apparatus
- b. Cytoplasm
- c. Nucleoid

d. R-plasmids

- e. Mitochondrion

1930. It is determined that genetic basis of extrachromosomal stability is defined by the elements containing genes that provide for cell resistance to certain drugs, primarily antibiotics. What elements are these?

- a. Golgi apparatus
- b. Mitochondrion
- c. Nucleoid
- d. Cytoplasm

e. R-plasmids

1931. It is known that heterologous antisera are obtained by means of animal immunization. What complications can arise when they are introduced into human body?

a. Allergic response

- b. Visual impairment
- c. Gastrointestinal disorders
- d. Sensitivity loss
- e. Water-electrolyte imbalance

1932. It is known that heterologous antisera are obtained by means of animal immunization. What complications can arise when they are introduced into human body?

a. Allergic response

- b. Visual impairment
- c. Sensitivity loss
- d. Gastrointestinal disorders
- e. Water-electrolyte imbalance

1933. It is known that heterologous antisera are obtained by means of animal immunization. What complications can arise when they are introduced into human body?

- a. Sensitivity loss
- b. Gastrointestinal disorders
- c. Water-electrolyte imbalance

d. Allergic response

- e. Visual impairment

1934. It is known, that HIV infection leads to severe immunologic disturbances in the body that result in the development of AIDS (acquired immune deficiency syndrome). What cells of the human body are the most susceptible to HIV infection?

- a. Endotheliocytes
- b. Suppressor T cells

- c. Hepatocytes
- d. B lymphocytes

e. T helper cells

1935. It is known, that HIV infection leads to severe immunologic disturbances in the body that result in the development of AIDS (acquired immune deficiency syndrome). What cells of the human body are the most susceptible to HIV infection?

- a. Hepatocytes
- b. T helper cells**
- c. Suppressor T cells
- d. B lymphocytes
- e. Endotheliocytes

1936. It is known, that HIV infection leads to severe immunologic disturbances in the body that result in the development of AIDS (acquired immune deficiency syndrome). What cells of the human body are the most susceptible to HIV infection?

- a. Hepatocytes
- b. Suppressor T cells
- c. B lymphocytes
- d. Endotheliocytes

e. T helper cells

1937. Jellies and the process of jellification are of great importance in medicine and biology. Name the process of jelly destruction followed by the restoration of its jellified state:

- a. Thixotropy**
- b. Coacervation
- c. Salting-out
- d. Coagulation
- e. Syneresis

1938. Jellies and the process of jellification are of great importance in medicine and biology. Name the process of jelly destruction followed by the restoration of its jellified state:

- a. Coacervation
- b. Thixotropy**
- c. Salting-out
- d. Syneresis
- e. Coagulation

1939. Jellies and the process of jellification are of great importance in medicine and biology. Name the process of jelly destruction followed by the restoration of its jellified state:

- a. Syneresis
- b. Coagulation
- c. Salting-out
- d. Thixotropy**

e. Coacervation

1940. Jelly is one of the promising dosage forms. Name the process, when the initial structure of a mechanically destroyed jelly spontaneously restores:

- a. Thixotropy**
- b. Diffusion
- c. Stratification
- d. Syneresis
- e. Gelation

1941. Jelly is one of the promising dosage forms. Name the process, when the initial structure of a mechanically destroyed jelly spontaneously restores:

- a. Diffusion
- b. Syneresis
- c. Gelation
- d. Stratification

e. Thixotropy

1942. Jelly is one of the promising dosage forms. Name the process, when the initial structure of a

mechanically destroyed jelly spontaneously restores:

- a. Syneresis
- b. Diffusion

c. Thixotropy

- d. Gelation
- e. Stratification

1943. Koch's bacillus was detected in the sputum of the patient with pulmonary tuberculosis. In this patient tuberculosis bacillus assumes the following role:

a. Causative agent of the disease

- b. Risk factor of the disease
- c. Condition hampering the disease development
- d. Disease development condition
- e. Condition conducive to the disease development

1944. Koch's bacillus was detected in the sputum of the patient with pulmonary tuberculosis. In this patient tuberculosis bacillus assumes the following role:

- a. Condition hampering the disease development
- b. Disease development condition

c. Causative agent of the disease

- d. Condition conducive to the disease development
- e. Risk factor of the disease

1945. Koch's bacillus was detected in the sputum of the patient with pulmonary tuberculosis. In this patient tuberculosis bacillus assumes the following role:

- a. Disease development condition
- b. Condition conducive to the disease development
- c. Risk factor of the disease

d. Causative agent of the disease

- e. Condition hampering the disease development

1946. L-DOPA and its derivatives are used in treatment of Parkinson's disease. What aminoacid is this substance made of?

a. Tyrosine

- b. Glutamate
- c. Arginine
- d. Asparagine
- e. Tryptophan

1947. L-DOPA and its derivatives are used in treatment of Parkinson's disease. What aminoacid is this substance made of?

a. Tyrosine

- b. Glutamate
- c. Tryptophan
- d. Arginine
- e. Asparagine

1948. L-DOPA and its derivatives are used in treatment of Parkinson's disease. What aminoacid is this substance made of?

a. Tryptophan

b. Tyrosine

- c. Glutamate
- d. Asparagine
- e. Arginine

1949. Laboratories of various specialization use the following method to determine general water hardness of potable water:

a. Acidimetry

b. Complexometric titration

- c. Oxidimetry
- d. Alkalimetry
- e. Precipitation

1950. Laboratories of various specialization use the following method to determine general water hardness of potable water:

- a. Oxidimetry
- b. Acidimetry
- c. Precipitation
- d. Alkalimetry

e. Complexometric titration

1951. Laboratories of various specialization use the following method to determine general water hardness of potable water:

- a. Oxidimetry
- b. Precipitation

c. Complexometric titration

- d. Alkalimetry
- e. Acidimetry

1952. Leaves damage by mosaic discoloration has been detected at medicinal plantations. What microorganisms are the cause?

- a. Plant-pathogenic fungi
- b. Plant-pathogenic viruses**
- c. Plant-pathogenic bacteria
- d. Protozoa
- e. Rickettsia

1953. Leaves damage by mosaic discoloration has been detected at medicinal plantations. What microorganisms are the cause?

- a. Plant-pathogenic fungi
- b. Plant-pathogenic viruses**
- c. Plant-pathogenic bacteria
- d. Rickettsia
- e. Protozoa

1954. Leaves damage by mosaic discoloration has been detected at medicinal plantations. What microorganisms are the cause?

- a. Protozoa
- b. Rickettsia
- c. Plant-pathogenic bacteria
- d. Plant-pathogenic fungi
- e. Plant-pathogenic viruses**

1955. Leaves of a Lamiaceae family plant are ovate, with a crenate margin, darker on the top than on the bottom, and have a characteristic lemon-like smell. These are the features of the following plant:

a. *Melissa officinalis*

- b. *Mentha piperita*
- c. *Lamium album*
- d. *Leonurus cardiaca*
- e. *Salvia officinalis*

1956. Leaves of a Lamiaceae family plant are ovate, with a crenate margin, darker on the top than on the bottom, and have a characteristic lemon-like smell. These are the features of the following plant:

- a. *Leonurus cardiaca*
- b. *Salvia officinalis*
- c. *Lamium album*
- d. *Mentha piperita*

e. *Melissa officinalis*

1957. Leaves of a Lamiaceae family plant are ovate, with a crenate margin, darker on the top than on the bottom, and have a characteristic lemon-like smell. These are the features of the following plant:

- a. *Mentha piperita*
- b. *Leonurus cardiaca*
- c. *Lamium album*
- d. *Salvia officinalis*

e. *Melissa officinalis*

1958. Lecithin of various origins, being a surfactant compound, is used in food industry as emulsifying agent. What group of biomolecules does it belong to?

a. Phospholipids

- b. Glycolipids
- c. Sulfolipid
- d. Triacylglycerols (triglycerides)
- e. Sterol esters

1959. Lecithin of various origins, being a surfactant compound, is used in food industry as emulsifying agent. What group of biomolecules does it belong to?

a. Phospholipids

- b. Triacylglycerols (triglycerides)
- c. Glycolipids
- d. Sterol esters
- e. Sulfolipid

1960. Lecithin of various origins, being a surfactant compound, is used in food industry as emulsifying agent. What group of biomolecules does it belong to?

- a. Glycolipids
- b. Triacylglycerols (triglycerides)
- c. Sterol esters
- d. Sulfolipid

e. Phospholipids

1961. Lipid digestion requires lipases, emulsifiers, and a slightly alkaline pH. What segment of the gastrointestinal tract provides these conditions?

a. Duodenum

- b. Esophagus
- c. Stomach
- d. Oral cavity
- e. Large intestine

1962. Lipid digestion requires lipases, emulsifiers, and a slightly alkaline pH. What segment of the gastrointestinal tract provides these conditions?

a. Oral cavity

b. Duodenum

- c. Large intestine
- d. Stomach
- e. Esophagus

1963. Lipid digestion requires lipases, emulsifiers, and a slightly alkaline pH. What segment of the gastrointestinal tract provides these conditions?

- a. Stomach
- b. Esophagus

c. Duodenum

- d. Large intestine
- e. Oral cavity

1964. Lipids are a group of water-insoluble substances of various structure that carry out a number of functions. What lipids form a protective layer over skin, fur, or feathers of animals?

a. Waxes

- b. Cholesterol esters
- c. Triglycerides
- d. Glycolipids
- e. Phospholipids

1965. Lipids are a group of water-insoluble substances of various structure that carry out a number of functions. What lipids form a protective layer over skin, fur, or feathers of animals?

a. Waxes

- b. Triglycerides
- c. Glycolipids

- d. Cholesterol esters
- e. Phospholipids

1966. Lipids are a group of water-insoluble substances of various structure that carry out a number of functions. What lipids form a protective layer over skin, fur, or feathers of animals?

- a. Phospholipids
- b. Cholesterol esters
- c. Glycolipids
- d. Triglycerides

e. Waxes

1967. Liquid dosage forms that contain camphor and chloral hydrate are used in dental practice. What phases are in the state of equilibrium at the eutectic point of the melting point diagram of the camphor-chloral hydrate mixture?

a. Eutectic melt, camphor crystals, chloral hydrate crystals

- b. Eutectic melt, camphor crystals
- c. Eutectic melt, chloral hydrate crystals
- d. Camphor crystals, chloral hydrate crystals
- e. Eutectic melt

1968. Liquid dosage forms that contain camphor and chloral hydrate are used in dental practice. What phases are in the state of equilibrium at the eutectic point of the melting point diagram of the camphor-chloral hydrate mixture?

- a. Eutectic melt, camphor crystals
- b. Camphor crystals, chloral hydrate crystals
- c. Eutectic melt, chloral hydrate crystals

d. Eutectic melt, camphor crystals, chloral hydrate crystals

e. Eutectic melt

1969. Liquid dosage forms that contain camphor and chloral hydrate are used in dental practice. What phases are in the state of equilibrium at the eutectic point of the melting point diagram of the camphor-chloral hydrate mixture?

a. Eutectic melt, chloral hydrate crystals

b. Eutectic melt, camphor crystals, chloral hydrate crystals

- c. Camphor crystals, chloral hydrate crystals
- d. Eutectic melt, camphor crystals
- e. Eutectic melt

1970. Long-term taking of sulfonamides has resulted in the patient developing anemia, leukopenia, and thrombocytopenia. What is the mechanism of development of these disorders?

a. Bone marrow stimulation

b. Inhibition of hematopoiesis in the bone marrow

- c. Intensified use of blood elements
- d. Destruction of blood elements
- e. These disorders have not been caused by the medicines

1971. Long-term taking of sulfonamides has resulted in the patient developing anemia, leukopenia, and thrombocytopenia. What is the mechanism of development of these disorders?

a. Bone marrow stimulation

b. These disorders have not been caused by the medicines

c. Destruction of blood elements

d. Inhibition of hematopoiesis in the bone marrow

e. Intensified use of blood elements

1972. Long-term taking of sulfonamides has resulted in the patient developing anemia, leukopenia, and thrombocytopenia. What is the mechanism of development of these disorders?

a. Destruction of blood elements

b. Inhibition of hematopoiesis in the bone marrow

- c. Intensified use of blood elements
- d. These disorders have not been caused by the medicines
- e. Bone marrow stimulation

1973. Long-term use of antibiotics can result in development of dysbiosis. What method can detect

intestinal dysbiosis?

a. Bacteriology

b. Patient interview

c. Allergy testing

d. Gnotobiotic experiments

e. Serology

1974. Long-term use of antibiotics can result in development of dysbiosis. What method can detect intestinal dysbiosis?

a. Allergy testing

b. Patient interview

c. Serology

d. Bacteriology

e. Gnotobiotic experiments

1975. Long-term use of antibiotics can result in development of dysbiosis. What method can detect intestinal dysbiosis?

a. Serology

b. Allergy testing

c. Patient interview

d. Bacteriology

e. Gnotobiotic experiments

1976. Main process of ammonia neutralization occurs in the liver. Arginine decomposition reaction that produces urea as a result is catalyzed with arginase. What group of enzymes does arginase belong to?

a. Hydrolases

b. Synthetases

c. Transferases

d. Isomerases

e. Oxidoreductases

1977. Main process of ammonia neutralization occurs in the liver. Arginine decomposition reaction that produces urea as a result is catalyzed with arginase. What group of enzymes does arginase belong to?

a. Hydrolases

b. Transferases

c. Oxidoreductases

d. Synthetases

e. Isomerases

1978. Main process of ammonia neutralization occurs in the liver. Arginine decomposition reaction that produces urea as a result is catalyzed with arginase. What group of enzymes does arginase belong to?

a. Synthetases

b. Oxidoreductases

c. Transferases

d. Hydrolases

e. Isomerases

1979. Malignant tumors have a number of morphological and functional characteristics that differ them from benign ones. What is typical only of malignant tumors?

a. No recurrences

b. Expansive growth

c. Only local influence

d. No metastases

e. Low degree of cell differentiation

1980. Malignant tumors have a number of morphological and functional characteristics that differ them from benign ones. What is typical only of malignant tumors?

a. No recurrences

b. No metastases

c. Only local influence

d. Low degree of cell differentiation

e. Expansive growth

1981. Malignant tumors have a number of morphological and functional characteristics that differ them from benign ones. What is typical only of malignant tumors?

a. Only local influence

b. Low degree of cell differentiation

c. No metastases

d. Expansive growth

e. No recurrences

1982. Mantoux skin test is used to screen school children for infection with Mycobacterium tuberculosis. What testing agent is necessary for this procedure?

a. BCG vaccine

b. Anthraxinum

c. Tuberculin

d. Brucellin

e. Anti-anthrax vaccine (STI)

1983. Mantoux skin test is used to screen school children for infection with Mycobacterium tuberculosis. What testing agent is necessary for this procedure?

a. BCG vaccine

b. Anti-anthrax vaccine (STI)

c. Anthraxinum

d. Brucellin

e. Tuberculin

1984. Mantoux skin test is used to screen school children for infection with Mycobacterium tuberculosis. What testing agent is necessary for this procedure?

a. Brucellin

b. Anthraxinum

c. BCG vaccine

d. Tuberculin

e. Anti-anthrax vaccine (STI)

1985. Many drugs must be manufactured under strictly aseptic conditions. One such possible source of microbiological contamination of drugs is laboratory glassware. What method should be used to sterilize the glassware?

a. Dry heat

b. Ignition

c. Pasteurization

d. Boiling

e. Tyndallization

1986. Many drugs must be manufactured under strictly aseptic conditions. One such possible source of microbiological contamination of drugs is laboratory glassware. What method should be used to sterilize the glassware?

a. Boiling

b. Ignition

c. Dry heat

d. Pasteurization

e. Tyndallization

1987. Many drugs must be manufactured under strictly aseptic conditions. One such possible source of microbiological contamination of drugs is laboratory glassware. What method should be used to sterilize the glassware?

a. Boiling

b. Tyndallization

c. Pasteurization

d. Ignition

e. Dry heat

1988. Many organic compounds break up in the cell into simple products. What compounds break up into ammonia, carbon dioxide, and water in the human body?

a. Amino acids

b. Monosaccharides

c. Monohydric alcohols

d. Keto acids

e. Fatty acids

1989. Many organic compounds break up in the cell into simple products. What compounds break up into ammonia, carbon dioxide, and water in the human body?

a. Monosaccharides

b. Amino acids

c. Keto acids

d. Monohydric alcohols

e. Fatty acids

1990. Many organic compounds break up in the cell into simple products. What compounds break up into ammonia, carbon dioxide, and water in the human body?

a. Monosaccharides

b. Monohydric alcohols

c. Amino acids

d. Fatty acids

e. Keto acids

1991. Many species of wild rose are a source of vitamins, fatty oils, and herbal material. Specify the juicy pseudocarps that are harvested as herbal raw material:

a. Aggregate-accessory fruits

b. Coenobia

c. Cenocarp stone-fruits

d. Hesperides

e. Rose hips

1992. Many species of wild rose are a source of vitamins, fatty oils, and herbal material. Specify the juicy pseudocarps that are harvested as herbal raw material:

a. Cenocarp stone-fruits

b. Rose hips

c. Hesperides

d. Aggregate-accessory fruits

e. Coenobia

1993. Many species of wild rose are a source of vitamins, fatty oils, and herbal material. Specify the juicy pseudocarps that are harvested as herbal raw material:

a. Coenobia

b. Rose hips

c. Cenocarp stone-fruits

d. Aggregate-accessory fruits

e. Hesperides

1994. Mass fraction of pharmaceutical preparations that contain aromatic amino groups is defined through nitrite titration. What external indicator is used in this case?

a. Starch-iodide paper

b. Eosin

c. Eriochrome Black T

d. Methylene red

e. Phenolphthalein

1995. Mass fraction of pharmaceutical preparations that contain aromatic amino groups is defined through nitrite titration. What external indicator is used in this case?

a. Eosin

b. Phenolphthalein

c. Methylene red

d. Starch-iodide paper

e. Eriochrome Black T

1996. Mass fraction of pharmaceutical preparations that contain aromatic amino groups is defined through nitrite titration. What external indicator is used in this case?

- a. Eriochrome Black T
- b. Phenolphthalein
- c. Methylene red
- d. Eosin

e. Starch-iodide paper

1997. Medical school graduates have received active immunization against hepatitis B, because doctors are at greater risk of contracting this disease. Name the main transmission route of this pathogen:

- a. Airborne droplet transmission
- b. Contact transmission
- c. Waterborne transmission
- d. Alimentary transmission

e. Parenteral transmission

1998. Medical school graduates have received active immunization against hepatitis B, because doctors are at greater risk of contracting this disease. Name the main transmission route of this pathogen:

- a. Alimentary transmission
- b. Contact transmission
- c. Waterborne transmission

d. Parenteral transmission

e. Airborne droplet transmission

1999. Medical school graduates have received active immunization against hepatitis B, because doctors are at greater risk of contracting this disease. Name the main transmission route of this pathogen:

- a. Waterborne transmission
- b. Airborne droplet transmission
- c. Alimentary transmission
- d. Contact transmission

e. Parenteral transmission

2000. Medicinal plants infected by microorganisms cannot be used in pharmaceutical industry. Invasive properties of phytopathogenic micro-organisms are due to the following enzymes:

- a. Isomerase
- b. Lyase

c. Hydrolytic

d. Oxidoreductase

e. Transferase

2001. Medicinal plants infected by microorganisms cannot be used in pharmaceutical industry. Invasive properties of phytopathogenic micro-organisms are due to the following enzymes:

- a. Oxidoreductase
- b. Isomerase
- c. Lyase

d. Hydrolytic

e. Transferase

2002. Medicinal plants infected by microorganisms cannot be used in pharmaceutical industry. Invasive properties of phytopathogenic micro-organisms are due to the following enzymes:

- a. Transferase
- b. Oxidoreductase

c. Hydrolytic

d. Isomerase

e. Lyase

2003. Megaloblasts and a high color index were detected in the child's blood. The child was diagnosed with megaloblastic anemia. What drug must be prescribed in this case?

a. Cyanocobalamin

- b. Ascorbic acid
- c. Iron lactate
- d. Coamidum
- e. Nicotinic acid

2004. Megaloblasts and a high color index were detected in the child's blood. The child was diagnosed with megaloblastic anemia. What drug must be prescribed in this case?

- a. Ascorbic acid
- b. Iron lactate
- c. Nicotinic acid
- d. Coamidum

e. Cyanocobalamin

2005. Megaloblasts and a high color index were detected in the child's blood. The child was diagnosed with megaloblastic anemia. What drug must be prescribed in this case?

- a. Coamidum
- b. Nicotinic acid
- c. Iron lactate
- d. Ascorbic acid

e. Cyanocobalamin

2006. Megaloblasts and a high color index were detected in the patient's blood. The diagnosis of megaloblastic anemia was established. What drug should be prescribed in this case?

- a. Rutin
- b. Ascorbic acid
- c. Tocopherol acetate
- d. Pyridoxine

e. Cyanocobalamin

2007. Megaloblasts and a high color index were detected in the patient's blood. The diagnosis of megaloblastic anemia was established. What drug should be prescribed in this case?

- a. Tocopherol acetate
- b. Ascorbic acid

c. Cyanocobalamin

- d. Rutin
- e. Pyridoxine

2008. Megaloblasts and a high color index were detected in the patient's blood. The diagnosis of megaloblastic anemia was established. What drug should be prescribed in this case?

- a. Tocopherol acetate
- b. Rutin
- c. Pyridoxine

d. Cyanocobalamin

- e. Ascorbic acid

2009. Mercurimetry is used for quantification of halide ions in their interaction with solutions of mercury salts (Hg_2^{2+}). What indicator allows analytical visualization of complete precipitation of halide ions?

- a. Eosin
- b. Methyl orange
- c. Fluorescein
- d. Potassium dichromate

e. Diphenylcarbazone

2010. Mercurimetry is used for quantification of halide ions in their interaction with solutions of mercury salts (Hg_2^{2+}). What indicator allows analytical visualization of complete precipitation of halide ions?

- a. Methyl orange
- b. Fluorescein
- c. Eosin

d. Diphenylcarbazone

e. Potassium dichromate

2011. Mercurimetry is used for quantification of halide ions in their interaction with solutions of mercury salts (Hg_2^{2+}). What indicator allows analytical visualization of complete precipitation of halide ions?

a. Potassium dichromate

b. Diphenylcarbazone

c. Methyl orange

d. Eosin

e. Fluorescein

2012. Metal ions in the blood are transported in a complex with proteins. What blood protein contains copper?

a. Ceruloplasmin

b. Fibrinolysin

c. Fibrinogen

d. Thrombin

e. Albumin

2013. Metal ions in the blood are transported in a complex with proteins. What blood protein contains copper?

a. Thrombin

b. Fibrinolysin

c. Albumin

d. Ceruloplasmin

e. Fibrinogen

2014. Metal ions in the blood are transported in a complex with proteins. What blood protein contains copper?

a. Thrombin

b. Fibrinolysin

c. Fibrinogen

d. Ceruloplasmin

e. Albumin

2015. Metallochromic indicators are used in complexometric titration, when determining total water hardness. For this purpose, the following can be used as an indicator:

a. Fluorescein

b. Potassium chromate

c. Phenolphthalein

d. Methyl red

e. Eriochrome black T

2016. Metallochromic indicators are used in complexometric titration, when determining total water hardness. For this purpose, the following can be used as an indicator:

a. Potassium chromate

b. Eriochrome black T

c. Methyl red

d. Fluorescein

e. Phenolphthalein

2017. Metallochromic indicators are used in complexometric titration, when determining total water hardness. For this purpose, the following can be used as an indicator:

a. Potassium chromate

b. Phenolphthalein

c. Methyl red

d. Eriochrome black T

e. Fluorescein

2018. Microbial survival within environment is facilitated by spore formation. What microorganisms of those listed below are spore formers:

a. Bacteroides

b. Peptococci

c. Staphylococci

d. Clostridia

e. Peptostreptococci

2019. Microbial survival within environment is facilitated by spore formation. What microorganisms of those listed below are spore formers:

a. Peptococci

b. Clostridia

c. Peptostreptococci

d. Staphylococci

e. Bacteroides

2020. Microbial survival within environment is facilitated by spore formation. What microorganisms of those listed below are spore formers:

a. Staphylococci

b. Bacteroides

c. Peptococci

d. Peptostreptococci

e. Clostridia

2021. Microbiological purity of tableted drugs had been tested at factory. Samples cultivation in mannitol salt agar resulted in growth of golden-yellow colonies, microscopic examination of colonies detected gram-positive globular bacteria positioned in clusters; microorganisms had plasma coagulation prorerties. What pure bacterial culture was obtained?

a. Enterobacteriaceae

b. Staphylococcus saprophyticus

c. Pseudomonas aeruginosa

d. Staphylococcus aureus

e. Staphylococcus epidermidis

2022. Microbiological purity of tableted drugs had been tested at factory. Samples cultivation in mannitol salt agar resulted in growth of golden-yellow colonies, microscopic examination of colonies detected gram-positive globular bacteria positioned in clusters; microorganisms had plasma coagulation prorerties. What pure bacterial culture was obtained?

a. Pseudomonas aeruginosa

b. Staphylococcus epidermidis

c. Staphylococcus aureus

d. Enterobacteriaceae

e. Staphylococcus saprophyticus

2023. Microbiological purity of tableted drugs had been tested at factory. Samples cultivation in mannitol salt agar resulted in growth of golden-yellow colonies, microscopic examination of colonies detected gram-positive globular bacteria positioned in clusters; microorganisms had plasma coagulation prorerties. What pure bacterial culture was obtained?

a. Staphylococcus saprophyticus

b. Enterobacteriaceae

c. Staphylococcus aureus

d. Staphylococcus epidermidis

e. Pseudomonas aeruginosa

2024. Microbiological studies of air in the pharmacy room revealed the presence of pathogenic staphylococci. Select the medium in which you can detect the lecithinase activity of the isolated microorganism:

a. Bismuth sulfite agar

b. Meat-extract agar

c. Sugar agar

d. Blood agar

e. Yolk-salt agar

2025. Microbiological studies of air in the pharmacy room revealed the presence of pathogenic staphylococci. Select the medium in which you can detect the lecithinase activity of the isolated microorganism:

- a. Meat-extract agar
- b. Sugar agar
- c. Bismuth sulfite agar
- d. Blood agar

e. Yolk-salt agar

2026. Microbiological studies of air in the pharmacy room revealed the presence of pathogenic staphylococci. Select the medium in which you can detect the lecithinase activity of the isolated microorganism:

- a. Sugar agar
- b. Meat-extract agar
- c. Blood agar
- d. Bismuth sulfite agar

e. Yolk-salt agar

2027. Microcrystalloscopy reaction for detecting potassium ions is the following one:

a. With sodium lead (II) hexanitrocuprate

- b. Flame colour test
- c. With sodium hydrotartrate
- d. With sodium hexanitrocobaltate
- e. With sodium tetraphenylborate

2028. Microcrystalloscopy reaction for detecting potassium ions is the following one:

a. With sodium tetraphenylborate

b. With sodium lead (II) hexanitrocuprate

- c. With sodium hydrotartrate
- d. Flame colour test
- e. With sodium hexanitrocobaltate

2029. Microcrystalloscopy reaction for detecting potassium ions is the following one:

- a. With sodium tetraphenylborate
- b. With sodium hexanitrocobaltate

c. With sodium lead (II) hexanitrocuprate

- d. Flame colour test
- e. With sodium hydrotartrate

2030. Microorganisms in the environment are being affected by various physical factors. What is the effect of high temperature on a microbial cell?

- a. Albuminolysis
- b. Fats saponification
- c. Transition into anabiosis state
- d. Irreversible degradation of all cellular structures**
- e. Mutagenic effect

2031. Microorganisms in the environment are being affected by various physical factors. What is the effect of high temperature on a microbial cell?

- a. Fats saponification
- b. Irreversible degradation of all cellular structures**
- c. Mutagenic effect
- d. Albuminolysis
- e. Transition into anabiosis state

2032. Microorganisms in the environment are being affected by various physical factors. What is the effect of high temperature on a microbial cell?

- a. Mutagenic effect
- b. Irreversible degradation of all cellular structures**
- c. Transition into anabiosis state
- d. Albuminolysis
- e. Fats saponification

2033. Microscopy of a leaf of a heliophyte plant detects several dense layers of elongated chlorophyll-containing cells that are located under the epidermis. These cells are oriented perpendicular to the surface of the leaf. What type of parenchyma is it?

a. Palisade parenchyma

- b. Storage parenchyma
- c. Folded parenchyma
- d. Spongy parenchyma
- e. Water-storage parenchyma

2034. Microscopy of a leaf of a heliophyte plant detects several dense layers of elongated chlorophyll-containing cells that are located under the epidermis. These cells are oriented perpendicular to the surface of the leaf. What type of parenchyma is it?

a. Spongy parenchyma

b. Palisade parenchyma

- c. Water-storage parenchyma
- d. Folded parenchyma
- e. Storage parenchyma

2035. Microscopy of a leaf of a heliophyte plant detects several dense layers of elongated chlorophyll-containing cells that are located under the epidermis. These cells are oriented perpendicular to the surface of the leaf. What type of parenchyma is it?

- a. Water-storage parenchyma
- b. Folded parenchyma

c. Palisade parenchyma

- d. Storage parenchyma
- e. Spongy parenchyma

2036. Microscopy of a plant stem revealed a complex tissue, consisting of sieve-like tubes with satellite cells, bast fibers, and bast parenchyma. Name this tissue:

a. Periderm

b. Phloem

- c. Rhytidoma
- d. Epidermis
- e. Xylem

2037. Microscopy of a plant stem revealed a complex tissue, consisting of sieve-like tubes with satellite cells, bast fibers, and bast parenchyma. Name this tissue:

- a. Rhytidoma
- b. Periderm

c. Phloem

- d. Epidermis
- e. Xylem

2038. Microscopy of a plant stem revealed a complex tissue, consisting of sieve-like tubes with satellite cells, bast fibers, and bast parenchyma. Name this tissue:

- a. Xylem
- b. Rhytidoma

c. Phloem

- d. Epidermis
- e. Periderm

2039. Microscopy of a rhizome revealed periphloematic vascular bundles. What plant does it belong to?

- a. Acorus calamus
- b. Elymus repens
- c. Potentilla erecta

d. Dryopteris filix-mas

e. Convallaria majalis

2040. Microscopy of a rhizome revealed periphloematic vascular bundles. What plant does it belong to?

a. Elymus repens

b. Dryopteris filix-mas

- c. Convallaria majalis
- d. Acorus calamus

e. *Potentilla erecta*

2041. Microscopy of a rhizome revealed periphloematic vascular bundles. What plant does it belong to?

a. *Potentilla erecta*

b. *Dryopteris filix-mas*

c. *Elymus repens*

d. *Convallaria majalis*

e. *Acorus calamus*

2042. Microscopy of a root detects root hairs, which are the cell growths of:

a. Endodermis

b. Epidermis

c. Exodermis

d. Epiblem

e. Mesoderm

2043. Microscopy of a root detects root hairs, which are the cell growths of:

a. Endodermis

b. Epidermis

c. Mesoderm

d. Epiblem

e. Exodermis

2044. Microscopy of a root detects root hairs, which are the cell growths of:

a. Epidermis

b. Exodermis

c. Mesoderm

d. Epiblem

e. Endodermis

2045. Microscopy of a smear obtained from the pharyngeal mucosa of a sick child with suspected diphtheria detected yellow-brown bacilli with dark blue thickened ends. What staining method was used in this case?

a. Neisser stain

b. Aujeszky stain

c. Loeffler stain

d. Ziehl-Neelsen stain

e. Gram stain

2046. Microscopy of a smear obtained from the pharyngeal mucosa of a sick child with suspected diphtheria detected yellow-brown bacilli with dark blue thickened ends. What staining method was used in this case?

a. Neisser stain

b. Ziehl-Neelsen stain

c. Aujeszky stain

d. Gram stain

e. Loeffler stain

2047. Microscopy of a smear obtained from the pharyngeal mucosa of a sick child with suspected diphtheria detected yellow-brown bacilli with dark blue thickened ends. What staining method was used in this case?

a. Aujeszky stain

b. Loeffler stain

c. Gram stain

d. Ziehl-Neelsen stain

e. Neisser stain

2048. Microscopy of a vaginal discharge detects round and oval Gram-positive cells that gemmate and form a pseudomycelium. What medicines must be recommended for treatment, if the diagnosis of candidiasis is confirmed?

a. Clotrimazole, nystatin

b. Tetracycline, oleandomycin

- c. Penicillin, streptomycin
- d. Sulgin (sulfaguanidine), phthalazol (phthalylsulfathiazole)
- e. Erythromycin, monomycin

2049. Microscopy of a vaginal discharge detects round and oval Gram-positive cells that gemmate and form a pseudomycelium. What medicines must be recommended for treatment, if the diagnosis of candidiasis is confirmed?

- a. Erythromycin, monomycin
- b. Tetracycline, oleandomycin
- c. Sulgin (sulfaguanidine), phthalazol (phthalylsulfathiazole)

d. Clotrimazole, nystatin

- e. Penicillin, streptomycin

2050. Microscopy of a vaginal discharge detects round and oval Gram-positive cells that gemmate and form a pseudomycelium. What medicines must be recommended for treatment, if the diagnosis of candidiasis is confirmed?

- a. Sulgin (sulfaguanidine), phthalazol (phthalylsulfathiazole)
- b. Tetracycline, oleandomycin

c. Clotrimazole, nystatin

- d. Erythromycin, monomycin
- e. Penicillin, streptomycin

2051. Microscopy of an axial organ shows that between the secondary phloem and xylem there is a layer of live, thin-walled, tightly packed, slightly elongated cells. What structure is formed by these cells?

- a. Phellogen
- b. Pericycle

c. Cambium

- d. Procambium
- e. Periderm

2052. Microscopy of an axial organ shows that between the secondary phloem and xylem there is a layer of live, thin-walled, tightly packed, slightly elongated cells. What structure is formed by these cells?

- a. Procambium

b. Cambium

- c. Periderm
- d. Phellogen
- e. Pericycle

2053. Microscopy of an axial organ shows that between the secondary phloem and xylem there is a layer of live, thin-walled, tightly packed, slightly elongated cells. What structure is formed by these cells?

- a. Procambium
- b. Phellogen

c. Cambium

- d. Pericycle
- e. Periderm

2054. Microscopy of plants detects parenchymal cells with thin membranes, a large nucleus, and a large number of ribosomes. What tissue is it?

- a. Parenchyma

b. Meristematic tissue

- c. Dermal tissue
- d. Secretory tissue
- e. Mechanical tissue

2055. Microscopy of plants detects parenchymal cells with thin membranes, a large nucleus, and a large number of ribosomes. What tissue is it?

- a. Parenchyma

b. Meristematic tissue

- c. Mechanical tissue

- d. Dermal tissue
- e. Secretory tissue

2056. Microscopy of plants detects parenchymal cells with thin membranes, a large nucleus, and a large number of ribosomes. What tissue is it?

- a. Parenchyma
- b. Meristematic tissue**
- c. Mechanical tissue
- d. Secretory tissue
- e. Dermal tissue

2057. Microscopy of subterranean organs of an Asteraceae family plant shows articulated laticifers with anastomoses filled with white latex. It is characteristic of the following plant:

- a. *Achillea millefolium*
- b. *Artemisia absinthium*
- c. *Taraxacum officinale***
- d. *Helianthus annuus*
- e. *Bidens tripartita*

2058. Microscopy of subterranean organs of an Asteraceae family plant shows articulated laticifers with anastomoses filled with white latex. It is characteristic of the following plant:

- a. *Bidens tripartita*
- b. *Helianthus annuus*
- c. *Taraxacum officinale***
- d. *Achillea millefolium*
- e. *Artemisia absinthium*

2059. Microscopy of subterranean organs of an Asteraceae family plant shows articulated laticifers with anastomoses filled with white latex. It is characteristic of the following plant:

- a. *Helianthus annuus*
- b. *Artemisia absinthium*
- c. *Bidens tripartita*
- d. *Achillea millefolium*
- e. *Taraxacum officinale***

2060. Microscopy of the patient's vaginal smear detected trichomonads. What antimicrobial drug must be prescribed for treatment in this case?

- a. Clotrimazole
- b. Fluconazole
- c. Biseptol (Co-trimoxazole)
- d. Ethambutol
- e. Metronidazole**

2061. Microscopy of the patient's vaginal smear detected trichomonads. What antimicrobial drug must be prescribed for treatment in this case?

- a. Fluconazole
- b. Biseptol (Co-trimoxazole)
- c. Metronidazole**
- d. Clotrimazole
- e. Ethambutol

2062. Microscopy of the patient's vaginal smear detected trichomonads. What antimicrobial drug must be prescribed for treatment in this case?

- a. Fluconazole
- b. Biseptol (Co-trimoxazole)
- c. Clotrimazole
- d. Ethambutol
- e. Metronidazole**

2063. Moisture content of thermally unstable preparations can be determined by:

- a. Karl Fischer titration**
- b. Iodometry
- c. Permanganatometry

- d. Nitritometry
- e. Bromatometry

2064. Moisture content of thermally unstable preparations can be determined by:

- a. Bromatometry
- b. Nitritometry
- c. Permanganatometry
- d. Iodometry

e. Karl Fischer titration

2065. Moisture content of thermally unstable preparations can be determined by:

- a. Nitritometry
- b. Karl Fischer titration**
- c. Bromatometry
- d. Permanganatometry
- e. Iodometry

2066. Molar attenuation coefficient is the optical density of a solution with absorbent layer 1 cm thick and concentration that equals:

a. 1 mol/L

- b. 1 g/mL
- c. 1%
- d. 0.1 mol/L
- e. 1 g/L

2067. Molar attenuation coefficient is the optical density of a solution with absorbent layer 1 cm thick and concentration that equals:

- a. 1 g/mL
- b. 0.1 mol/L
- c. 1 g/L
- d. 1%

e. 1 mol/L

2068. Molar attenuation coefficient is the optical density of a solution with absorbent layer 1 cm thick and concentration that equals:

- a. 1 g/mL
- b. 1 g/L
- c. 1%

d. 1 mol/L

e. 0.1 mol/L

2069. Molecular absorption analysis is based on the Beer-Lambert-Bouguer law. According to this law, optical density of a solution is:

a. Directly proportional to the layer thickness and concentration of the substance

- b. Directly proportional to the concentration and inversely proportional to the layer thickness
- c. Directly proportional to the layer thickness and monochromatic light absorption index
- d. Inversely proportional to the layer thickness and concentration of the substance
- e. Directly proportional to the concentration and inversely proportional to the monochromatic light absorption index

2070. Molecular absorption analysis is based on the Beer-Lambert-Bouguer law. According to this law, optical density of a solution is:

- a. Directly proportional to the concentration and inversely proportional to the layer thickness
- b. Directly proportional to the concentration and inversely proportional to the monochromatic light absorption index

c. Directly proportional to the layer thickness and concentration of the substance

- d. Directly proportional to the layer thickness and monochromatic light absorption index
- e. Inversely proportional to the layer thickness and concentration of the substance

2071. Molecular absorption analysis is based on the Beer-Lambert-Bouguer law. According to this law, optical density of a solution is:

- a. Directly proportional to the layer thickness and monochromatic light absorption index
- b. Directly proportional to the concentration and inversely proportional to the layer thickness

c. Directly proportional to the concentration and inversely proportional to the monochromatic light absorption index

d. Inversely proportional to the layer thickness and concentration of the substance

e. Directly proportional to the layer thickness and concentration of the substance

2072. Morphological analysis of poplar inflorescence showed that it is a simple monopodial inflorescence: main axis is drooping, the flowers are sessile, unisexual. Specify the type of inflorescence:

a. Catkin

b. Panicle

c. Capitulum

d. Head

e. Cyme

2073. Morphological analysis of poplar inflorescence showed that it is a simple monopodial inflorescence: main axis is drooping, the flowers are sessile, unisexual. Specify the type of inflorescence:

a. Cyme

b. Head

c. Panicle

d. Catkin

e. Capitulum

2074. Morphological analysis of poplar inflorescence showed that it is a simple monopodial inflorescence: main axis is drooping, the flowers are sessile, unisexual. Specify the type of inflorescence:

a. Head

b. Cyme

c. Capitulum

d. Panicle

e. Catkin

2075. Morphologically the herbaceous plant being studied can be identified as *Convallaria majalis*. To confirm this conclusion additionally, a leaf of this plant was examined under the microscope and a search for the following crystalline inclusions was conducted:

a. Raphides

b. Crystal sand

c. Druse crystals

d. Single crystals

e. Styloid crystals

2076. Morphologically the herbaceous plant being studied can be identified as *Convallaria majalis*. To confirm this conclusion additionally, a leaf of this plant was examined under the microscope and a search for the following crystalline inclusions was conducted:

a. Druse crystals

b. Raphides

c. Single crystals

d. Crystal sand

e. Styloid crystals

2077. Morphologically the herbaceous plant being studied can be identified as *Convallaria majalis*. To confirm this conclusion additionally, a leaf of this plant was examined under the microscope and a search for the following crystalline inclusions was conducted:

a. Styloid crystals

b. Raphides

c. Crystal sand

d. Druse crystals

e. Single crystals

2078. Most antidepressants are nonselective monoamine oxidase inhibitors (MAOIs) --- they inhibit flavin-containing enzymes that catalyze oxidative deamination of monoamines in the mitochondria of brain neurons. Name the coenzyme of MAO:

a. Nicotinamide adenine dinucleotide

b. Flavin adenine dinucleotide

c. Pyridoxal phosphate

d. Thiamine pyrophosphate

e. Coenzyme A

2079. Most antidepressants are nonselective monoamine oxidase inhibitors (MAOIs) --- they inhibit flavin-containing enzymes that catalyze oxidative deamination of monoamines in the mitochondria of brain neurons. Name the coenzyme of MAO:

a. Nicotinamide adenine dinucleotide

b. Coenzyme A

c. Thiamine pyrophosphate

d. Flavin adenine dinucleotide

e. Pyridoxal phosphate

2080. Most antidepressants are nonselective monoamine oxidase inhibitors (MAOIs) --- they inhibit flavin-containing enzymes that catalyze oxidative deamination of monoamines in the mitochondria of brain neurons. Name the coenzyme of MAO:

a. Pyridoxal phosphate

b. Coenzyme A

c. Thiamine pyrophosphate

d. Nicotinamide adenine dinucleotide

e. Flavin adenine dinucleotide

2081. Most often, the quantitative content of primary and secondary aromatic amines in drugs is determined using the following method:

a. Cerimetry

b. Titanometry

c. Ascorbinometry

d. Permanganatometry

e. Nitritometry

2082. Most often, the quantitative content of primary and secondary aromatic amines in drugs is determined using the following method:

a. Permanganatometry

b. Nitritometry

c. Titanometry

d. Cerimetry

e. Ascorbinometry

2083. Most often, the quantitative content of primary and secondary aromatic amines in drugs is determined using the following method:

a. Titanometry

b. Permanganatometry

c. Ascorbinometry

d. Cerimetry

e. Nitritometry

2084. Mother of a 10-year-old child came to the pharmacy to obtain a drug for prevention of upper respiratory tract infections. What drug would be recommended by the dispensing chemist?

a. Interferon

b. Benzoteph

c. Tetracycline

d. Doxorubicin

e. Carvedilol

2085. Mother of a 10-year-old child came to the pharmacy to obtain a drug for prevention of upper respiratory tract infections. What drug would be recommended by the dispensing chemist?

a. Benzoteph

b. Interferon

c. Doxorubicin

d. Carvedilol

e. Tetracycline

2086. Mother of a 10-year-old child came to the pharmacy to obtain a drug for prevention of upper respiratory tract infections. What drug would be recommended by the dispensing chemist?

a. Doxorubicin

b. Interferon

c. Carvedilol

d. Benzoteph

e. Tetracycline

2087. Mycorrhiza on the oak roots is a symbiosis of:

a. Bacterium and higher plant

b. Fungus and higher plant

c. Fungus and alga

d. Fungus and bacterium

e. Two different bacteria

2088. Mycorrhiza on the oak roots is a symbiosis of:

a. Bacterium and higher plant

b. Fungus and higher plant

c. Fungus and alga

d. Two different bacteria

e. Fungus and bacterium

2089. Mycorrhiza on the oak roots is a symbiosis of:

a. Two different bacteria

b. Fungus and higher plant

c. Fungus and bacterium

d. Bacterium and higher plant

e. Fungus and alga

2090. Name the ability of a drug to accumulate within the patient's body:

a. Cumulation

b. Allergy

c. Antagonism

d. Habituation

e. Synergism

2091. Name the ability of a drug to accumulate within the patient's body:

a. Cumulation

b. Antagonism

c. Synergism

d. Allergy

e. Habituation

2092. Name the ability of a drug to accumulate within the patient's body:

a. Antagonism

b. Synergism

c. Cumulation

d. Allergy

e. Habituation

2093. Name the difference in potentials that occurs due to uneven distribution of electrolytes between the outer and inner surfaces of the cell membrane:

a. Membrane potential

b. Contact biopotential

c. Surface biopotential

d. Chemical biopotential

e. Diffuse biopotential

2094. Name the difference in potentials that occurs due to uneven distribution of electrolytes between the outer and inner surfaces of the cell membrane:

a. Chemical biopotential

b. Membrane potential

- c. Contact biopotential
- d. Diffuse biopotential
- e. Surface biopotential

2095. Name the difference in potentials that occurs due to uneven distribution of electrolytes between the outer and inner surfaces of the cell membrane:

- a. Surface biopotential
- b. Diffuse biopotential
- c. Contact biopotential
- d. Chemical biopotential

e. Membrane potential

2096. Name the initial compound for the synthesis of phthalic acid:

a. 1,2-Dichlorobenzene

b. o-Xylene

- c. Salicylic acid
- d. m-Xylene
- e. 2-Chlorobenzoic acid

2097. Name the initial compound for the synthesis of phthalic acid:

a. 1,2-Dichlorobenzene

b. o-Xylene

- c. m-Xylene
- d. Salicylic acid
- e. 2-Chlorobenzoic acid

2098. Name the initial compound for the synthesis of phthalic acid:

a. m-Xylene

b. o-Xylene

- c. 2-Chlorobenzoic acid
- d. Salicylic acid
- e. 1,2-Dichlorobenzene

2099. Name the method of binding foreign ions in an analysis:

a. Analytical masking

- b. Analytical separation
- c. Analytical extraction
- d. Analytical concentration
- e. Analytical coprecipitation

2100. Name the method of binding foreign ions in an analysis:

- a. Analytical coprecipitation
- b. Analytical separation
- c. Analytical concentration
- d. Analytical extraction

e. Analytical masking

2101. Name the method of binding foreign ions in an analysis:

- a. Analytical separation
- b. Analytical concentration
- c. Analytical extraction
- d. Analytical coprecipitation

e. Analytical masking

2102. Name the method of sorption detoxification of the body, in which the adsorption of toxic substances occurs when the sorbent passes through the digestive system?

a. Enterosorption

- b. Liquorosorption
- c. Hemosorption
- d. Lymphosorption
- e. Contact therapy

2103. Name the method of sorption detoxification of the body, in which the adsorption of toxic substances occurs when the sorbent passes through the digestive system?

a. Liquorosorption

b. Enterosorption

c. Hemosorption

d. Lymphosorption

e. Contact therapy

2104. Name the method of sorption detoxification of the body, in which the adsorption of toxic substances occurs when the sorbent passes through the digestive system?

a. Lymphosorption

b. Hemosorption

c. Liquorosorption

d. Enterosorption

e. Contact therapy

2105. Name the pharmacopoeial method for determining the relative molecular mass of high-molecular compounds:

a. Calorimetry

b. Cryoscopy

c. Ebullioscopy

d. Viscosimetry

e. Osmometry

2106. Name the pharmacopoeial method for determining the relative molecular mass of high-molecular compounds:

a. Cryoscopy

b. Viscosimetry

c. Ebullioscopy

d. Calorimetry

e. Osmometry

2107. Name the pharmacopoeial method for determining the relative molecular mass of high-molecular compounds:

a. Osmometry

b. Ebullioscopy

c. Cryoscopy

d. Calorimetry

e. Viscosimetry

2108. Name the phenomenon when one drug weakens the effect of another drug:

a. Tachyphylaxis

b. Sensitization

c. Antagonism

d. Tolerance

e. Potentiation

2109. Name the phenomenon when one drug weakens the effect of another drug:

a. Tachyphylaxis

b. Tolerance

c. Potentiation

d. Antagonism

e. Sensitization

2110. Name the phenomenon when one drug weakens the effect of another drug:

a. Tolerance

b. Sensitization

c. Antagonism

d. Tachyphylaxis

e. Potentiation

2111. Name the plants that have adapted to growing in an arid environment and developed a number of mechanisms to reduce the moisture loss.

a. Hygrophytes

b. Hydrophytes

c. Mesophytes

d. Xerophytes

e. Succulents

2112. Name the plants that have adapted to growing in an arid environment and developed a number of mechanisms to reduce the moisture loss.

a. Mesophytes

b. Hygrophytes

c. Hydrophytes

d. Xerophytes

e. Succulents

2113. Name the plants that have adapted to growing in an arid environment and developed a number of mechanisms to reduce the moisture loss.

a. Succulents

b. Hydrophytes

c. Xerophytes

d. Hygrophytes

e. Mesophytes

2114. Name the primary drug of choice for treatment of narcotic analgesics overdose.

a. Naloxone

b. Caffeine and sodium benzoate

c. Calcium chloride

d. Unithiol (Dimercaprol)

e. Diazepam

2115. Name the primary drug of choice for treatment of narcotic analgesics overdose.

a. Calcium chloride

b. Diazepam

c. Naloxone

d. Unithiol (Dimercaprol)

e. Caffeine and sodium benzoate

2116. Name the primary drug of choice for treatment of narcotic analgesics overdose.

a. Diazepam

b. Calcium chloride

c. Unithiol (Dimercaprol)

d. Caffeine and sodium benzoate

e. Naloxone

2117. Name the process of cell membrane saturation with a fat-like substance - suberin:

a. Cutinization

b. Lignification

c. Suberization

d. Mucification

e. Mineralization

2118. Name the process of cell membrane saturation with a fat-like substance - suberin:

a. Lignification

b. Suberization

c. Cutinization

d. Mineralization

e. Mucification

2119. Name the process of cell membrane saturation with a fat-like substance - suberin:

a. Lignification

b. Suberization

c. Mucification

d. Mineralization

e. Cutinization

2120. Name the process of liquid droplets or gas (air) bubbles fusion that occurs when they collide inside a moving medium (liquid, gas), or on the surface of a body:

- a. Aggregation
- b. Sedimentation
- c. Electrophoresis

d. Coalescence

- e. Coagulation

2121. Name the process of liquid droplets or gas (air) bubbles fusion that occurs when they collide inside a moving medium (liquid, gas), or on the surface of a body:

- a. Electrophoresis
- b. Coagulation
- c. Aggregation
- d. Sedimentation

e. Coalescence

2122. Name the process of liquid droplets or gas (air) bubbles fusion that occurs when they collide inside a moving medium (liquid, gas), or on the surface of a body:

- a. Sedimentation
- b. Electrophoresis

c. Coalescence

- d. Aggregation
- e. Coagulation

2123. Name the process of spontaneous adhesion of drops in an emulsion to each other:

a. Coalescence

- b. Flotation
- c. Coagulation
- d. Sedimentation
- e. Flocculation

2124. Name the process of spontaneous adhesion of drops in an emulsion to each other:

- a. Flocculation
- b. Sedimentation

c. Coalescence

- d. Coagulation
- e. Flotation

2125. Name the process of spontaneous adhesion of drops in an emulsion to each other:

- a. Flotation
- b. Sedimentation
- c. Flocculation

d. Coalescence

- e. Coagulation

2126. Name the process when a dissolved macromolecular compound is sedimented by adding electrolytes into the solution:

- a. Denaturation

b. Salting out

- c. Flocculation
- d. Coacervation
- e. Jelly formation

2127. Name the process when a dissolved macromolecular compound is sedimented by adding electrolytes into the solution:

- a. Jelly formation

b. Salting out

- c. Denaturation
- d. Coacervation
- e. Flocculation

2128. Name the process when a dissolved macromolecular compound is sedimented by adding electrolytes into the solution:

- a. Jelly formation
- b. Coacervation

c. Salting out

d. Flocculation

e. Denaturation

2129. Name the process, when the precipitate obtained as a result of coagulation transforms into a stable colloidal solution.

a. Flocculation

b. Colloidal protection

c. Micelle formation

d. Peptization

e. Heterocoagulation

2130. Name the process, when the precipitate obtained as a result of coagulation transforms into a stable colloidal solution.

a. Heterocoagulation

b. Flocculation

c. Micelle formation

d. Colloidal protection

e. Peptization

2131. Name the process, when the precipitate obtained as a result of coagulation transforms into a stable colloidal solution.

a. Micelle formation

b. Colloidal protection

c. Flocculation

d. Heterocoagulation

e. Peptization

2132. Name the psychostimulant with analeptical action, which is a purine derivative:

a. Caffeine and sodium benzoate

b. Tramadol

c. Sulpiride

d. Medazepam

e. Sodium bromide

2133. Name the psychostimulant with analeptical action, which is a purine derivative:

a. Sodium bromide

b. Medazepam

c. Tramadol

d. Sulpiride

e. Caffeine and sodium benzoate

2134. Name the psychostimulant with analeptical action, which is a purine derivative:

a. Sulpiride

b. Sodium bromide

c. Medazepam

d. Tramadol

e. Caffeine and sodium benzoate

2135. Name the reactions and reagents that under certain conditions allow determination of certain ions in the presence of other ions:

a. Specific

b. Group

c. Characteristic

d. Selective

e. General

2136. Name the reactions and reagents that under certain conditions allow determination of certain ions in the presence of other ions:

a. Group

b. Specific

c. Selective

d. General

e. Characteristic

2137. Name the reactions and reagents that under certain conditions allow determination of certain ions in the presence of other ions:

a. Selective

b. General

c. Specific

d. Group

e. Characteristic

2138. Name the serums made from blood donated by volunteers or convalescent donors:

a. Homologous

b. Corpuscular

c. Heterologous

d. Attenuated

e. Autoimmune

2139. Name the serums made from blood donated by volunteers or convalescent donors:

a. Corpuscular

b. Attenuated

c. Homologous

d. Heterologous

e. Autoimmune

2140. Name the serums made from blood donated by volunteers or convalescent donors:

a. Heterologous

b. Corpuscular

c. Autoimmune

d. Homologous

e. Attenuated

2141. Name the state of colloidal particles that has zero electrokinetic potential and can be characterized by the absence of directed movement of the granules in the electric field.

a. Compensated

b. Neutral

c. Neutralized

d. Electroneutral

e. Isoelectric

2142. Name the state of colloidal particles that has zero electrokinetic potential and can be characterized by the absence of directed movement of the granules in the electric field.

a. Neutralized

b. Electroneutral

c. Compensated

d. Neutral

e. Isoelectric

2143. Name the state of colloidal particles that has zero electrokinetic potential and can be characterized by the absence of directed movement of the granules in the electric field.

a. Neutralized

b. Neutral

c. Isoelectric

d. Compensated

e. Electroneutral

2144. Name the structural unit of a colloidal solution of a medicinal substance:

a. Molecule

b. Micelle

c. Ion

d. Zwitterion

e. Atom

2145. Name the structural unit of a colloidal solution of a medicinal substance:

a. Molecule

b. Micelle

c. Zwitterion

d. Atom

e. Ion

2146. Name the structural unit of a colloidal solution of a medicinal substance:

a. Molecule

b. Atom

c. Micelle

d. Ion

e. Zwitterion

2147. Name the substance that is the initial compound in the polymerization reaction:

a. Monomer

b. Nucleophile

c. Dimer

d. Polymer

e. Polypeptide

2148. Name the substance that is the initial compound in the polymerization reaction:

a. Monomer

b. Polypeptide

c. Dimer

d. Polymer

e. Nucleophile

2149. Name the substance that is the initial compound in the polymerization reaction:

a. Nucleophile

b. Monomer

c. Dimer

d. Polymer

e. Polypeptide

2150. Name the titrimetric method for quantitative determination of phenol and its derivatives:

a. Bromatometry

b. Permanganatometry

c. Cerimetry

d. Ascorbinometry

e. Nitritometry

2151. Name the titrimetric method for quantitative determination of phenol and its derivatives:

a. Permanganatometry

b. Bromatometry

c. Nitritometry

d. Cerimetry

e. Ascorbinometry

2152. Name the titrimetric method for quantitative determination of phenol and its derivatives:

a. Permanganatometry

b. Nitritometry

c. Bromatometry

d. Cerimetry

e. Ascorbinometry

2153. Name the type of an inflorescence that has an elongated and thickened main axis with sessile flowers:

a. Spadix

b. Spike

c. Round capitulum

d. Umbel

e. Flat capitulum

2154. Name the type of an inflorescence that has an elongated and thickened main axis with sessile flowers:

a. Spadix

- b. Spike
- c. Umbel
- d. Flat capitulum
- e. Round capitulum

2155. Name the type of an inflorescence that has an elongated and thickened main axis with sessile flowers:

- a. Spike
- b. Flat capitulum

c. Spadix

- d. Umbel
- e. Round capitulum

2156. Narcotic analgesics can induce constipations in a patient. What receptors are affected in such cases?

- a. Opiate receptors**
- b. Mechanoreceptors
- c. Dopamine receptors
- d. Glutamate receptors
- e. Chemoreceptors

2157. Narcotic analgesics can induce constipations in a patient. What receptors are affected in such cases?

- a. Chemoreceptors
- b. Glutamate receptors
- c. Dopamine receptors

d. Opiate receptors

- e. Mechanoreceptors

2158. Narcotic analgesics can induce constipations in a patient. What receptors are affected in such cases?

- a. Glutamate receptors
- b. Dopamine receptors
- c. Chemoreceptors

d. Opiate receptors

- e. Mechanoreceptors

2159. Natural peptides can carry out various functions. What bioactive peptide is a major antioxidant and functions as a coenzyme?

a. Glutathione

- b. Oxytocin
- c. Bradykinin
- d. Liberin
- e. Anserine

2160. Natural peptides can carry out various functions. What bioactive peptide is a major antioxidant and functions as a coenzyme?

- a. Bradykinin

b. Glutathione

- c. Anserine
- d. Liberin
- e. Oxytocin

2161. Natural peptides can carry out various functions. What bioactive peptide is a major antioxidant and functions as a coenzyme?

- a. Bradykinin

b. Glutathione

- c. Oxytocin
- d. Anserine
- e. Liberin

2162. Neutralization of drugs, particularly sulfonamides, in the liver occurs by means of acetylation.

Name the compound that causes acetylation reaction:

- a. Glycine
- b. Succinyl-CoA
- c. Glutathione
- d. Acetyl-CoA**
- e. S-adenosylmethionine

2163. Neutralization of drugs, particularly sulfonamides, in the liver occurs by means of acetylation. Name the compound that causes acetylation reaction:

- a. Succinyl-CoA
- b. Acetyl-CoA**
- c. Glutathione
- d. S-adenosylmethionine
- e. Glycine

2164. Neutralization of drugs, particularly sulfonamides, in the liver occurs by means of acetylation. Name the compound that causes acetylation reaction:

- a. Succinyl-CoA
- b. Glutathione
- c. Glycine
- d. Acetyl-CoA**
- e. S-adenosylmethionine

2165. Neutralization of xenobiotics and active endogenous metabolites often occurs via inclusion of an oxygen atom into a substrate molecule as the result of the following process:

- a. Hydroxylation**
- b. Deaminization
- c. Phosphorilation
- d. Decarboxylation
- e. Transamination

2166. Neutralization of xenobiotics and active endogenous metabolites often occurs via inclusion of an oxygen atom into a substrate molecule as the result of the following process:

- a. Deaminization
- b. Decarboxylation
- c. Transamination
- d. Hydroxylation**
- e. Phosphorilation

2167. Neutralization of xenobiotics and active endogenous metabolites often occurs via inclusion of an oxygen atom into a substrate molecule as the result of the following process:

- a. Deaminization
- b. Transamination
- c. Hydroxylation**
- d. Phosphorilation
- e. Decarboxylation

2168. Nitrate anions, unlike nitrite anions, do not interact with:

- a. Antipyrine
- b. Sulfanilic acid
- c. Potassium permanganate**
- d. Diphenylamine
- e. Iron(II) sulfate and sulfuric acid

2169. Nitrate anions, unlike nitrite anions, do not interact with:

- a. Iron(II) sulfate and sulfuric acid
- b. Diphenylamine
- c. Potassium permanganate**
- d. Antipyrine
- e. Sulfanilic acid

2170. Nitrate anions, unlike nitrite anions, do not interact with:

- a. Sulfanilic acid

b. Potassium permanganate

- c. Antipyrine
- d. Diphenylamine
- e. Iron(II) sulfate and sulfuric acid

2171. Nitrite ions can be detected in the presence of nitrate ions using the following:

a. Crystalline iron (III) sulfate

b. Crystalline antipyrine in the presence of diluted HCl

- c. Crystalline sodium thiosulfate
- d. Dimethylglyoxime
- e. Diphenylcarbazone

2172. Nitrite ions can be detected in the presence of nitrate ions using the following:

- a. Crystalline iron (III) sulfate
- b. Crystalline sodium thiosulfate
- c. Dimethylglyoxime
- d. Diphenylcarbazone

e. Crystalline antipyrine in the presence of diluted HCl

2173. Nitrite ions can be detected in the presence of nitrate ions using the following:

- a. Crystalline iron (III) sulfate
- b. Diphenylcarbazone
- c. Dimethylglyoxime

d. Crystalline antipyrine in the presence of diluted HCl

e. Crystalline sodium thiosulfate

2174. Nitritometry is used to determine primary aromatic amines. What indicator is used in the process?

a. Eosin

b. Tropaeolin 00

- c. Potassium chromate
- d. Methyl orange
- e. Phenolphthalein

2175. Nitritometry is used to determine primary aromatic amines. What indicator is used in the process?

a. Phenolphthalein

b. Tropaeolin 00

- c. Methyl orange
- d. Eosin
- e. Potassium chromate

2176. Nitritometry is used to determine primary aromatic amines. What indicator is used in the process?

a. Phenolphthalein

b. Tropaeolin 00

- c. Potassium chromate
- d. Eosin
- e. Methyl orange

2177. Non-aqueous acid-base titration is used for the substances that have low solubility in water and weak basic or weak acidic properties. Choose the titrant and medium for titration of substances with weak basic properties.

- a. HCl solution in anhydrous acetic acid
- b. HClO solution in anhydrous acetic acid
- c. HCl solution in dioxane

d. HClO₄ solution in anhydrous acetic acid

e. HCl solution in methanol

2178. Non-aqueous acid-base titration is used for the substances that have low solubility in water and weak basic or weak acidic properties. Choose the titrant and medium for titration of substances with weak basic properties.

a. HCl solution in dioxane

- b. HCl solution in methanol
- c. HClO solution in anhydrous acetic acid
- d. HClO₄ solution in anhydrous acetic acid**
- e. HCl solution in anhydrous acetic acid

2179. Non-aqueous acid-base titration is used for the substances that have low solubility in water and weak basic or weak acidic properties. Choose the titrant and medium for titration of substances with weak basic properties.

- a. HClO solution in anhydrous acetic acid
- b. HCl solution in anhydrous acetic acid
- c. HClO₄ solution in anhydrous acetic acid**
- d. HCl solution in dioxane
- e. HCl solution in methanol

2180. Nuciform fruits include a certain type of one-seeded fruit that does not burst when ripe. Its base is enclosed in a cup-shaped cupule formed by the broad part of the peduncle to which the flower was attached. Name this type of fruit:

- a. Acorn**
- b. Samara
- c. Nut
- d. Nutlet
- e. Caryopsis

2181. Nuciform fruits include a certain type of one-seeded fruit that does not burst when ripe. Its base is enclosed in a cup-shaped cupule formed by the broad part of the peduncle to which the flower was attached. Name this type of fruit:

- a. Nutlet
- b. Samara

c. Acorn

- d. Nut
- e. Caryopsis

2182. Nuciform fruits include a certain type of one-seeded fruit that does not burst when ripe. Its base is enclosed in a cup-shaped cupule formed by the broad part of the peduncle to which the flower was attached. Name this type of fruit:

- a. Nutlet
- b. Samara
- c. Caryopsis
- d. Nut

e. Acorn

2183. Number of freedom degrees at the point of intersection of liquidus with Y-axis on the fusibility chart of a two-component system would equal:

- a. 2
- b. 1
- c. 3
- d. 4

e. 0

2184. Number of freedom degrees at the point of intersection of liquidus with Y-axis on the fusibility chart of a two-component system would equal:

- a. 4
- b. 2
- c. 1

d. 0

e. 3

2185. Number of freedom degrees at the point of intersection of liquidus with Y-axis on the fusibility chart of a two-component system would equal:

- a. 4
- b. 3
- c. 0**

- d. 2
- e. 1

2186. On a fusibility curve of a two-component system with simple eutectic we can observe the following above the liquidus line:

- a. Both components are in liquid state**
- b. Both components are in gaseous state
- c. Both components are in solid state
- d. Each component is partially in different aggregate states
- e. One component is liquid, another is solid

2187. On a fusibility curve of a two-component system with simple eutectic we can observe the following above the liquidus line:

- a. One component is liquid, another is solid
- b. Each component is partially in different aggregate states
- c. Both components are in gaseous state
- d. Both components are in solid state

e. Both components are in liquid state

2188. On a fusibility curve of a two-component system with simple eutectic we can observe the following above the liquidus line:

- a. One component is liquid, another is solid
- b. Each component is partially in different aggregate states
- c. Both components are in solid state
- d. Both components are in gaseous state

e. Both components are in liquid state

2189. On day 7 of dimedrol (diphenhydramine) treatment, the patient noted a decrease in the effectiveness of the drug. What pharmacological concept describes the decreased response of the body to a drug?

- a. Carcinogenicity
- b. Embryotoxicity

c. Tolerance

- d. Mutagenicity
- e. Idiosyncrasy

2190. On day 7 of dimedrol (diphenhydramine) treatment, the patient noted a decrease in the effectiveness of the drug. What pharmacological concept describes the decreased response of the body to a drug?

- a. Embryotoxicity
- b. Idiosyncrasy
- c. Mutagenicity

d. Tolerance

- e. Carcinogenicity

2191. On day 7 of dimedrol (diphenhydramine) treatment, the patient noted a decrease in the effectiveness of the drug. What pharmacological concept describes the decreased response of the body to a drug?

- a. Idiosyncrasy
- b. Carcinogenicity
- c. Mutagenicity
- d. Embryotoxicity

e. Tolerance

2192. On examination the doctor suspects Cushing syndrome in the patient. This preliminary diagnosis can be confirmed by elevated levels of the following substance in the patient's blood:

- a. Cortisol**
- b. Cholesterol
- c. Tocopherol
- d. Retinol
- e. Adrenaline

2193. On examination the doctor suspects Cushing syndrome in the patient. This preliminary

diagnosis can be confirmed by elevated levels of the following substance in the patient's blood:

a. Cortisol

- b. Tocopherol
- c. Cholesterol
- d. Retinol
- e. Adrenaline

2194. On examination the doctor suspects Cushing syndrome in the patient. This preliminary diagnosis can be confirmed by elevated levels of the following substance in the patient's blood:

- a. Cholesterol
- b. Retinol

c. Cortisol

- d. Tocopherol
- e. Adrenaline

2195. On examination the patient's sclera and oral mucosa are icteric. What biochemical blood value can be expected to be increased?

- a. Albumin
- b. Cholesterol
- c. Glucose
- d. Amylase

e. Bilirubin

2196. On examination the patient's sclera and oral mucosa are icteric. What biochemical blood value can be expected to be increased?

- a. Amylase
- b. Albumin
- c. Cholesterol
- d. Glucose

e. Bilirubin

2197. On examination the patient's sclera and oral mucosa are icteric. What biochemical blood value can be expected to be increased?

- a. Glucose
- b. Amylase

c. Bilirubin

- d. Albumin
- e. Cholesterol

2198. On the 2nd day after developing acute inflammation of the knee joint, the patient exhibits the joint enlargement, swelling of the skin. At what stage of inflammation are these signs typically observed?

- a. Alteration
- b. Proliferation
- c. Regeneration
- d. Sclerosis

e. Exudation

2199. On the 2nd day after developing acute inflammation of the knee joint, the patient exhibits the joint enlargement, swelling of the skin. At what stage of inflammation are these signs typically observed?

- a. Alteration
- b. Regeneration
- c. Sclerosis

d. Exudation

- e. Proliferation

2200. On the 2nd day after developing acute inflammation of the knee joint, the patient exhibits the joint enlargement, swelling of the skin. At what stage of inflammation are these signs typically observed?

- a. Proliferation
- b. Alteration

- c. Sclerosis
- d. Regeneration

e. Exudation

2201. On the surface of a crystalline substance predominantly those ions are adsorbed that compose the crystalline lattice or are isomorphous to its ions, forming in the process a hard-to-dissolve compound with crystalline ions. Name the author (authors) of this rule:

- a. Duclaux, Traube
- b. Van 't Hoff

c. Paneth, Fajans

- d. Schulze, Hardy
- e. Rehbinder

2202. On the surface of a crystalline substance predominantly those ions are adsorbed that compose the crystalline lattice or are isomorphous to its ions, forming in the process a hard-to-dissolve compound with crystalline ions. Name the author (authors) of this rule:

- a. Schulze, Hardy
- b. Van 't Hoff

c. Paneth, Fajans

- d. Rehbinder
- e. Duclaux, Traube

2203. On the surface of a crystalline substance predominantly those ions are adsorbed that compose the crystalline lattice or are isomorphous to its ions, forming in the process a hard-to-dissolve compound with crystalline ions. Name the author (authors) of this rule:

- a. Van 't Hoff
- b. Duclaux, Traube

c. Paneth, Fajans

- d. Schulze, Hardy
- e. Rehbinder

2204. On the teeth of a leaf blade, water droplets are excreted through a constantly open gap between two guard cells of the epidermis. This structure is a:

a. Hydathode

- b. Glandular hair
- c. Osmophor
- d. Sticky hair
- e. Nectary

2205. On the teeth of a leaf blade, water droplets are excreted through a constantly open gap between two guard cells of the epidermis. This structure is a:

- a. Glandular hair
- b. Nectary
- c. Sticky hair
- d. Osmophor

e. Hydathode

2206. On the teeth of a leaf blade, water droplets are excreted through a constantly open gap between two guard cells of the epidermis. This structure is a:

- a. Sticky hair
- b. Osmophor
- c. Glandular hair
- d. Nectary

e. Hydathode

2207. One of the biological functions performed by glycoproteins in the body is a regulatory (hormone) function. What hormone is a glycoprotein based on its chemical nature?

a. Thyrotropin

- b. Insulin
- c. Glucagon
- d. Cortisol
- e. Aldosterone

2208. One of the biological functions performed by glycoproteins in the body is a regulatory (hormone) function. What hormone is a glycoprotein based on its chemical nature?

- a. Glucagon
- b. Cortisol
- c. Insulin
- d. Aldosterone

e. Thyrotropin

2209. One of the biological functions performed by glycoproteins in the body is a regulatory (hormone) function. What hormone is a glycoprotein based on its chemical nature?

- a. Insulin
- b. Aldosterone
- c. Glucagon

d. Thyrotropin

e. Cortisol

2210. One of the cations of the 1st group hinders detection of the others. Therefore, it should be detected first and then extracted. Name this cation:

- a. Na^+
- b. NH_4^+**
- c. Ca^{2+}
- d. Li^+
- e. K^+

2211. One of the cations of the 1st group hinders detection of the others. Therefore, it should be detected first and then extracted. Name this cation:

- a. Na^+
- b. NH_4^+**
- c. Li^+
- d. K^+
- e. Ca^{2+}

2212. One of the cations of the 1st group hinders detection of the others. Therefore, it should be detected first and then extracted. Name this cation:

- a. Na^+
- b. Li^+
- c. K^+
- d. NH_4^+**
- e. Ca^{2+}

2213. One of the important diagnostic features of garden sage and motherwort is their shape of corolla. Their flowers have the following type of corolla:

a. Bilabiate

- b. Pseudoligulate
- c. Ligulate
- d. Thimble-shaped
- e. Funnelform

2214. One of the important diagnostic features of garden sage and motherwort is their shape of corolla. Their flowers have the following type of corolla:

- a. Ligulate
- b. Pseudoligulate
- c. Thimble-shaped
- d. Bilabiate**
- e. Funnelform

2215. One of the important diagnostic features of garden sage and motherwort is their shape of corolla. Their flowers have the following type of corolla:

- a. Pseudoligulate
- b. Thimble-shaped
- c. Funnelform
- d. Ligulate

e. Bilabiate

2216. One week after an inpatient treatment with penicillin, a microorganism that was initially susceptible to this antibiotic developed a resistance to penicillin, tetracyclines, aminoglycosides, and macrolides. What mechanism of antibiotic resistance formation is observed in this case?

a. Mutational

b. R-plasmid

c. Natural selection

d. Spontaneous

e. Phenotypic

2217. One week after an inpatient treatment with penicillin, a microorganism that was initially susceptible to this antibiotic developed a resistance to penicillin, tetracyclines, aminoglycosides, and macrolides. What mechanism of antibiotic resistance formation is observed in this case?

a. Mutational

b. Phenotypic

c. Spontaneous

d. Natural selection

e. R-plasmid

2218. One week after an inpatient treatment with penicillin, a microorganism that was initially susceptible to this antibiotic developed a resistance to penicillin, tetracyclines, aminoglycosides, and macrolides. What mechanism of antibiotic resistance formation is observed in this case?

a. Phenotypic

b. Natural selection

c. Mutational

d. Spontaneous

e. R-plasmid

2219. Optical activity of monosaccharides can be explained by their:

a. Asymmetric carbon atoms in a molecule

b. Aldehyde or ketone group

c. Complicated rotation around sigma-bond

d. Asymmetric crystal

e. Number of hydroxyl groups in a molecule

2220. Optical activity of monosaccharides can be explained by their:

a. Aldehyde or ketone group

b. Number of hydroxyl groups in a molecule

c. Asymmetric carbon atoms in a molecule

d. Asymmetric crystal

e. Complicated rotation around sigma-bond

2221. Optical activity of monosaccharides can be explained by their:

a. Number of hydroxyl groups in a molecule

b. Complicated rotation around sigma-bond

c. Asymmetric crystal

d. Aldehyde or ketone group

e. Asymmetric carbon atoms in a molecule

2222. Osmotic pressure is an important characteristic of biological fluids. Semipermeable membranes are necessary for penetration of solvent molecules. What substance **CANNOT** be used as a semipermeable membrane?

a. Glass

b. Parchment

c. Biological membrane

d. Gelatine

e. Collodion film

2223. Osmotic pressure is an important characteristic of biological fluids. Semipermeable membranes are necessary for penetration of solvent molecules. What substance **CANNOT** be used as a semipermeable membrane?

a. Collodion film

- b. Parchment
- c. Gelatine

d. Glass

- e. Biological membrane

2224. Osmotic pressure is an important characteristic of biological fluids. Semipermeable membranes are necessary for penetration of solvent molecules. What substance **CANNOT** be used as a semipermeable membrane?

- a. Parchment
- b. Biological membrane
- c. Collodion film

d. Glass

- e. Gelatine

2225. Oxidation of carbohydrates, amino acids, and fatty acids generally occurs via tricarboxylic acid cycle. Specify the acid with which acetyl-CoA reacts first in the tricarboxylic acid cycle:

a. Oxaloacetic

- b. Malic
- c. Fumaric
- d. Citric
- e. Isocitric

2226. Oxidation of carbohydrates, amino acids, and fatty acids generally occurs via tricarboxylic acid cycle. Specify the acid with which acetyl-CoA reacts first in the tricarboxylic acid cycle:

- a. Citric
- b. Isocitric

c. Oxaloacetic

- d. Fumaric
- e. Malic

2227. Oxidation of carbohydrates, amino acids, and fatty acids generally occurs via tricarboxylic acid cycle. Specify the acid with which acetyl-CoA reacts first in the tricarboxylic acid cycle:

- a. Citric
- b. Isocitric

c. Oxaloacetic

- d. Malic
- e. Fumaric

2228. Oxygen cocktails are used in treatment of upper air passages. What kind of colloid system is it?

- a. Emulsion

b. Aerosol

- c. Powder
- d. Paste
- e. Suspension

2229. Oxygen cocktails are used in treatment of upper air passages. What kind of colloid system is it?

- a. Powder
- b. Suspension
- c. Emulsion
- d. Paste

e. Aerosol

2230. Oxygen cocktails are used in treatment of upper air passages. What kind of colloid system is it?

- a. Suspension
- b. Paste
- c. Powder
- d. Emulsion

e. Aerosol

2231. Oxytocin was prescribed for a pregnant woman with weak labor activity, who was hospitalized into the maternity ward. What pharmacological group does this drug belong to?

a. Pituitary hormone preparations

- b. Glucocorticoids

- c. Mineralocorticoids
- d. Thyroid hormone preparations
- e. Anabolic steroids

2232. Oxytocin was prescribed for a pregnant woman with weak labor activity, who was hospitalized into the maternity ward. What pharmacological group does this drug belong to?

a. Pituitary hormone preparations

- b. Mineralocorticoids
- c. Glucocorticoids
- d. Anabolic steroids
- e. Thyroid hormone preparations

2233. Oxytocin was prescribed for a pregnant woman with weak labor activity, who was hospitalized into the maternity ward. What pharmacological group does this drug belong to?

- a. Anabolic steroids
- b. Glucocorticoids
- c. Thyroid hormone preparations

d. Pituitary hormone preparations

- e. Mineralocorticoids

2234. Paracetamol has antipyretic and analgesic effect. In the human body it is neutralized in the following organ:

a. Liver

- b. Intestine
- c. Lungs
- d. Spleen
- e. Heart

2235. Paracetamol has antipyretic and analgesic effect. In the human body it is neutralized in the following organ:

- a. Intestine
- b. Heart
- c. Spleen
- d. Lungs

e. Liver

2236. Paracetamol has antipyretic and analgesic effect. In the human body it is neutralized in the following organ:

- a. Spleen
- b. Lungs

c. Liver

- d. Heart
- e. Intestine

2237. Pastes are used in medicine to treat skin diseases. What type of disperse systems are they?

a. Suspensions

- b. Aerosols
- c. Foams
- d. Emulsions
- e. Powders

2238. Pastes are used in medicine to treat skin diseases. What type of disperse systems are they?

a. Suspensions

- b. Foams
- c. Aerosols
- d. Powders
- e. Emulsions

2239. Pastes are used in medicine to treat skin diseases. What type of disperse systems are they?

- a. Powders
- b. Foams
- c. Aerosols
- d. Emulsions

e. Suspensions

2240. Pathogenic microorganisms are characterized by presence of aggression enzymes that determine their virulence. Select the aggression enzyme:

- a. Carbohydrase
- b. Lyase
- c. Transferase

d. Hyaluronidase

- e. Oxidase

2241. Pathogenic microorganisms are characterized by presence of aggression enzymes that determine their virulence. Select the aggression enzyme:

- a. Oxidase

b. Hyaluronidase

- c. Carbohydrase
- d. Lyase
- e. Transferase

2242. Pathogenic microorganisms are characterized by presence of aggression enzymes that determine their virulence. Select the aggression enzyme:

- a. Oxidase
- b. Lyase

c. Hyaluronidase

- d. Carbohydrase
- e. Transferase

2243. Pathogenic microorganisms produce various enzymes in order to penetrate body tissues and spread there. Point out these enzymes among those named below:

- a. Lyase, ligase

b. Hyaluronidase, lecithinase

- c. Transferase, nuclease
- d. Esterase, protease
- e. Oxydase, catalase

2244. Pathogenic microorganisms produce various enzymes in order to penetrate body tissues and spread there. Point out these enzymes among those named below:

- a. Lyase, ligase
- b. Oxydase, catalase

c. Hyaluronidase, lecithinase

- d. Esterase, protease
- e. Transferase, nuclease

2245. Pathogenic microorganisms produce various enzymes in order to penetrate body tissues and spread there. Point out these enzymes among those named below:

- a. Oxydase, catalase
- b. Lyase, ligase

c. Hyaluronidase, lecithinase

- d. Esterase, protease
- e. Transferase, nuclease

2246. Permanganatometry is used in determination of many organic and inorganic compounds. What are the main advantages of permanganatometry over the other oxidimetric methods?

- a. High selectivity and sensitivity when determining compounds
- b. Pure potassium permanganate is easily available and obtainable
- c. Various types of indicators can be used; in some cases catalysts are necessary to accelerate the reaction
- d. Sufficiently high stability of potassium permanganate and its solutions

e. Sufficiently high redox potential; it is possible to determine titration end-point without indicator

2247. Permanganatometry is used in determination of many organic and inorganic compounds. What are the main advantages of permanganatometry over the other oxidimetric methods?

- a. Sufficiently high stability of potassium permanganate and its solutions

b. Sufficiently high redox potential; it is possible to determine titration end-point without indicator

- c. Pure potassium permanganate is easily available and obtainable
- d. Various types of indicators can be used; in some cases catalysts are necessary to accelerate the reaction
- e. High selectivity and sensitivity when determining compounds

2248. Permanganatometry is used in determination of many organic and inorganic compounds. What are the main advantages of permanganatometry over the other oxidimetric methods?

- a. Sufficiently high stability of potassium permanganate and its solutions
- b. High selectivity and sensitivity when determining compounds
- c. Sufficiently high redox potential; it is possible to determine titration end-point without indicator
- d. Various types of indicators can be used; in some cases catalysts are necessary to accelerate the reaction
- e. Pure potassium permanganate is easily available and obtainable

2249. Pharmacological action of enterosgel (methylsilicic acid hydrogel, polymethylsiloxane polyhydrate) is based on a certain phenomenon characteristic of disperse systems. Name this phenomenon:

- a. Adhesion
- b. Cohesion
- c. Desorption
- d. Wettability
- e. Adsorption

2250. Pharmacological action of enterosgel (methylsilicic acid hydrogel, polymethylsiloxane polyhydrate) is based on a certain phenomenon characteristic of disperse systems. Name this phenomenon:

- a. Cohesion
- b. Adsorption
- c. Desorption
- d. Wettability
- e. Adhesion

2251. Pharmacological action of enterosgel (methylsilicic acid hydrogel, polymethylsiloxane polyhydrate) is based on a certain phenomenon characteristic of disperse systems. Name this phenomenon:

- a. Cohesion
- b. Adhesion
- c. Adsorption
- d. Wettability
- e. Desorption

2252. Pharmacopoeia reaction of potassium ferrocyanide with zinc cations produces:

- a. White precipitate
- b. Black precipitate
- c. Red precipitate
- d. Yellow precipitate
- e. Violet precipitate

2253. Pharmacopoeia reaction of potassium ferrocyanide with zinc cations produces:

- a. Red precipitate
- b. White precipitate
- c. Violet precipitate
- d. Black precipitate
- e. Yellow precipitate

2254. Pharmacopoeia reaction of potassium ferrocyanide with zinc cations produces:

- a. Violet precipitate
- b. Yellow precipitate
- c. Black precipitate
- d. White precipitate
- e. Red precipitate

2255. Pharmacy sells glaucine hydrochloride to a patient with chronic bronchitis. What common side

effect should he be warned about?

- a. Allergic skin rashes
- b. Decrease of arterial pressure**
- c. Increase of intraocular pressure
- d. Disruption of cardiac rate
- e. Excitation of central nervous system

2256. Pharmacy sells glaucine hydrochloride to a patient with chronic bronchitis. What common side effect should he be warned about?

- a. Disruption of cardiac rate
- b. Allergic skin rashes
- c. Excitation of central nervous system
- d. Increase of intraocular pressure

e. Decrease of arterial pressure

2257. Pharmacy sells glaucine hydrochloride to a patient with chronic bronchitis. What common side effect should he be warned about?

- a. Disruption of cardiac rate
- b. Increase of intraocular pressure
- c. Excitation of central nervous system
- d. Allergic skin rashes

e. Decrease of arterial pressure

2258. Phenobarbital causes induction of smooth endoplasmic reticulum enzymes in the cells. As a result, the amount of active pharmaceutical ingredient decreases due to the following process:

a. Activation of microsomal oxidation

- b. Activation of lipid peroxidation
- c. Activation of uric acid synthesis
- d. Activation of glycolysis
- e. Activation of protein peroxidation

2259. Phenobarbital causes induction of smooth endoplasmic reticulum enzymes in the cells. As a result, the amount of active pharmaceutical ingredient decreases due to the following process:

- a. Activation of lipid peroxidation
- b. Activation of glycolysis
- c. Activation of uric acid synthesis
- d. Activation of protein peroxidation

e. Activation of microsomal oxidation

2260. Phenobarbital causes induction of smooth endoplasmic reticulum enzymes in the cells. As a result, the amount of active pharmaceutical ingredient decreases due to the following process:

a. Activation of protein peroxidation

b. Activation of microsomal oxidation

- c. Activation of lipid peroxidation
- d. Activation of uric acid synthesis
- e. Activation of glycolysis

2261. Phosphate anions and arsenate anions form similar precipitates insoluble in an ammonia solution during their reaction with:

a. Magnesia mixture (a solution containing $MgCl_2$, NH_4Cl , NH_3)

- b. Cobalt sulfate solution
- c. Sodium hydroxide solution
- d. Nessler's reagent
- e. Lead acetate solution

2262. Phosphate anions and arsenate anions form similar precipitates insoluble in an ammonia solution during their reaction with:

a. Cobalt sulfate solution

b. Magnesia mixture (a solution containing $MgCl_2$, NH_4Cl , NH_3)

- c. Lead acetate solution
- d. Nessler's reagent
- e. Sodium hydroxide solution

2263. Phosphate anions and arsenate anions form similar precipitates insoluble in an ammonia solution during their reaction with:

- a. Cobalt sulfate solution
- b. Nessler's reagent
- c. Magnesia mixture (a solution containing $MgCl_2$, NH_4Cl , NH_3)**
- d. Sodium hydroxide solution
- e. Lead acetate solution

2264. Phosphorylation reactions in the cell are catalyzed by enzymes that have the trivial name of "kinases". What class of enzymes do they belong to?

- a. Isomerases
- b. Oxidoreductases
- c. Ligases
- d. Lyases

e. Transferases

2265. Phosphorylation reactions in the cell are catalyzed by enzymes that have the trivial name of "kinases". What class of enzymes do they belong to?

- a. Ligases

b. Transferases

- c. Oxidoreductases
- d. Isomerases
- e. Lyases

2266. Phosphorylation reactions in the cell are catalyzed by enzymes that have the trivial name of "kinases". What class of enzymes do they belong to?

- a. Lyases

b. Transferases

- c. Isomerases
- d. Ligases
- e. Oxidoreductases

2267. Photometry is one of the most common instrumental methods of analysis. It is based on the measurement of:

- a. Rotation angle
- b. Fluorescence intensity

c. Optical density

- d. Wavelength
- e. Refractive index

2268. Photometry is one of the most common instrumental methods of analysis. It is based on the measurement of:

- a. Wavelength

b. Optical density

- c. Fluorescence intensity
- d. Rotation angle
- e. Refractive index

2269. Photometry is one of the most common instrumental methods of analysis. It is based on the measurement of:

- a. Wavelength
- b. Rotation angle

c. Optical density

- d. Refractive index
- e. Fluorescence intensity

2270. Phytopathogenic microorganisms can significantly affect the yield of medicinal plants by decreasing their biomass or content of active substances. A plant afflicted with phytopathogenic microorganisms can develop rot in the organs and tissues rich in water, which leads to discoloration and changes in taste and odor. What microorganisms are the most common cause of rot?

- a. Mycoplasma and rickettsia
- b. Mycoplasma and viroids

c. Viruses and rickettsia

d. Fungi and bacteria

e. Viruses and bacteria

2271. Phytopathogenic microorganisms can significantly affect the yield of medicinal plants by decreasing their biomass or content of active substances. A plant afflicted with phytopathogenic microorganisms can develop rot in the organs and tissues rich in water, which leads to discoloration and changes in taste and odor. What microorganisms are the most common cause of rot?

a. Viruses and bacteria

b. Fungi and bacteria

c. Viruses and rickettsia

d. Mycoplasma and viroids

e. Mycoplasma and rickettsia

2272. Phytopathogenic microorganisms can significantly affect the yield of medicinal plants by decreasing their biomass or content of active substances. A plant afflicted with phytopathogenic microorganisms can develop rot in the organs and tissues rich in water, which leads to discoloration and changes in taste and odor. What microorganisms are the most common cause of rot?

a. Viruses and bacteria

b. Mycoplasma and viroids

c. Mycoplasma and rickettsia

d. Viruses and rickettsia

e. Fungi and bacteria

2273. Plant fatty acids have an odd number of carbon atoms. What product forms as a result of beta-oxidation of fatty acids with an odd number of carbon atoms?

a. Palmitoyl-CoA

b. Propionyl-CoA

c. Acetoacetyl-CoA

d. Stearoyl-CoA

e. Oxymethylglutaryl-CoA

2274. Plant fatty acids have an odd number of carbon atoms. What product forms as a result of beta-oxidation of fatty acids with an odd number of carbon atoms?

a. Palmitoyl-CoA

b. Oxymethylglutaryl-CoA

c. Propionyl-CoA

d. Stearoyl-CoA

e. Acetoacetyl-CoA

2275. Plant fatty acids have an odd number of carbon atoms. What product forms as a result of beta-oxidation of fatty acids with an odd number of carbon atoms?

a. Stearoyl-CoA

b. Palmitoyl-CoA

c. Propionyl-CoA

d. Acetoacetyl-CoA

e. Oxymethylglutaryl-CoA

2276. Plantago major inflorescence grows at the apex, its rachis is long, with sessile flowers. Name this type of inflorescence:

a. Panicle

b. Capitulum

c. Spike

d. Thyrs

e. Spadix

2277. Plantago major inflorescence grows at the apex, its rachis is long, with sessile flowers. Name this type of inflorescence:

a. Spadix

b. Panicle

c. Spike

d. Capitulum

e. Thyse

2278. *Plantago major* inflorescence grows at the apex, its rachis is long, with sessile flowers. Name this type of inflorescence:

- a. Thyse
- b. Capitulum
- c. Spadix
- d. Panicle

e. Spike

2279. Plants that grow in moderately humid conditions belong to the following ecological group:

- a. Hydrophytes
- b. Succulents
- c. Mesophytes**
- d. Hygrophytes
- e. Xerophytes

2280. Plants that grow in moderately humid conditions belong to the following ecological group:

- a. Hygrophytes
- b. Xerophytes
- c. Succulents

d. Mesophytes

e. Hydrophytes

2281. Pleural tap performed by a doctor has yielded a significant amount of yellow exudate. Microscopy detected neutrophils in the exudate. What type of exudate is it characteristic of?

- a. Bloody
- b. Fibrinous

c. Purulent

- d. Hemorrhagic
- e. Serous

2282. Pleural tap performed by a doctor has yielded a significant amount of yellow exudate. Microscopy detected neutrophils in the exudate. What type of exudate is it characteristic of?

- a. Bloody
- b. Hemorrhagic

c. Purulent

- d. Fibrinous
- e. Serous

2283. Pleural tap performed by a doctor has yielded a significant amount of yellow exudate. Microscopy detected neutrophils in the exudate. What type of exudate is it characteristic of?

a. Fibrinous

b. Purulent

- c. Hemorrhagic
- d. Serous
- e. Bloody

2284. Polarography is one of the electrochemical methods of analysis. What parameter is used in polarographic analysis to identify the substance being analyzed?

- a. Height of a polarographic wave
- b. Position of a polarographic wave
- c. Magnitude of the electromotive force
- d. Width of a polarographic wave

e. Half-wave potential

2285. Polarography is one of the electrochemical methods of analysis. What parameter is used in polarographic analysis to identify the substance being analyzed?

- a. Position of a polarographic wave
- b. Width of a polarographic wave
- c. Height of a polarographic wave
- d. Magnitude of the electromotive force

e. Half-wave potential

2286. Polarography is one of the electrochemical methods of analysis. What parameter is used in polarographic analysis to identify the substance being analyzed?

- a. Width of a polarographic wave
- b. Height of a polarographic wave
- c. Half-wave potential**
- d. Position of a polarographic wave
- e. Magnitude of the electromotive force

2287. Polymerase chain reaction (PCR) is widely used in modern laboratory diagnostics. What can be detected using this reaction?

- a. Allergy to the pathogen
- b. Antigen of the microorganism
- c. Antibodies to the microorganism
- d. Nucleic acid of the microorganism**
- e. Autoimmune disease

2288. Polymerase chain reaction (PCR) is widely used in modern laboratory diagnostics. What can be detected using this reaction?

- a. Antigen of the microorganism
- b. Nucleic acid of the microorganism**
- c. Antibodies to the microorganism
- d. Autoimmune disease
- e. Allergy to the pathogen

2289. Polymerase chain reaction (PCR) is widely used in modern laboratory diagnostics. What can be detected using this reaction?

- a. Autoimmune disease
- b. Nucleic acid of the microorganism**
- c. Allergy to the pathogen
- d. Antibodies to the microorganism
- e. Antigen of the microorganism

2290. Potassium dichromate solution is to be analyzed. What physicochemical method of analysis will be used to determine its concentration?

- a. Spectrophotometry**
- b. Coulometry
- c. Fluorimetry
- d. Conductometric titration
- e. Polarimetry

2291. Potassium dichromate solution is to be analyzed. What physicochemical method of analysis will be used to determine its concentration?

- a. Spectrophotometry**
- b. Coulometry
- c. Polarimetry
- d. Conductometric titration
- e. Fluorimetry

2292. Potassium dichromate solution is to be analyzed. What physicochemical method of analysis will be used to determine its concentration?

- a. Conductometric titration
- b. Fluorimetry
- c. Coulometry
- d. Polarimetry
- e. Spectrophotometry**

2293. Potassium iodide solution has been added to the solution containing cations of the sixth analytical group (acid-base classification). It resulted in the red precipitate soluble in excess of reagent. What cations are present in the solution?

- a. Cadmium
- b. Mercury (II)**
- c. Bismuth

- d. Nickel
- e. Cobalt (II)

2294. Potassium iodide solution has been added to the solution containing cations of the sixth analytical group (acid-base classification). It resulted in the red precipitate soluble in excess of reagent. What cations are present in the solution?

- a. Cadmium
- b. Mercury (II)**
- c. Cobalt (II)
- d. Bismuth
- e. Nickel

2295. Potassium iodide solution has been added to the solution containing cations of the sixth analytical group (acid-base classification). It resulted in the red precipitate soluble in excess of reagent. What cations are present in the solution?

- a. Cobalt (II)
- b. Mercury (II)**
- c. Nickel
- d. Cadmium
- e. Bismuth

2296. Potentiometric methods of analysis are based on the use of:

- a. Dependence of the electric current on the concentration of the analyte
- b. Dependence of the mass of the precipitate on the concentration of the analyte
- c. Dependence of the volume of the produced gas on the concentration of the analyte
- d. Dependence of the volume of the titrant on the concentration of the analyte
- e. Dependence of the electromotive force (EMF) of a galvanic cell on the concentration of the analyte**

2297. Potentiometric methods of analysis are based on the use of:

- a. Dependence of the electric current on the concentration of the analyte
- b. Dependence of the volume of the titrant on the concentration of the analyte
- c. Dependence of the mass of the precipitate on the concentration of the analyte
- d. Dependence of the volume of the produced gas on the concentration of the analyte
- e. Dependence of the electromotive force (EMF) of a galvanic cell on the concentration of the analyte**

2298. Potentiometric methods of analysis are based on the use of:

- a. Dependence of the mass of the precipitate on the concentration of the analyte
- b. Dependence of the electric current on the concentration of the analyte
- c. Dependence of the volume of the produced gas on the concentration of the analyte
- d. Dependence of the electromotive force (EMF) of a galvanic cell on the concentration of the analyte**
- e. Dependence of the volume of the titrant on the concentration of the analyte

2299. Potentiometry is an analytical method widely used in pharmaceutical analysis. In what galvanic cell its electromotive force (EMF) does not depend on the value of standard electrode potentials?

- a. Concentration galvanic cell**
- b. Galvanic cell with ionic transport
- c. Reversible galvanic cell
- d. Chemical galvanic cell
- e. Galvanic cell without ionic transport

2300. Potentiometry is an analytical method widely used in pharmaceutical analysis. In what galvanic cell its electromotive force (EMF) does not depend on the value of standard electrode potentials?

- a. Galvanic cell with ionic transport
- b. Reversible galvanic cell
- c. Concentration galvanic cell**
- d. Galvanic cell without ionic transport
- e. Chemical galvanic cell

2301. Potentiometry is an analytical method widely used in pharmaceutical analysis. In what galvanic cell its electromotive force (EMF) does not depend on the value of standard electrode potentials?

- a. Reversible galvanic cell
- b. Galvanic cell with ionic transport
- c. Concentration galvanic cell**

- d. Chemical galvanic cell
- e. Galvanic cell without ionic transport

2302. Potentiometry is one of the electrochemical methods of analysis. This method is based on measuring (determination) of:

- a. Diffuse layer potential
- b. Zeta-potential
- c. Reference electrode potential
- d. Indicator electrode potential**
- e. Systemic redox potential

2303. Potentiometry is one of the electrochemical methods of analysis. This method is based on measuring (determination) of:

- a. Reference electrode potential
- b. Systemic redox potential
- c. Indicator electrode potential**
- d. Zeta-potential
- e. Diffuse layer potential

2304. Potentiometry is one of the electrochemical methods of analysis. This method is based on measuring (determination) of:

- a. Zeta-potential
- b. Systemic redox potential
- c. Reference electrode potential
- d. Indicator electrode potential**
- e. Diffuse layer potential

2305. Potentiometry is widely used in the analysis of medicinal products. What type of galvanic cell has the electromotive force that does not depend on the value of the standard electrode potential?

- a. Chemical galvanic cell
- b. Galvanic cell with ion transfer
- c. Concentration galvanic cell**
- d. Reversible galvanic cell
- e. Galvanic cell without ion transfer

2306. Potentiometry is widely used in the analysis of medicinal products. What type of galvanic cell has the electromotive force that does not depend on the value of the standard electrode potential?

- a. Galvanic cell without ion transfer
- b. Galvanic cell with ion transfer
- c. Chemical galvanic cell
- d. Concentration galvanic cell**
- e. Reversible galvanic cell

2307. Potentiometry is widely used in the analysis of medicinal products. What type of galvanic cell has the electromotive force that does not depend on the value of the standard electrode potential?

- a. Reversible galvanic cell
- b. Concentration galvanic cell**
- c. Galvanic cell without ion transfer
- d. Galvanic cell with ion transfer
- e. Chemical galvanic cell

2308. Preliminary disinfection of air and working surfaces of the equipment was conducted in the operating room of the surgical inpatient unit. What method of sterilization would be the most advisable in this case?

- a. Irradiation sterilization
- b. Ultraviolet irradiation**
- c. Formaldehyde vapor
- d. High-frequency current
- e. Flowing steam

2309. Preliminary disinfection of air and working surfaces of the equipment was conducted in the operating room of the surgical inpatient unit. What method of sterilization would be the most advisable in this case?

- a. Irradiation sterilization
- b. High-frequency current
- c. Flowing steam
- d. Formaldehyde vapor

e. Ultraviolet irradiation

2310. Preliminary disinfection of air and working surfaces of the equipment was conducted in the operating room of the surgical inpatient unit. What method of sterilization would be the most advisable in this case?

- a. Irradiation sterilization
- b. High-frequency current
- c. Formaldehyde vapor
- d. Flowing steam

e. Ultraviolet irradiation

2311. Presence of the pathogenic microorganisms in the air can be prognosticated according to the content of sanitary-indicative bacteria. Which bacteria indicate immediate epidemiologic danger?

a. Yeast fungi

b. Haemolytic streptococci

- c. Sarcinae
- d. Micrococci
- e. Mold fungi

2312. Presence of the pathogenic microorganisms in the air can be prognosticated according to the content of sanitary-indicative bacteria. Which bacteria indicate immediate epidemiologic danger?

- a. Yeast fungi
- b. Mold fungi
- c. Sarcinae
- d. Micrococci

e. Haemolytic streptococci

2313. Presence of the pathogenic microorganisms in the air can be prognosticated according to the content of sanitary-indicative bacteria. Which bacteria indicate immediate epidemiologic danger?

- a. Yeast fungi
- b. Sarcinae
- c. Micrococci
- d. Mold fungi

e. Haemolytic streptococci

2314. Primary and secondary nitroalkanes are tautomeric compounds. What tautomerism is characteristic of these compounds?

a. Aci-nitro tautomerism

- b. Keto-enol tautomerism
- c. Tautomerism of azoles
- d. Lactam-lactim tautomerism
- e. Amino-imino tautomerism

2315. Primary and secondary nitroalkanes are tautomeric compounds. What tautomerism is characteristic of these compounds?

a. Amino-imino tautomerism

b. Aci-nitro tautomerism

- c. Keto-enol tautomerism
- d. Lactam-lactim tautomerism
- e. Tautomerism of azoles

2316. Primary and secondary nitroalkanes are tautomeric compounds. What tautomerism is characteristic of these compounds?

a. Tautomerism of azoles

b. Aci-nitro tautomerism

- c. Lactam-lactim tautomerism
- d. Amino-imino tautomerism
- e. Keto-enol tautomerism

2317. Primary protein structure is formed as the result of amino acid polymerization. What bonds between the amino acid residues are characteristic of this structure?

- a. Hydrogen
- b. Ion interaction

c. Peptide

- d. Hydrophobic
- e. Electrostatic

2318. Primary protein structure is formed as the result of amino acid polymerization. What bonds between the amino acid residues are characteristic of this structure?

- a. Ion interaction
- b. Electrostatic
- c. Hydrogen
- d. Hydrophobic

e. Peptide

2319. Primary protein structure is formed as the result of amino acid polymerization. What bonds between the amino acid residues are characteristic of this structure?

- a. Ion interaction
- b. Hydrogen

c. Peptide

- d. Hydrophobic
- e. Electrostatic

2320. Production of digestive juices by gastrointestinal tract mucosa is regulated by various factors. What local hormone can affect this process?

a. Gastrin

- b. Angiotensin
- c. Bradykinin
- d. Calcitriol
- e. Endorphin

2321. Production of digestive juices by gastrointestinal tract mucosa is regulated by various factors. What local hormone can affect this process?

a. Gastrin

- b. Calcitriol
- c. Bradykinin
- d. Endorphin
- e. Angiotensin

2322. Production of digestive juices by gastrointestinal tract mucosa is regulated by various factors. What local hormone can affect this process?

- a. Bradykinin
- b. Angiotensin
- c. Endorphin

d. Gastrin

- e. Calcitriol

2323. Production of injection solutions in pharmacies requires strict control of sterilization quality. What is placed in autoclave sterilization box to ensure proper control?

a. Ampoule with fungi spores

b. Ampoule with microbe spores

- c. Ampoule with viruses
- d. Ampoule with staphylococcus culture
- e. Ampoule with colibacillus culture

2324. Production of injection solutions in pharmacies requires strict control of sterilization quality. What is placed in autoclave sterilization box to ensure proper control?

- a. Ampoule with fungi spores
- b. Ampoule with viruses
- c. Ampoule with colibacillus culture
- d. Ampoule with staphylococcus culture

e. Ampoule with microbe spores

2325. Production of injection solutions in pharmacies requires strict control of sterilization quality. What is placed in autoclave sterilization box to ensure proper control?

a. Ampoule with staphylococcus culture

b. Ampoule with microbe spores

c. Ampoule with fungi spores

d. Ampoule with viruses

e. Ampoule with colibacillus culture

2326. Prosenchyma cells with framed pores in their membranes were detected during microscopy of raw material fragment. Such cells are characteristic of the following tissues:

a. Integumentary tissue

b. Growth tissue

c. Strengthening tissue

d. Storage tissue

e. Conducting tissue

2327. Prosenchyma cells with framed pores in their membranes were detected during microscopy of raw material fragment. Such cells are characteristic of the following tissues:

a. Storage tissue

b. Integumentary tissue

c. Strengthening tissue

d. Conducting tissue

e. Growth tissue

2328. Prosenchyma cells with framed pores in their membranes were detected during microscopy of raw material fragment. Such cells are characteristic of the following tissues:

a. Strengthening tissue

b. Conducting tissue

c. Integumentary tissue

d. Storage tissue

e. Growth tissue

2329. Proserin is a reverse acetylcholinesterase inhibitor. What is the mechanism of inhibitory action of the drug?

a. Covalent bond with enzyme substrate

b. Oxidation of iron ion in enzyme active center

c. Competition with acetylcholine for enzyme active center

d. Enzyme denaturation

e. Covalent bond outside of enzyme active center

2330. Proserin is a reverse acetylcholinesterase inhibitor. What is the mechanism of inhibitory action of the drug?

a. Oxidation of iron ion in enzyme active center

b. Competition with acetylcholine for enzyme active center

c. Covalent bond with enzyme substrate

d. Covalent bond outside of enzyme active center

e. Enzyme denaturation

2331. Proserin is a reverse acetylcholinesterase inhibitor. What is the mechanism of inhibitory action of the drug?

a. Oxidation of iron ion in enzyme active center

b. Covalent bond outside of enzyme active center

c. Enzyme denaturation

d. Competition with acetylcholine for enzyme active center

e. Covalent bond with enzyme substrate

2332. Proteins are of great importance for vital functions. What value of pH results in zero electrophoretic mobility of gelatin (gelatin isoelectric point equals 4.7)?

a. 4.7

b. 7.0

c. 5.5

d. 14.0

e. 9.4

2333. Proteins are of great importance for vital functions. What value of pH results in zero electrophoretic mobility of gelatin (gelatin isoelectric point equals 4.7)?

a. 14.0

b. 4.7

c. 9.4

d. 7.0

e. 5.5

2334. Proteins are of great importance for vital functions. What value of pH results in zero electrophoretic mobility of gelatin (gelatin isoelectric point equals 4.7)?

a. 5.5

b. 7.0

c. 4.7

d. 9.4

e. 14.0

2335. Proteins carry out various extremely important functions in the human body. Actin and myosin perform the following function:

a. Contractile (motor)

b. Regulatory

c. Transport

d. Cogenetic

e. Receptor

2336. Proteins carry out various extremely important functions in the human body. Actin and myosin perform the following function:

a. Receptor

b. Cogenetic

c. Transport

d. Regulatory

e. Contractile (motor)

2337. Proteins carry out various extremely important functions in the human body. Actin and myosin perform the following function:

a. Receptor

b. Transport

c. Contractile (motor)

d. Regulatory

e. Cogenetic

2338. Pterin derivatives are used as antitumor agents, because they are the equivalents of the coenzyme required for the synthesis of thiamine monophosphate. This coenzyme is the active form of the following vitamin:

a. Folic acid

b. Thiamine

c. Riboflavin

d. Lipoic acid

e. Ascorbic acid

2339. Pterin derivatives are used as antitumor agents, because they are the equivalents of the coenzyme required for the synthesis of thiamine monophosphate. This coenzyme is the active form of the following vitamin:

a. Lipoic acid

b. Ascorbic acid

c. Riboflavin

d. Thiamine

e. Folic acid

2340. Pterin derivatives are used as antitumor agents, because they are the equivalents of the coenzyme required for the synthesis of thiamine monophosphate. This coenzyme is the active form of

the following vitamin:

- a. Riboflavin
- b. Thiamine
- c. Lipoic acid
- d. Ascorbic acid

e. Folic acid

2341. Quantitative content of hydrogen peroxide can be determined by means of the following self-indicator method:

a. Permanganatometry

- b. Nitritometry
- c. Iodometry
- d. Bromatometry
- e. Argentometry

2342. Quantitative content of hydrogen peroxide can be determined by means of the following self-indicator method:

- a. Argentometry
- b. Nitritometry

c. Permanganatometry

- d. Bromatometry
- e. Iodometry

2343. Quantitative content of hydrogen peroxide can be determined by means of the following self-indicator method:

- a. Nitritometry

b. Permanganatometry

- c. Argentometry
- d. Bromatometry
- e. Iodometry

2344. Quantitative content of oxalic acid can be determined by means of permanganatometry. How to determine equivalence point for this kind of titration?

- a. With adsorption indicator

b. When titrate changes its color after another drop of process solution is added

- c. With specific indicator
- d. With redox indicator diphenylamine
- e. With pH indicator

2345. Quantitative content of oxalic acid can be determined by means of permanganatometry. How to determine equivalence point for this kind of titration?

- a. With redox indicator diphenylamine
- b. With pH indicator
- c. With adsorption indicator
- d. With specific indicator

e. When titrate changes its color after another drop of process solution is added

2346. Quantitative content of oxalic acid can be determined by means of permanganatometry. How to determine equivalence point for this kind of titration?

- a. With redox indicator diphenylamine
- b. With specific indicator
- c. With adsorption indicator
- d. With pH indicator

e. When titrate changes its color after another drop of process solution is added

2347. Quantitative determination of iodides by Fajans method is performed with adsorption indicators. The following can be used as an adsorption indicator:

a. Eosin

- b. Diphenylamine
- c. Methyl orange
- d. Phenolphthalein
- e. Murexide

2348. Quantitative determination of iodides by Fajans method is performed with adsorption indicators. The following can be used as an adsorption indicator:

a. Diphenylamine

b. Eosin

c. Phenolphthalein

d. Murexide

e. Methyl orange

2349. Quantitative determination of iodides by Fajans method is performed with adsorption indicators. The following can be used as an adsorption indicator:

a. Murexide

b. Methyl orange

c. Eosin

d. Diphenylamine

e. Phenolphthalein

2350. Quite often the soil may contain a number of pathogenic microorganisms. Causative agents of the following disease may exist in the soil for a long time:

a. Dysentery

b. Viral hepatitis

c. Anthrax

d. Pertussis

e. Diphtheria

2351. Quite often the soil may contain a number of pathogenic microorganisms. Causative agents of the following disease may exist in the soil for a long time:

a. Pertussis

b. Diphtheria

c. Dysentery

d. Anthrax

e. Viral hepatitis

2352. Quite often the soil may contain a number of pathogenic microorganisms. Causative agents of the following disease may exist in the soil for a long time:

a. Pertussis

b. Viral hepatitis

c. Dysentery

d. Diphtheria

e. Anthrax

2353. Racemose clusters of calcium carbonate crystals are detected among the waste products of a protoplast. These crystals are:

a. Crystal druses

b. Isolated crystals

c. Styloid crystals

d. Raphides

e. Cystoliths

2354. Racemose clusters of calcium carbonate crystals are detected among the waste products of a protoplast. These crystals are:

a. Isolated crystals

b. Crystal druses

c. Raphides

d. Cystoliths

e. Styloid crystals

2355. Racemose clusters of calcium carbonate crystals are detected among the waste products of a protoplast. These crystals are:

a. Styloid crystals

b. Crystal druses

c. Raphides

d. Isolated crystals

e. Cystoliths

2356. Rapid analysis of benzoate ions by means of Pharmacopoeia reaction with iron(III) chloride produces:

a. Black precipitate

b. Pink-yellow precipitate

c. Blue precipitate

d. Green precipitate

e. Red precipitate

2357. Rapid analysis of benzoate ions by means of Pharmacopoeia reaction with iron(III) chloride produces:

a. Black precipitate

b. Blue precipitate

c. Pink-yellow precipitate

d. Green precipitate

e. Red precipitate

2358. Rapid analysis of benzoate ions by means of Pharmacopoeia reaction with iron(III) chloride produces:

a. Blue precipitate

b. Black precipitate

c. Green precipitate

d. Pink-yellow precipitate

e. Red precipitate

2359. Rapid growth of tumor node and its progressing malignant change (malignization) is observed in a patient. The described developments are characteristic of the following stage of tumor growth:

a. Progression

b. Inactivation

c. Transformation

d. Exudation

e. Promotion

2360. Rapid growth of tumor node and its progressing malignant change (malignization) is observed in a patient. The described developments are characteristic of the following stage of tumor growth:

a. Exudation

b. Inactivation

c. Transformation

d. Promotion

e. Progression

2361. Rapid growth of tumor node and its progressing malignant change (malignization) is observed in a patient. The described developments are characteristic of the following stage of tumor growth:

a. Inactivation

b. Transformation

c. Progression

d. Promotion

e. Exudation

2362. Reaction of sodium ions with potassium hexahydroxoantimonate (V) in neutral medium produces precipitate. Specify the color of this precipitate:

a. Green

b. Red

c. Yellow

d. Blue

e. White

2363. Reaction of sodium ions with potassium hexahydroxoantimonate (V) in neutral medium produces precipitate. Specify the color of this precipitate:

a. Red

b. White

c. Yellow

- d. Green
- e. Blue

2364. Reaction of sodium ions with potassium hexahydroxoantimonate (V) in neutral medium produces precipitate. Specify the color of this precipitate:

- a. Yellow
- b. Blue
- c. Green
- d. White**
- e. Red

2365. Recommend the patient with glaucoma an M-cholinomimetic agent:

- a. Atropine sulfate
- b. Pilocarpine hydrochloride**
- c. Levomycetin (Chloramphenicol)
- d. Ephedrine hydrochloride
- e. Sulfacyl-sodium (Sulfacetamide)

2366. Recommend the patient with glaucoma an M-cholinomimetic agent:

- a. Ephedrine hydrochloride
- b. Atropine sulfate
- c. Levomycetin (Chloramphenicol)
- d. Pilocarpine hydrochloride**
- e. Sulfacyl-sodium (Sulfacetamide)

2367. Recommend the patient with glaucoma an M-cholinomimetic agent:

- a. Levomycetin (Chloramphenicol)
- b. Ephedrine hydrochloride
- c. Atropine sulfate
- d. Sulfacyl-sodium (Sulfacetamide)
- e. Pilocarpine hydrochloride**

2368. Research of reaction rate dependance from various factors allows to intensify technological processes. What factor textbfHAS NO effect on reaction rate constant?

- a. Solid substance dispersion degree
- b. Reacting agents concentration**
- c. Temperature
- d. Solvent nature
- e. Reagents nature

2369. Research of reaction rate dependance from various factors allows to intensify technological processes. What factor textbfHAS NO effect on reaction rate constant?

- a. Solid substance dispersion degree
- b. Reagents nature
- c. Reacting agents concentration**
- d. Solvent nature
- e. Temperature

2370. Research of reaction rate dependance from various factors allows to intensify technological processes. What factor textbfHAS NO effect on reaction rate constant?

- a. Solvent nature
- b. Solid substance dispersion degree
- c. Reacting agents concentration**
- d. Temperature
- e. Reagents nature

2371. Rhizome and roots of Inula helenium have cavities without clear inner margins that are filled with essential oils. What are they?

- a. Non-articulated laticifers
- b. Resin ducts
- c. Lysigenous cavities**
- d. Schizogenous cavities
- e. Articulated laticifers

2372. Rhizome and roots of *Inula helenium* have cavities without clear inner margins that are filled with essential oils. What are they?

- a. Resin ducts
- b. Schizogenous cavities

c. Lysigenous cavities

- d. Non-articulated laticifers
- e. Articulated laticifers

2373. Rhizome and roots of *Inula helenium* have cavities without clear inner margins that are filled with essential oils. What are they?

- a. Schizogenous cavities
- b. Articulated laticifers
- c. Resin ducts

d. Lysigenous cavities

- e. Non-articulated laticifers

2374. Sabin polyvalent oral vaccine is used for planned immunization of children against poliomyelitis. However, this vaccine is absolutely contraindicated for the:

a. Children with congenital or acquired immunodeficiencies

- b. Adolescents
- c. Children with recent medical history of infectious diseases
- d. Preschoolers
- e. Children vaccinated with Salk vaccine

2375. Sabin polyvalent oral vaccine is used for planned immunization of children against poliomyelitis. However, this vaccine is absolutely contraindicated for the:

- a. Adolescents
- b. Children vaccinated with Salk vaccine
- c. Preschoolers

d. Children with congenital or acquired immunodeficiencies

- e. Children with recent medical history of infectious diseases

2376. Sabin polyvalent oral vaccine is used for planned immunization of children against poliomyelitis. However, this vaccine is absolutely contraindicated for the:

- a. Children vaccinated with Salk vaccine
- b. Children with recent medical history of infectious diseases

c. Children with congenital or acquired immunodeficiencies

- d. Adolescents
- e. Preschoolers

2377. Salicylic acid and its derivatives are widely used in medicine. This compound belongs to the following class of chemicals:

- a. Aldehydes
- b. Heterocyclic compounds
- c. Alcohols

d. Hydroxycarboxylic acids

- e. Alkanes

2378. Salicylic acid and its derivatives are widely used in medicine. This compound belongs to the following class of chemicals:

- a. Heterocyclic compounds
- b. Alcohols
- c. Alkanes
- d. Aldehydes

e. Hydroxycarboxylic acids

2379. Salicylic acid and its derivatives are widely used in medicine. This compound belongs to the following class of chemicals:

- a. Heterocyclic compounds
- b. Aldehydes
- c. Alcohols
- d. Alkanes

e. Hydroxycarboxylic acids

2380. Sanitary microbiological investigation of potable water has detected coliphages. What conclusion can be made about the sanitary-hygienic status of this water?

a. Fecal contamination

- b. The water is safe to drink after boiling
- c. The water is safe to drink
- d. The water is for industrial use only
- e. Artesian water

2381. Sanitary microbiological investigation of potable water has detected coliphages. What conclusion can be made about the sanitary-hygienic status of this water?

- a. Artesian water
- b. The water is safe to drink after boiling

c. Fecal contamination

- d. The water is safe to drink
- e. The water is for industrial use only

2382. Sanitary microbiological investigation of potable water has detected coliphages. What conclusion can be made about the sanitary-hygienic status of this water?

- a. The water is safe to drink
- b. Artesian water
- c. The water is safe to drink after boiling

d. Fecal contamination

- e. The water is for industrial use only

2383. Select a Brassicaceae family plant that contains glycosides similar in action to those obtained from foxglove:

a. Erysimum canescens

- b. Arctostaphylos uva-ursi
- c. Urtica dioica
- d. Primula officinalis
- e. Polygonum aviculare

2384. Select a Brassicaceae family plant that contains glycosides similar in action to those obtained from foxglove:

- a. Primula officinalis
- b. Polygonum aviculare

c. Erysimum canescens

- d. Urtica dioica
- e. Arctostaphylos uva-ursi

2385. Select a Brassicaceae family plant that contains glycosides similar in action to those obtained from foxglove:

- a. Primula officinalis
- b. Urtica dioica
- c. Polygonum aviculare
- d. Arctostaphylos uva-ursi

e. Erysimum canescens

2386. Select a metallochromic indicator from the list below.

- a. Eosin

b. Murexide

- c. Litmus
- d. Starch
- e. Methyl orange

2387. Select a metallochromic indicator from the list below.

- a. Eosin
- b. Litmus
- c. Methyl orange

d. Murexide

- e. Starch

2388. Select a metallochromic indicator from the list below.

- a. Methyl orange
- b. Eosin
- c. Starch
- d. Murexide**
- e. Litmus

2389. Select from the list a compound that is a pyridinecarboxylic acid:

- a. Benzoic acid
- b. Nicotinic acid**
- c. Barbituric acid
- d. Malic acid
- e. Uric acid

2390. Select from the list a compound that is a pyridinecarboxylic acid:

- a. Benzoic acid
- b. Uric acid
- c. Barbituric acid
- d. Malic acid
- e. Nicotinic acid**

2391. Select from the list a compound that is a pyridinecarboxylic acid:

- a. Uric acid
- b. Barbituric acid
- c. Malic acid
- d. Nicotinic acid**
- e. Benzoic acid

2392. Select from the list an adsorption indicator:

- a. Eosin**
- b. Methyl-orange
- c. Sulfosalicylic acid
- d. Phenolphthalein
- e. Eriochrome black T

2393. Select from the list an adsorption indicator:

- a. Methyl-orange
- b. Eriochrome black T
- c. Sulfosalicylic acid
- d. Eosin**
- e. Phenolphthalein

2394. Select from the list an adsorption indicator:

- a. Phenolphthalein
- b. Methyl-orange
- c. Eriochrome black T
- d. Sulfosalicylic acid
- e. Eosin**

2395. Select from the list an antiprotozoal drug with an anti-Helicobacter pylori effect.

- a. Aciclovir
- b. Isoniazid
- c. Metronidazole**
- d. Benzylpenicillin sodium salt
- e. Rifampicin

2396. Select from the list an antiprotozoal drug with an anti-Helicobacter pylori effect.

- a. Isoniazid
- b. Metronidazole**
- c. Aciclovir
- d. Rifampicin
- e. Benzylpenicillin sodium salt

2397. Select from the list an antiprotozoal drug with an anti-Helicobacter pylori effect.

- a. Rifampicin
- b. Isoniazid
- c. Aciclovir
- d. Benzylpenicillin sodium salt

e. Metronidazole

2398. Select ketose from the monosaccharides listed below:

- a. Glucose
- b. Mannose
- c. Arabinose

d. Fructose

e. Ribose

2399. Select ketose from the monosaccharides listed below:

- a. Mannose
- b. Arabinose

c. Fructose

- d. Glucose
- e. Ribose

2400. Select ketose from the monosaccharides listed below:

- a. Ribose
- b. Mannose
- c. Glucose
- d. Arabinose

e. Fructose

2401. Select lyophilic systems among the dispersion systems listed below.

a. Surfactant solutions

- b. Emulsions
- c. Suspensions
- d. Solid foams
- e. Sols

2402. Select lyophilic systems among the dispersion systems listed below.

a. Surfactant solutions

- b. Solid foams
- c. Suspensions
- d. Emulsions
- e. Sols

2403. Select lyophilic systems among the dispersion systems listed below.

a. Surfactant solutions

- b. Sols
- c. Emulsions
- d. Solid foams
- e. Suspensions

2404. Select the hepatoprotective drugs from the list below:

a. Allochol, Cholenzym

b. Essentiale (Phospholipides), Thiotriasoline

- c. No-Spa (drotaverine), papaverine hydrochloride
- d. Oxaphenamide (Osalmid), Nicodin
- e. Festal, Panzinorm (Pancreatin)

2405. Select the hepatoprotective drugs from the list below:

a. Allochol, Cholenzym

b. Festal, Panzinorm (Pancreatin)

c. Essentiale (Phospholipides), Thiotriasoline

- d. No-Spa (drotaverine), papaverine hydrochloride
- e. Oxaphenamide (Osalmid), Nicodin

2406. Select the hepatoprotective drugs from the list below:

a. No-Spa (drotaverine), papaverine hydrochloride

b. Allochol, Cholenzym

c. Essentiale (Phospholipides), Thiotriasoline

d. Festal, Panzinorm (Pancreatin)

e. Oxaphenamide (Osalmid), Nicodin

2407. Selective solvents are used in laboratories and factories to isolate and refine essential oils, alkaloids, antibiotics, and other pharmaceutical substances. This process is called:

a. Extraction

b. Coagulation

c. Flocculation

d. Flotation

e. Sedimentation

2408. Selective solvents are used in laboratories and factories to isolate and refine essential oils, alkaloids, antibiotics, and other pharmaceutical substances. This process is called:

a. Coagulation

b. Flotation

c. Sedimentation

d. Flocculation

e. Extraction

2409. Selective solvents are used in laboratories and factories to isolate and refine essential oils, alkaloids, antibiotics, and other pharmaceutical substances. This process is called:

a. Flotation

b. Extraction

c. Sedimentation

d. Coagulation

e. Flocculation

2410. Separation of substances in chromatography is based on the ability of solutes:

a. To distribute between two mobile phases

b. To distribute between two stationary phases

c. To precipitate

d. To dissolve

e. To distribute between the mobile and stationary phases

2411. Separation of substances in chromatography is based on the ability of solutes:

a. To precipitate

b. To dissolve

c. To distribute between two stationary phases

d. To distribute between the mobile and stationary phases

e. To distribute between two mobile phases

2412. Separation of substances in chromatography is based on the ability of solutes:

a. To precipitate

b. To distribute between two stationary phases

c. To distribute between the mobile and stationary phases

d. To dissolve

e. To distribute between two mobile phases

2413. Separation of substances in gas-liquid chromatography occurs due to the different speed of movement of substances through the column. What is the mobile phase in this method of analysis?

a. Carrier gas

b. Water

c. Organic solvent

d. Liquid phases

e. Solid carrier

2414. Separation of substances in gas-liquid chromatography occurs due to the different speed of movement of substances through the column. What is the mobile phase in this method of analysis?

a. Liquid phases

b. Organic solvent

c. Water

d. Solid carrier

e. Carrier gas

2415. Separation of substances in gas-liquid chromatography occurs due to the different speed of movement of substances through the column. What is the mobile phase in this method of analysis?

a. Water

b. Liquid phases

c. Organic solvent

d. Carrier gas

e. Solid carrier

2416. Serology is the main method of congenital toxoplasmosis diagnostics. What reaction is used to diagnose this pathology?

a. Agglutination

b. Precipitation

c. Complement fixation

d. Bacteriolysis

e. Neutralization

2417. Serology is the main method of congenital toxoplasmosis diagnostics. What reaction is used to diagnose this pathology?

a. Neutralization

b. Bacteriolysis

c. Complement fixation

d. Agglutination

e. Precipitation

2418. Serology is the main method of congenital toxoplasmosis diagnostics. What reaction is used to diagnose this pathology?

a. Precipitation

b. Complement fixation

c. Agglutination

d. Bacteriolysis

e. Neutralization

2419. Serum total protein is one of metabolic indicators. What reaction is usually used in clinical laboratories to measure this value?

a. Ninhydrin

b. Xanthoproteic

c. Fohl

d. Nitroprusside

e. Biuret

2420. Serum total protein is one of metabolic indicators. What reaction is usually used in clinical laboratories to measure this value?

a. Nitroprusside

b. Fohl

c. Xanthoproteic

d. Ninhydrin

e. Biuret

2421. Serum total protein is one of metabolic indicators. What reaction is usually used in clinical laboratories to measure this value?

a. Xanthoproteic

b. Ninhydrin

c. Biuret

d. Nitroprusside

e. Fohl

2422. Short lignified stem is characteristic of the Allium cepa genera. It is a part of modified sprout that is called:

a. Phylloclade

b. Tuber

c. Rhizome

d. Bulb

e. Tendril

2423. Short lignified stem is characteristic of the *Allium cepa* genera. It is a part of modified sprout that is called:

a. Tendril

b. Rhizome

c. Tuber

d. Bulb

e. Phylloclade

2424. Short lignified stem is characteristic of the *Allium cepa* genera. It is a part of modified sprout that is called:

a. Tuber

b. Rhizome

c. Phylloclade

d. Tendril

e. Bulb

2425. Silver nitrate solution has been added to the solution containing anions of the first analytical group. It resulted in yellow precipitate. That means the following are present in the solution:

a. Arsenate ions

b. Sulphate ions

c. Iodide ions

d. Bromide ions

e. Arsenite ions

2426. Silver nitrate solution has been added to the solution containing anions of the first analytical group. It resulted in yellow precipitate. That means the following are present in the solution:

a. Iodide ions

b. Bromide ions

c. Sulphate ions

d. Arsenite ions

e. Arsenate ions

2427. Silver nitrate solution has been added to the solution containing anions of the first analytical group. It resulted in yellow precipitate. That means the following are present in the solution:

a. Sulphate ions

b. Arsenite ions

c. Bromide ions

d. Iodide ions

e. Arsenate ions

2428. Silver nitrate solution was added into a solution with anions of the first analytical group. A yellow precipitate was produced as the result, which indicates that this solution contained:

a. Bromide ions

b. Iodide ions

c. Sulfate ions

d. Arsenite ions

e. Arsenate ions

2429. Silver nitrate solution was added into a solution with anions of the first analytical group. A yellow precipitate was produced as the result, which indicates that this solution contained:

a. Sulfate ions

b. Arsenate ions

c. Bromide ions

d. Iodide ions

e. Arsenite ions

2430. Silver nitrate solution was added into a solution with anions of the first analytical group. A yellow precipitate was produced as the result, which indicates that this solution contained:

a. Sulfate ions

- b. Arsenate ions
- c. Iodide ions

d. Arsenite ions

- e. Bromide ions

2431. Single-use syringes produced at a medical equipment factory need to be sterilized. What sterilization method would be the most advisable for this type of medical equipment?

- a. Dry heat
- b. Tyndallization

c. Radiation sterilization (gamma-radiation)

- d. Autoclaving
- e. Pasteurization

2432. Single-use syringes produced at a medical equipment factory need to be sterilized. What sterilization method would be the most advisable for this type of medical equipment?

- a. Pasteurization
- b. Autoclaving

c. Radiation sterilization (gamma-radiation)

- d. Dry heat
- e. Tyndallization

2433. Single-use syringes produced at a medical equipment factory need to be sterilized. What sterilization method would be the most advisable for this type of medical equipment?

- a. Pasteurization
- b. Autoclaving
- c. Tyndallization

d. Radiation sterilization (gamma-radiation)

- e. Dry heat

2434. Smears prepared from the cerebrospinal fluid sediment and stained using the Gram technique are studied in diagnostics of meningitis. What finding confirms the diagnosis of meningococcal infection?

- a. Diplococci enclosed within a capsule
- b. Gram-negative diplococci located inside leukocytes and outside of them**
- c. Lancet-shaped Gram-positive diplococci
- d. Gram-positive diplococci located inside leukocytes
- e. Gram-negative coccobacteria located inside leukocytes

2435. Smears prepared from the cerebrospinal fluid sediment and stained using the Gram technique are studied in diagnostics of meningitis. What finding confirms the diagnosis of meningococcal infection?

- a. Gram-positive diplococci located inside leukocytes
- b. Diplococci enclosed within a capsule
- c. Lancet-shaped Gram-positive diplococci
- d. Gram-negative coccobacteria located inside leukocytes
- e. Gram-negative diplococci located inside leukocytes and outside of them**

2436. Smears prepared from the cerebrospinal fluid sediment and stained using the Gram technique are studied in diagnostics of meningitis. What finding confirms the diagnosis of meningococcal infection?

- a. Gram-positive diplococci located inside leukocytes
- b. Lancet-shaped Gram-positive diplococci
- c. Gram-negative coccobacteria located inside leukocytes
- d. Diplococci enclosed within a capsule
- e. Gram-negative diplococci located inside leukocytes and outside of them**

2437. Sodium hexanitrocobaltate(III) is used to determine the presence of potassium cations in a solution. What visual analytical effect is observed in this case?

- a. Formation of a yellow precipitate**
- b. Formation of a white precipitate
- c. Formation of a black precipitate
- d. Formation of a blue precipitate

e. Formation of a violet precipitate

2438. Sodium hexanitrocobaltate(III) is used to determine the presence of potassium cations in a solution. What visual analytical effect is observed in this case?

a. Formation of a violet precipitate

b. Formation of a white precipitate

c. Formation of a yellow precipitate

d. Formation of a black precipitate

e. Formation of a blue precipitate

2439. Sodium hexanitrocobaltate(III) is used to determine the presence of potassium cations in a solution. What visual analytical effect is observed in this case?

a. Formation of a white precipitate

b. Formation of a blue precipitate

c. Formation of a violet precipitate

d. Formation of a black precipitate

e. Formation of a yellow precipitate

2440. Sol $\text{Al}(\text{OH})_3$ was produced as a result of treatment of freshly prepared $\text{Al}(\text{OH})_3$ precipitate with a small amount of HCl solution. What phenomenon underlies the sol production?

a. Chemical condensation

b. Physical condensation

c. Mechanical dispersion

d. Washing with a solvent

e. Chemical peptization

2441. Sol $\text{Al}(\text{OH})_3$ was produced as a result of treatment of freshly prepared $\text{Al}(\text{OH})_3$ precipitate with a small amount of HCl solution. What phenomenon underlies the sol production?

a. Mechanical dispersion

b. Physical condensation

c. Washing with a solvent

d. Chemical condensation

e. Chemical peptization

2442. Sol $\text{Al}(\text{OH})_3$ was produced as a result of treatment of freshly prepared $\text{Al}(\text{OH})_3$ precipitate with a small amount of HCl solution. What phenomenon underlies the sol production?

a. Physical condensation

b. Mechanical dispersion

c. Chemical condensation

d. Washing with a solvent

e. Chemical peptization

2443. Solutions of colloidal surfactants are typical representatives of lyophilic dispersion systems. What is a characteristic feature of colloidal surfactants?

a. Amphiphilicity (Diphilicity)

b. Polarity

c. Ionogenicity

d. Non-polarity

e. Non-ionogenicity

2444. Solutions of colloidal surfactants are typical representatives of lyophilic dispersion systems. What is a characteristic feature of colloidal surfactants?

a. Ionogenicity

b. Non-polarity

c. Polarity

d. Amphiphilicity (Diphilicity)

e. Non-ionogenicity

2445. Solutions of colloidal surfactants are typical representatives of lyophilic dispersion systems. What is a characteristic feature of colloidal surfactants?

a. Non-ionogenicity

b. Ionogenicity

c. Polarity

d. Non-polarity

e. Amphiphilicity (Diphilicity)

2446. Solutions of high-molecular compounds can be precipitated by concentrated electrolyte solutions. Name this process:

a. Salting-out

b. Syneresis

c. Coacervation

d. Coagulation

e. Peptization

2447. Solutions of high-molecular compounds can be precipitated by concentrated electrolyte solutions. Name this process:

a. Salting-out

b. Syneresis

c. Coagulation

d. Peptization

e. Coacervation

2448. Solutions of high-molecular compounds can be precipitated by concentrated electrolyte solutions. Name this process:

a. Coacervation

b. Coagulation

c. Salting-out

d. Peptization

e. Syneresis

2449. Solutions of some electrolytes are used as medicines. What is the maximum value of the isotonic coefficient for MgSO_4 solution?

a. 2

b. 5

c. 7

d. 4

e. 3

2450. Solutions of some electrolytes are used as medicines. What is the maximum value of the isotonic coefficient for MgSO_4 solution?

a. 7

b. 2

c. 4

d. 5

e. 3

2451. Solutions of some electrolytes are used as medicines. What is the maximum value of the isotonic coefficient for MgSO_4 solution?

a. 7

b. 3

c. 4

d. 5

e. 2

2452. Some hormones are synthesized from amino acids in the body. What amino acid is the precursor to the thyroxine hormone?

a. Tyrosine

b. Glutamine

c. Arginine

d. Histidine

e. Cysteine

2453. Some hormones are synthesized from amino acids in the body. What amino acid is the precursor to the thyroxine hormone?

a. Glutamine

b. Histidine

c. Arginine

d. Tyrosine

e. Cysteine

2454. Some hormones are synthesized from amino acids in the body. What amino acid is the precursor to the thyroxine hormone?

a. Histidine

b. Glutamine

c. Tyrosine

d. Arginine

e. Cysteine

2455. Some leaf cells have lignified membranes. These cells are called:

a. Sclereids

b. Collenchyma

c. Trichomes

d. Sieve tubes

e. Companion cells

2456. Some leaf cells have lignified membranes. These cells are called:

a. Collenchyma

b. Trichomes

c. Companion cells

d. Sclereids

e. Sieve tubes

2457. Some leaf cells have lignified membranes. These cells are called:

a. Trichomes

b. Sieve tubes

c. Companion cells

d. Collenchyma

e. Sclereids

2458. Some medicinal plants are poisonous. Select a poisonous plant from the list below:

a. Digitalis purpurea

b. Origaum vulgare

c. Thymus vulgaris

d. Salvia officinalis

e. Thymus serpyllum

2459. Some medicinal plants are poisonous. Select a poisonous plant from the list below:

a. Origaum vulgare

b. Thymus serpyllum

c. Thymus vulgaris

d. Digitalis purpurea

e. Salvia officinalis

2460. Some medicinal plants are poisonous. Select a poisonous plant from the list below:

a. Origaum vulgare

b. Thymus vulgaris

c. Salvia officinalis

d. Digitalis purpurea

e. Thymus serpyllum

2461. Some medicines are colloidal solutions. Stabilizers are added to them to increase their aggregate stability. What substances are called stabilizers?

a. Substances that can increase the free energy of a system

b. Substances that have no effect on the interfacial tension

c. Substances that first increase the interfacial tension, and then reduce it over time

d. Substances that can be adsorbed and reduce the interfacial tension

e. Substances that can increase the interfacial tension

2462. Some medicines are colloidal solutions. Stabilizers are added to them to increase their aggregate stability. What substances are called stabilizers?

a. Substances that can increase the interfacial tension

b. Substances that can be adsorbed and reduce the interfacial tension

c. Substances that have no effect on the interfacial tension

d. Substances that can increase the free energy of a system

e. Substances that first increase the interfacial tension, and then reduce it over time

2463. Some medicines are colloidal solutions. Stabilizers are added to them to increase their aggregate stability. What substances are called stabilizers?

a. Substances that have no effect on the interfacial tension

b. Substances that can increase the interfacial tension

c. Substances that can be adsorbed and reduce the interfacial tension

d. Substances that can increase the free energy of a system

e. Substances that first increase the interfacial tension, and then reduce it over time

2464. Specific reactions used in qualitative analysis make it possible to:

a. Detect only anions

b. Detect an ion without previous separation of other ions

c. Detect an ion with previous separation

d. Detect only cations

e. Detect only a certain group of ions

2465. Specific reactions used in qualitative analysis make it possible to:

a. Detect only anions

b. Detect only cations

c. Detect an ion with previous separation

d. Detect only a certain group of ions

e. Detect an ion without previous separation of other ions

2466. Specific reactions used in qualitative analysis make it possible to:

a. Detect only cations

b. Detect only anions

c. Detect an ion with previous separation

d. Detect only a certain group of ions

e. Detect an ion without previous separation of other ions

2467. Specify the analgesic that affects opiate receptors and can cause development of tolerance and dependence:

a. Morphine

b. Medazepam

c. Haloperidol

d. Voltaren (Diclofenac sodium)

e. Phenobarbital

2468. Specify the analgesic that affects opiate receptors and can cause development of tolerance and dependence:

a. Haloperidol

b. Medazepam

c. Voltaren (Diclofenac sodium)

d. Phenobarbital

e. Morphine

2469. Specify the analgesic that affects opiate receptors and can cause development of tolerance and dependence:

a. Haloperidol

b. Phenobarbital

c. Morphine

d. Voltaren (Diclofenac sodium)

e. Medazepam

2470. Specify the standard solution (titrant) for the iodometric determination of oxidants:

a. KBrO_3

b. $\text{Na}_2\text{S}_2\text{O}_3$

c. KMnO_4

d. I_2

e. $K_2Cr_2O_7$

2471. Specify the standard solution (titrant) for the iodometric determination of oxidants:

a. $K_2Cr_2O_7$

b. I_2

c. $KMnO_4$

d. $KBrO_3$

e. $Na_2S_2O_3$

2472. Specify the standard solution (titrant) for the iodometric determination of oxidants:

a. $K_2Cr_2O_7$

b. $KBrO_3$

c. $KMnO_4$

d. I_2

e. $Na_2S_2O_3$

2473. Specify the standard solutions that are used in permanganatometry to quantify the oxidants by the residual titration method:

a. Potassium permanganate, iron (II) sulfate

b. Potassium dichromate, sodium thiosulfate

c. Potassium bromate, sodium thiosulfate

d. Potassium iodate, sodium thiosulfate

e. Cerium (IV) sulfate, iron (II) sulfate

2474. Specify the standard solutions that are used in permanganatometry to quantify the oxidants by the residual titration method:

a. Cerium (IV) sulfate, iron (II) sulfate

b. Potassium dichromate, sodium thiosulfate

c. Potassium iodate, sodium thiosulfate

d. Potassium permanganate, iron (II) sulfate

e. Potassium bromate, sodium thiosulfate

2475. Specify the standard solutions that are used in permanganatometry to quantify the oxidants by the residual titration method:

a. Potassium iodate, sodium thiosulfate

b. Potassium permanganate, iron (II) sulfate

c. Potassium dichromate, sodium thiosulfate

d. Cerium (IV) sulfate, iron (II) sulfate

e. Potassium bromate, sodium thiosulfate

2476. Specify the substance that results from the following reaction: $CH_3CHO \xrightarrow{[O]} HOCH_2CHO$,
 Hg^{2+} ?

a. Ethanol

b. Acetic acid

c. Propanone

d. Ethanal

e. Propanal

2477. Specify the substance that results from the following reaction: $CH_3CHO \xrightarrow{[O]} HOCH_2CHO$,
 Hg^{2+} ?

a. Ethanol

b. Propanal

c. Acetic acid

d. Ethanal

e. Propanone

2478. Specify the substance that results from the following reaction: $CH_3CHO \xrightarrow{[O]} HOCH_2CHO$,
 Hg^{2+} ?

a. Propanal

b. Ethanol

c. Propanone

d. Ethanal

e. Acetic acid

2479. Specify what method of redox titration requires the use of specific indicator - starch - to fix the end point:

a. Bromatometry

b. Iodometry

c. Cerimetry

d. Nitritometry

e. Permanganatometry

2480. Specify what method of redox titration requires the use of specific indicator - starch - to fix the end point:

a. Cerimetry

b. Nitritometry

c. Bromatometry

d. Iodometry

e. Permanganatometry

2481. Specify what method of redox titration requires the use of specific indicator - starch - to fix the end point:

a. Nitritometry

b. Bromatometry

c. Cerimetry

d. Iodometry

e. Permanganatometry

2482. Sputum analysis by means of flotation and Ziehl-Neelsen staining technique revealed red long thin bacilli, both isolated and arranged in clusters. What disease is caused by this pathogen?

a. Actinomycosis

b. Tuberculosis

c. Tularemia

d. Diphtheria

e. Pertussis

2483. Sputum analysis by means of flotation and Ziehl-Neelsen staining technique revealed red long thin bacilli, both isolated and arranged in clusters. What disease is caused by this pathogen?

a. Tularemia

b. Actinomycosis

c. Tuberculosis

d. Diphtheria

e. Pertussis

2484. Sputum analysis by means of flotation and Ziehl-Neelsen staining technique revealed red long thin bacilli, both isolated and arranged in clusters. What disease is caused by this pathogen?

a. Tularemia

b. Diphtheria

c. Actinomycosis

d. Tuberculosis

e. Pertussis

2485. Staphylococci grow well on common nutrient media. However, when isolating pure cultures from patients, blood agar and yolk-salt agar are used for inoculation. What is the purpose of using these nutrient media?

a. To determine the mobility of the bacteria

b. To determine the tinctorial properties

c. To determine the pathogenicity factors

d. To study the antigenic properties

e. To measure the sensitivity to antibiotics

2486. Staphylococci grow well on common nutrient media. However, when isolating pure cultures from patients, blood agar and yolk-salt agar are used for inoculation. What is the purpose of using these nutrient media?

a. To determine the tinctorial properties

- b. To measure the sensitivity to antibiotics
- c. To study the antigenic properties
- d. To determine the mobility of the bacteria

e. To determine the pathogenicity factors

2487. Staphylococci grow well on common nutrient media. However, when isolating pure cultures from patients, blood agar and yolk-salt agar are used for inoculation. What is the purpose of using these nutrient media?

- a. To measure the sensitivity to antibiotics
- b. To determine the mobility of the bacteria
- c. To study the antigenic properties
- d. To determine the tinctorial properties

e. To determine the pathogenicity factors

2488. Stone cells shaped like dumbbells or tubular bones were detected in begonia leaves. What type of cells do they belong to?

- a. Astrosclereids
- b. Trichosclereids
- c. Fibrosclereids

d. Osteosclereids

e. Macrosclereids

2489. Stone cells shaped like dumbbells or tubular bones were detected in begonia leaves. What type of cells do they belong to?

- a. Trichosclereids
- b. Fibrosclereids

c. Osteosclereids

d. Macrosclereids

e. Astrosclereids

2490. Stone cells shaped like dumbbells or tubular bones were detected in begonia leaves. What type of cells do they belong to?

- a. Trichosclereids
- b. Macrosclereids
- c. Fibrosclereids

d. Osteosclereids

e. Astrosclereids

2491. Streptomycin like other aminoglycosides, by binding to the 30S subunit of ribosomes, prevents the attachment of formylmethionyl-tRNA) What process is being disrupted as a result of this effect?

- a. Transcription initiation
- b. Translation termination
- c. Replication initiation
- d. Transcription termination

e. Translation initiation

2492. Streptomycin like other aminoglycosides, by binding to the 30S subunit of ribosomes, prevents the attachment of formylmethionyl-tRNA) What process is being disrupted as a result of this effect?

- a. Translation termination
- b. Replication initiation

c. Translation initiation

d. Transcription termination

e. Transcription initiation

2493. Streptomycin like other aminoglycosides, by binding to the 30S subunit of ribosomes, prevents the attachment of formylmethionyl-tRNA) What process is being disrupted as a result of this effect?

- a. Translation termination
- b. Replication initiation
- c. Transcription termination

d. Translation initiation

e. Transcription initiation

2494. Sulfur sol was obtained by adding 5 mL of a solution of sulfur in alcohol into 20 mL of distilled

water. The sol was obtained by the following method:

- a. Chemical condensation
- b. Reduction reaction

c. Solvent substitution

- d. Hydrolysis reaction
- e. Double exchange reaction

2495. Sulfur sol was obtained by adding 5 mL of a solution of sulfur in alcohol into 20 mL of distilled water. The sol was obtained by the following method:

- a. Double exchange reaction

b. Solvent substitution

- c. Reduction reaction
- d. Hydrolysis reaction
- e. Chemical condensation

2496. Sulfur sol was obtained by adding 5 mL of a solution of sulfur in alcohol into 20 mL of distilled water. The sol was obtained by the following method:

- a. Hydrolysis reaction
- b. Chemical condensation
- c. Reduction reaction

d. Solvent substitution

- e. Double exchange reaction

2497. Suppositories are widely used in medicine. What requirement should their aggregative stability meet?

- a. Must be non-volatile
- b. Must be solid
- c. Must not disintegrate

d. Melting point of 37°C

- e. Must not dissolve

2498. Suppositories are widely used in medicine. What requirement should their aggregative stability meet?

- a. Must be solid

b. Melting point of 37°C

- c. Must be non-volatile
- d. Must not disintegrate
- e. Must not dissolve

2499. Suppositories are widely used in medicine. What requirement should their aggregative stability meet?

- a. Must be solid
- b. Must not disintegrate
- c. Must not dissolve

d. Melting point of 37°C

- e. Must be non-volatile

2500. Surfactants and high-molecular compounds are added into concentrated emulsions to stabilize them. These substances are:

a. Emulsifiers

- b. Activators
- c. Absorbents
- d. Catalysts
- e. Solvents

2501. Surfactants and high-molecular compounds are added into concentrated emulsions to stabilize them. These substances are:

- a. Activators
- b. Catalysts

c. Emulsifiers

- d. Absorbents
- e. Solvents

2502. Surfactants and high-molecular compounds are added into concentrated emulsions to stabilize them. These substances are:

- a. Catalysts
- b. Emulsifiers**
- c. Absorbents
- d. Solvents
- e. Activators

2503. Symptoms of cardiac failure are detected during examination of a female patient. Specify the possible cause of myocardial failure among those named below:

- a. Coarctation of aorta
- b. Mitral stenosis
- c. Primary hypertension
- d. Pulmonary emphysema
- e. Infectious myocarditis**

2504. Symptoms of cardiac failure are detected during examination of a female patient. Specify the possible cause of myocardial failure among those named below:

- a. Mitral stenosis
- b. Pulmonary emphysema
- c. Infectious myocarditis**
- d. Primary hypertension
- e. Coarctation of aorta

2505. Symptoms of cardiac failure are detected during examination of a female patient. Specify the possible cause of myocardial failure among those named below:

- a. Primary hypertension
- b. Pulmonary emphysema
- c. Coarctation of aorta
- d. Infectious myocarditis**
- e. Mitral stenosis

2506. Synthesis of a medicinal substance occurs in an isolated system. What is a direction criterion of spontaneous processes?

- a. Entropy change**
- b. Helmholtz energy
- c. Gibbs energy
- d. Intrinsic energy
- e. Enthalpy

2507. Synthesis of a medicinal substance occurs in an isolated system. What is a direction criterion of spontaneous processes?

- a. Enthalpy
- b. Gibbs energy
- c. Entropy change**
- d. Intrinsic energy
- e. Helmholtz energy

2508. Synthesis of a medicinal substance occurs in an isolated system. What is a direction criterion of spontaneous processes?

- a. Intrinsic energy
- b. Helmholtz energy
- c. Gibbs energy
- d. Enthalpy
- e. Entropy change**

2509. Tests for agglutination and lysis of the Leptospira bacteria are used in microbiological diagnostics of leptospirosis. How should these tests be evaluated?

- a. With dark field method**
- b. Against dark background
- c. With unaided eye
- d. With agglutinoscope

e. With microscope set at low magnification

2510. Tests for agglutination and lysis of the *Leptospira* bacteria are used in microbiological diagnostics of leptospirosis. How should these tests be evaluated?

a. With dark field method

b. With unaided eye

c. With agglutinoscope

d. Against dark background

e. With microscope set at low magnification

2511. Tests for agglutination and lysis of the *Leptospira* bacteria are used in microbiological diagnostics of leptospirosis. How should these tests be evaluated?

a. With agglutinoscope

b. Against dark background

c. With unaided eye

d. With microscope set at low magnification

e. With dark field method

2512. The 55-year-old patient has been diagnosed with angina pectoris. Calcium channel-blocking agent was prescribed for treatment. Name this agent:

a. Amlodipine

b. Atenolol

c. Reserpine

d. Guanethidine

e. Labetalol

2513. The 55-year-old patient has been diagnosed with angina pectoris. Calcium channel-blocking agent was prescribed for treatment. Name this agent:

a. Amlodipine

b. Guanethidine

c. Atenolol

d. Reserpine

e. Labetalol

2514. The 55-year-old patient has been diagnosed with angina pectoris. Calcium channel-blocking agent was prescribed for treatment. Name this agent:

a. Guanethidine

b. Reserpine

c. Atenolol

d. Labetalol

e. Amlodipine

2515. The Embryophyta subkingdom (higher plants) includes mainly terrestrial organisms, represented by various life forms (grasses, shrubs, subshrubs, trees, etc.). What division of higher plants includes only shrubs and trees?

a. Pynophyta

b. Polypodiophyta

c. Magnoliophyta

d. Bryophyta

e. Lycopodiophyta

2516. The Embryophyta subkingdom (higher plants) includes mainly terrestrial organisms, represented by various life forms (grasses, shrubs, subshrubs, trees, etc.). What division of higher plants includes only shrubs and trees?

a. Magnoliophyta

b. Bryophyta

c. Polypodiophyta

d. Pynophyta

e. Lycopodiophyta

2517. The Embryophyta subkingdom (higher plants) includes mainly terrestrial organisms, represented by various life forms (grasses, shrubs, subshrubs, trees, etc.). What division of higher plants includes only shrubs and trees?

- a. Polypodiophyta
- b. Magnoliophyta
- c. Lycopodiophyta
- d. Bryophyta

e. Pynophyta

2518. The Fajans-Khodakov method is used to determine the mass fraction of sodium chloride (NaCl) in a drug. What indicator is used in this titration method?

- a. Ammonium iron(III) sulfate

b. Fluorescein

- c. Potassium chromate
- d. Phenolphthalein
- e. Methyl red

2519. The Fajans-Khodakov method is used to determine the mass fraction of sodium chloride (NaCl) in a drug. What indicator is used in this titration method?

- a. Methyl red

b. Fluorescein

- c. Potassium chromate
- d. Ammonium iron(III) sulfate
- e. Phenolphthalein

2520. The Fajans-Khodakov method is used to determine the mass fraction of sodium chloride (NaCl) in a drug. What indicator is used in this titration method?

- a. Methyl red
- b. Potassium chromate

c. Fluorescein

- d. Ammonium iron(III) sulfate
- e. Phenolphthalein

2521. The State Pharmacopoeia of Ukraine includes the method of determining molar mass of a polymer, which is based on the following property of high-molecular substances:

- a. Light scattering
- b. Saturated vapor pressure
- c. Freezing point

d. Viscosity

- e. Osmotic pressure

2522. The State Pharmacopoeia of Ukraine includes the method of determining molar mass of a polymer, which is based on the following property of high-molecular substances:

- a. Osmotic pressure
- b. Saturated vapor pressure

c. Viscosity

- d. Freezing point
- e. Light scattering

2523. The State Pharmacopoeia of Ukraine includes the method of determining molar mass of a polymer, which is based on the following property of high-molecular substances:

- a. Saturated vapor pressure
- b. Freezing point
- c. Osmotic pressure

d. Viscosity

- e. Light scattering

2524. The Wasserman test was positive in a 25-year-old woman. What disease can be diagnosed using this test?

a. Syphilis

- b. Diphtheria
- c. Brucellosis
- d. Tuberculosis
- e. Leptospirosis

2525. The Wasserman test was positive in a 25-year-old woman. What disease can be diagnosed

using this test?

- a. Brucellosis
- b. Syphilis**
- c. Tuberculosis
- d. Diphtheria
- e. Leptospirosis

2526. The Wasserman test was positive in a 25-year-old woman. What disease can be diagnosed using this test?

- a. Tuberculosis
- b. Diphtheria
- c. Leptospirosis
- d. Brucellosis

e. Syphilis

2527. The absorption zone of the primary anatomical root cortex mainly consists of multi-layered, live, loose parenchyma with starch granules. What tissue is described above?

a. Mesodermis

- b. Periderm
- c. Ectodermis
- d. Endodermis
- e. Hypodermis

2528. The absorption zone of the primary anatomical root cortex mainly consists of multi-layered, live, loose parenchyma with starch granules. What tissue is described above?

- a. Endodermis
- b. Hypodermis
- c. Ectodermis
- d. Periderm

e. Mesodermis

2529. The absorption zone of the primary anatomical root cortex mainly consists of multi-layered, live, loose parenchyma with starch granules. What tissue is described above?

- a. Periderm
- b. Ectodermis

c. Mesodermis

- d. Hypodermis
- e. Endodermis

2530. The anti-tumor preparation Methotrexate is a structural analogue of folic acid. The mechanism of its action is based on the inhibition of the following enzyme:

- a. Hexokinase
- b. Dihydrofolate reductase**
- c. Lactate dehydrogenase
- d. Creatine kinase
- e. Xanthine oxidase

2531. The anti-tumor preparation Methotrexate is a structural analogue of folic acid. The mechanism of its action is based on the inhibition of the following enzyme:

- a. Hexokinase
- b. Creatine kinase
- c. Xanthine oxidase
- d. Lactate dehydrogenase

e. Dihydrofolate reductase

2532. The anti-tumor preparation Methotrexate is a structural analogue of folic acid. The mechanism of its action is based on the inhibition of the following enzyme:

- a. Hexokinase
- b. Lactate dehydrogenase
- c. Dihydrofolate reductase**
- d. Xanthine oxidase
- e. Creatine kinase

2533. The antitumor agent 5-fluorouracil blocks the enzyme that attaches the methyl group to deoxyuridine monophosphate (dUMP). What reaction becomes inhibited, when this medicine is used?

- a. Synthesis of thymidine monophosphate
- b. Synthesis of glucose monophosphate
- c. Synthesis of glycerol monophosphate
- d. Synthesis of adenosine monophosphate
- e. Synthesis of guanosine monophosphate

2534. The antitumor agent 5-fluorouracil blocks the enzyme that attaches the methyl group to deoxyuridine monophosphate (dUMP). What reaction becomes inhibited, when this medicine is used?

- a. Synthesis of thymidine monophosphate
- b. Synthesis of glycerol monophosphate
- c. Synthesis of guanosine monophosphate
- d. Synthesis of glucose monophosphate
- e. Synthesis of adenosine monophosphate

2535. The antitumor agent 5-fluorouracil blocks the enzyme that attaches the methyl group to deoxyuridine monophosphate (dUMP). What reaction becomes inhibited, when this medicine is used?

- a. Synthesis of glucose monophosphate
- b. Synthesis of thymidine monophosphate
- c. Synthesis of adenosine monophosphate
- d. Synthesis of guanosine monophosphate
- e. Synthesis of glycerol monophosphate

2536. The brain is highly dependent on its supply with oxygen and energy substrates. Under physiological conditions, neurons utilize the following as an energy substrate:

- a. Bilirubin
- b. Glucose
- c. Amino acids
- d. Higher fatty acids
- e. Cholesterol

2537. The brain is highly dependent on its supply with oxygen and energy substrates. Under physiological conditions, neurons utilize the following as an energy substrate:

- a. Bilirubin
- b. Cholesterol
- c. Glucose
- d. Amino acids
- e. Higher fatty acids

2538. The brain is highly dependent on its supply with oxygen and energy substrates. Under physiological conditions, neurons utilize the following as an energy substrate:

- a. Cholesterol
- b. Bilirubin
- c. Amino acids
- d. Higher fatty acids
- e. Glucose

2539. The breakdown of hemoglobin is accompanied by the formation of bile pigments. What pigment forms as a result of the heme oxidation reaction?

- a. Biliverdin
- b. Carotene
- c. Chlorophyll
- d. Stercobilinogen
- e. Urobilinogen

2540. The breakdown of hemoglobin is accompanied by the formation of bile pigments. What pigment forms as a result of the heme oxidation reaction?

- a. Chlorophyll
- b. Urobilinogen
- c. Biliverdin
- d. Carotene

e. Stercobilinogen

2541. The breakdown of hemoglobin is accompanied by the formation of bile pigments. What pigment forms as a result of the heme oxidation reaction?

a. Urobilinogen

b. Carotene

c. Chlorophyll

d. Biliverdin

e. Stercobilinogen

2542. The breakdown of starch in the body is a catalytic process that occurs with the help of amylase. What type of catalysis is it?

a. Enzymatic catalysis

b. Autocatalysis

c. Redox catalysis

d. Acid-base catalysis

e. Heterogeneous catalysis

2543. The breakdown of starch in the body is a catalytic process that occurs with the help of amylase. What type of catalysis is it?

a. Acid-base catalysis

b. Enzymatic catalysis

c. Autocatalysis

d. Heterogeneous catalysis

e. Redox catalysis

2544. The breakdown of starch in the body is a catalytic process that occurs with the help of amylase. What type of catalysis is it?

a. Redox catalysis

b. Heterogeneous catalysis

c. Enzymatic catalysis

d. Acid-base catalysis

e. Autocatalysis

2545. The cells of Brassica oleracea leaves contain a certain vitamin that facilitates healing of gastric and duodenal ulcers. It is vitamin:

a. A

b. U

c. E

d. C

e. K

2546. The cells of Brassica oleracea leaves contain a certain vitamin that facilitates healing of gastric and duodenal ulcers. It is vitamin:

a. A

b. U

c. K

d. C

e. E

2547. The cells of Brassica oleracea leaves contain a certain vitamin that facilitates healing of gastric and duodenal ulcers. It is vitamin:

a. E

b. U

c. K

d. A

e. C

2548. The children attending a kindergarten were hospitalized with diagnosis of poliomyelitis. What was the route of infection transmission in this case?

a. Fecal-oral transmission

b. Direct contact transmission

c. Alimentary transmission

- d. Vector-borne transmission
- e. Transmission via airborne dust particles

2549. The children attending a kindergarten were hospitalized with diagnosis of poliomyelitis. What was the route of infection transmission in this case?

- a. Direct contact transmission
- b. Alimentary transmission
- c. Vector-borne transmission
- d. Transmission via airborne dust particles

e. Fecal-oral transmission

2550. The children attending a kindergarten were hospitalized with diagnosis of poliomyelitis. What was the route of infection transmission in this case?

- a. Transmission via airborne dust particles
- b. Vector-borne transmission

c. Fecal-oral transmission

- d. Direct contact transmission
- e. Alimentary transmission

2551. The defensive mechanisms against some infectious diseases can be greatly reinforced with interferon. Interferon preparations will be the most advisable in cases of the following type of infections:

a. Viral

- b. Helminthic
- c. Fungal
- d. Protozoal
- e. Microbioses

2552. The defensive mechanisms against some infectious diseases can be greatly reinforced with interferon. Interferon preparations will be the most advisable in cases of the following type of infections:

a. Viral

- b. Protozoal
- c. Microbioses
- d. Fungal
- e. Helminthic

2553. The defensive mechanisms against some infectious diseases can be greatly reinforced with interferon. Interferon preparations will be the most advisable in cases of the following type of infections:

- a. Microbioses
- b. Fungal
- c. Protozoal
- d. Helminthic

e. Viral

2554. The end product of starch hydrolysis is:

a. D-glucose

- b. Maltose
- c. D-fructose
- d. Saccharose
- e. D-galactose

2555. The end product of starch hydrolysis is:

- a. Maltose
- b. D-fructose
- c. D-galactose
- d. Saccharose

e. D-glucose

2556. The end product of starch hydrolysis is:

- a. Saccharose
- b. D-galactose

c. D-fructose

d. D-glucose

e. Maltose

2557. The enzymes of medicinal substance metabolism that require monooxygenase reactions of biotransformation are localized in the cells mainly in the:

a. Cytosol

b. Lysosomes

c. Microsomes of the endoplasmic reticulum

d. Mitochondria

e. Nucleus

2558. The enzymes of medicinal substance metabolism that require monooxygenase reactions of biotransformation are localized in the cells mainly in the:

a. Cytosol

b. Nucleus

c. Mitochondria

d. Microsomes of the endoplasmic reticulum

e. Lysosomes

2559. The enzymes of medicinal substance metabolism that require monooxygenase reactions of biotransformation are localized in the cells mainly in the:

a. Mitochondria

b. Microsomes of the endoplasmic reticulum

c. Cytosol

d. Nucleus

e. Lysosomes

2560. The following belongs to high-concentration suspensions:

a. Pastes

b. Ointments

c. Powders

d. Foams

e. Creams

2561. The following belongs to high-concentration suspensions:

a. Pastes

b. Powders

c. Foams

d. Ointments

e. Creams

2562. The following belongs to high-concentration suspensions:

a. Foams

b. Pastes

c. Creams

d. Powders

e. Ointments

2563. The following have been detected in hand lavage of the kindergarten chef: colibacilli, ray fungi, staphylococci, bacilli, mold fungi. What microbes are evidential of fecal contamination of hands?

a. Mold fungi

b. Ray fungi

c. Bacilli

d. Staphylococci

e. Colibacilli

2564. The following have been detected in hand lavage of the kindergarten chef: colibacilli, ray fungi, staphylococci, bacilli, mold fungi. What microbes are evidential of fecal contamination of hands?

a. Ray fungi

b. Bacilli

c. Colibacilli

d. Mold fungi

e. Staphylococci

2565. The following have been detected in hand lavage of the kindergarten chef: colibacilli, ray fungi, staphylococci, bacilli, mold fungi. What microbes are evidential of fecal contamination of hands?

- a. Ray fungi
- b. Mold fungi
- c. Staphylococci
- d. Bacilli

e. Colibacilli

2566. The following ion has the highest coagulation ability for iron hydroxide sol with positively charged granules:

- a. Calcium
- b. Chloride
- c. Sodium

d. Sulfate

e. Nitrate

2567. The following ion has the highest coagulation ability for iron hydroxide sol with positively charged granules:

- a. Chloride
- b. Calcium
- c. Sodium
- d. Nitrate

e. Sulfate

2568. The following ion has the highest coagulation ability for iron hydroxide sol with positively charged granules:

- a. Nitrate
- b. Calcium
- c. Chloride

d. Sulfate

e. Sodium

2569. The following is used to determine the titrant volume in the process of titrimetric analysis:

a. Burettes

- b. Measuring tubes
- c. Measuring flasks
- d. Cylinders
- e. Measuring glasses

2570. The following is used to determine the titrant volume in the process of titrimetric analysis:

- a. Measuring flasks
- b. Cylinders
- c. Measuring glasses
- d. Measuring tubes

e. Burettes

2571. The following method can be used to quantitatively determine magnesium sulfate in the solution:

a. Argentometry

b. Complexometric titration

- c. Thiocyanate titration
- d. Nitrite titration
- e. Acidimetry

2572. The following method can be used to quantitatively determine magnesium sulfate in the solution:

- a. Nitrite titration
- b. Argentometry
- c. Thiocyanate titration
- d. Acidimetry

e. Complexometric titration

2573. The following method can be used to quantitatively determine magnesium sulfate in the solution:

- a. Thiocyanate titration
- b. Nitrite titration
- c. Acidimetry
- d. Argentometry

e. Complexometric titration

2574. The fruit is a spiky spherical green capsule. The capsule splits open into two valves and contains usually one large glossy dark brown seed with a matt whitish scar. It is a fruit of:

- a. *Hipericum perforatum*
- b. *Datura stramonium*

c. *Aesculus hippocastanum*

- d. *Plantago major*
- e. *Papaver somniferum*

2575. The fruit is a spiky spherical green capsule. The capsule splits open into two valves and contains usually one large glossy dark brown seed with a matt whitish scar. It is a fruit of:

- a. *Papaver somniferum*
- b. *Datura stramonium*
- c. *Hipericum perforatum*

d. *Aesculus hippocastanum*

- e. *Plantago major*

2576. The fruit is a spiky spherical green capsule. The capsule splits open into two valves and contains usually one large glossy dark brown seed with a matt whitish scar. It is a fruit of:

- a. *Plantago major*
- b. *Papaver somniferum*
- c. *Hipericum perforatum*

d. *Aesculus hippocastanum*

- e. *Datura stramonium*

2577. The gradual aging of the body is accompanied by the slowing down of metabolic processes, the appearance of wrinkles, and the literal desiccation of a human body, associated with the cells in muscles and skin losing a certain ability that they have. Name this ability of the cells.

- a. Adhesion
- b. Moistening
- c. Wetting
- d. Cohesion

e. Swelling

2578. The gradual aging of the body is accompanied by the slowing down of metabolic processes, the appearance of wrinkles, and the literal desiccation of a human body, associated with the cells in muscles and skin losing a certain ability that they have. Name this ability of the cells.

- a. Adhesion
- b. Wetting

c. Swelling

- d. Cohesion
- e. Moistening

2579. The gradual aging of the body is accompanied by the slowing down of metabolic processes, the appearance of wrinkles, and the literal desiccation of a human body, associated with the cells in muscles and skin losing a certain ability that they have. Name this ability of the cells.

- a. Moistening
- b. Adhesion
- c. Cohesion

d. Swelling

- e. Wetting

2580. The inflorescence of a plant has an elongated main axis and sessile flowers. What type of inflorescence is it?

- a. Corymb

b. Round capitulum

c. Spike

d. Umbel

e. Flat capitulum

2581. The inflorescence of a plant has an elongated main axis and sessile flowers. What type of inflorescence is it?

a. Flat capitulum

b. Round capitulum

c. Corymb

d. Umbel

e. Spike

2582. The inflorescence of a plant has an elongated main axis and sessile flowers. What type of inflorescence is it?

a. Umbel

b. Flat capitulum

c. Spike

d. Corymb

e. Round capitulum

2583. The isoelectric point of a protein is 5.7. At what pH value does the protein macroion move to the anode?

a. 4.0

b. 4.7

c. 5.7

d. 7.0

e. 5.0

2584. The isoelectric point of a protein is 5.7. At what pH value does the protein macroion move to the anode?

a. 5.0

b. 4.7

c. 5.7

d. 4.0

e. 7.0

2585. The isoelectric point of a protein is 5.7. At what pH value does the protein macroion move to the anode?

a. 5.7

b. 4.7

c. 4.0

d. 7.0

e. 5.0

2586. The leaves of a Lamiaceae family plant are ovate, with a pointed tip, crenate leaf edge, and a lemon scent, which is characteristic of the following plant:

a. *Lamium album*

b. *Melissa officinalis*

c. *Leonurus cardiaca*

d. *Mentha piperita*

e. *Salvia officinalis*

2587. The leaves of a Lamiaceae family plant are ovate, with a pointed tip, crenate leaf edge, and a lemon scent, which is characteristic of the following plant:

a. *Mentha piperita*

b. *Melissa officinalis*

c. *Salvia officinalis*

d. *Leonurus cardiaca*

e. *Lamium album*

2588. The leaves of a Lamiaceae family plant are ovate, with a pointed tip, crenate leaf edge, and a lemon scent, which is characteristic of the following plant:

- a. *Salvia officinalis*
- b. *Mentha piperita*
- c. *Lamium album*
- d. *Leonurus cardiaca*

e. *Melissa officinalis*

2589. The material obtained from a patient with suspected acute *Salmonella*-induced gastroenteritis was sent to a bacteriological laboratory. What should be used in this case for serological identification of the isolated pure bacterial culture?

a. Agglutinating diagnostic serum for salmonellosis

- b. Live pure culture of *Salmonella*
- c. Salmonellosis diagnosticum
- d. Erythrocytic salmonellosis diagnosticum
- e. Patient's blood serum

2590. The material obtained from a patient with suspected acute *Salmonella*-induced gastroenteritis was sent to a bacteriological laboratory. What should be used in this case for serological identification of the isolated pure bacterial culture?

a. Agglutinating diagnostic serum for salmonellosis

- b. Salmonellosis diagnosticum
- c. Erythrocytic salmonellosis diagnosticum
- d. Patient's blood serum
- e. Live pure culture of *Salmonella*

2591. The material obtained from a patient with suspected acute *Salmonella*-induced gastroenteritis was sent to a bacteriological laboratory. What should be used in this case for serological identification of the isolated pure bacterial culture?

- a. Live pure culture of *Salmonella*
- b. Erythrocytic salmonellosis diagnosticum
- c. Salmonellosis diagnosticum

d. Agglutinating diagnostic serum for salmonellosis

- e. Patient's blood serum

2592. The method consisting of removal of low-molecular impurities from colloidal systems and high-molecular compound solutions by means of diffusion through semipermeable membrane is called:

a. Compensatory dialysis

b. Dialysis

- c. Ultrafiltration
- d. Decantation
- e. Electrodialysis

2593. The method consisting of removal of low-molecular impurities from colloidal systems and high-molecular compound solutions by means of diffusion through semipermeable membrane is called:

- a. Compensatory dialysis
- b. Ultrafiltration
- c. Electrodialysis
- d. Decantation

e. Dialysis

2594. The method consisting of removal of low-molecular impurities from colloidal systems and high-molecular compound solutions by means of diffusion through semipermeable membrane is called:

- a. Electrodialysis
- b. Decantation

c. Dialysis

- d. Ultrafiltration

e. Compensatory dialysis

2595. The mixture being studied contains Mg^{2+} , Ni^{2+} , Hg^{2+} cations. What reagent allows to detect Ni^{2+} cations in the mixture?

a. 1-Nitroso-2-naphthol

b. Dimethylglyoxime

c. Magneson I (Azo violet)

d. Ammonia solution

e. Alizarin

2596. The mixture being studied contains Mg^{2+} , Ni^{2+} , Hg^{2+} cations. What reagent allows to detect Ni^{2+} cations in the mixture?

a. 1-Nitroso-2-naphthol

b. Ammonia solution

c. Magneson I (Azo violet)

d. Dimethylglyoxime

e. Alizarin

2597. The mixture being studied contains Mg^{2+} , Ni^{2+} , Hg^{2+} cations. What reagent allows to detect Ni^{2+} cations in the mixture?

a. Alizarin

b. Magneson I (Azo violet)

c. Dimethylglyoxime

d. Ammonia solution

e. 1-Nitroso-2-naphthol

2598. The mother of a 3-year-old child was taking antibiotics during her pregnancy. The child presents with destruction of the incisors and a brown border on the gums. What antibiotic has caused this side effect?

a. Ciprofloxacin

b. Levomycetin (Chloramphenicol)

c. Doxycycline hydrochloride

d. Co-amoxiclav

e. Azithromycin

2599. The mother of a 3-year-old child was taking antibiotics during her pregnancy. The child presents with destruction of the incisors and a brown border on the gums. What antibiotic has caused this side effect?

a. Co-amoxiclav

b. Azithromycin

c. Ciprofloxacin

d. Doxycycline hydrochloride

e. Levomycetin (Chloramphenicol)

2600. The mother of a 3-year-old child was taking antibiotics during her pregnancy. The child presents with destruction of the incisors and a brown border on the gums. What antibiotic has caused this side effect?

a. Levomycetin (Chloramphenicol)

b. Ciprofloxacin

c. Co-amoxiclav

d. Azithromycin

e. Doxycycline hydrochloride

2601. The ornithine cycle is the main way of ammonia neutralization in the human body. What substance is the end product of ammonia neutralization?

a. Urea

b. Arginine

c. Citrulline

d. Carbamoyl phosphate

e. Uric acid

2602. The ornithine cycle is the main way of ammonia neutralization in the human body. What substance is the end product of ammonia neutralization?

a. Urea

b. Carbamoyl phosphate

c. Citrulline

- d. Arginine
- e. Uric acid

2603. The ornithine cycle is the main way of ammonia neutralization in the human body. What substance is the end product of ammonia neutralization?

- a. Carbamoyl phosphate
- b. Citrulline

c. Urea

- d. Arginine
- e. Uric acid

2604. The patient has icteric skin; unconjugated bilirubin content in blood is high; conjugated bilirubin in urine is not detected. There is significant amount of urobilin in urine and stercobilin in feces. Name the pathology characterized by the given symptoms:

a. Hemolytic jaundice

- b. Hepatocellular jaundice
- c. Jaundice of the newborn
- d. Obstructive jaundice
- e. Atherosclerosis

2605. The patient has icteric skin; unconjugated bilirubin content in blood is high; conjugated bilirubin in urine is not detected. There is significant amount of urobilin in urine and stercobilin in feces. Name the pathology characterized by the given symptoms:

- a. Atherosclerosis
- b. Obstructive jaundice

c. Hemolytic jaundice

- d. Hepatocellular jaundice
- e. Jaundice of the newborn

2606. The patient has icteric skin; unconjugated bilirubin content in blood is high; conjugated bilirubin in urine is not detected. There is significant amount of urobilin in urine and stercobilin in feces. Name the pathology characterized by the given symptoms:

- a. Obstructive jaundice
- b. Atherosclerosis
- c. Jaundice of the newborn
- d. Hepatocellular jaundice

e. Hemolytic jaundice

2607. The patient with alcoholic cirrhosis complains of general weakness and dyspnea. The following is revealed: decrease of arterial pressure, ascites, dilation of stomach anterior wall superficial veins, esophageal varicose veins dilatation, splenomegaly. What haemodynamics disorder does the patient suffer from?

a. Portal hypertension

- b. Cardiac insufficiency
- c. Right ventricular failure
- d. Collapse
- e. Left ventricular failure

2608. The patient with alcoholic cirrhosis complains of general weakness and dyspnea. The following is revealed: decrease of arterial pressure, ascites, dilation of stomach anterior wall superficial veins, esophageal varicose veins dilatation, splenomegaly. What haemodynamics disorder does the patient suffer from?

- a. Cardiac insufficiency
- b. Collapse

c. Portal hypertension

- d. Right ventricular failure
- e. Left ventricular failure

2609. The patient with alcoholic cirrhosis complains of general weakness and dyspnea. The following is revealed: decrease of arterial pressure, ascites, dilation of stomach anterior wall superficial veins, esophageal varicose veins dilatation, splenomegaly. What haemodynamics disorder does the patient suffer from?

- a. Right ventricular failure
- b. Collapse

c. Portal hypertension

- d. Cardiac insufficiency
- e. Left ventricular failure

2610. The patient with parkinsonism has been prescribed a drug - dopamine precursor - to relieve muscular rigidity. Name this drug:

- a. Aminazine
- b. Scopolamine hydrobromide
- c. Atropine sulphate
- d. Paracetamol

e. Levodopa

2611. The patient with parkinsonism has been prescribed a drug - dopamine precursor - to relieve muscular rigidity. Name this drug:

- a. Atropine sulphate

b. Levodopa

- c. Paracetamol
- d. Aminazine
- e. Scopolamine hydrobromide

2612. The patient with parkinsonism has been prescribed a drug - dopamine precursor - to relieve muscular rigidity. Name this drug:

- a. Paracetamol
- b. Scopolamine hydrobromide
- c. Aminazine

d. Levodopa

- e. Atropine sulphate

2613. The patient's 24-hour urine output is 6 liters, its specific gravity varies from 1003 to 1008 g/L. What pathological process can be characterized by these signs?

a. Diabetes insipidus

- b. Acute renal failure
- c. Diabetes mellitus
- d. Chronic renal failure
- e. Hypothyroidism

2614. The patient's 24-hour urine output is 6 liters, its specific gravity varies from 1003 to 1008 g/L. What pathological process can be characterized by these signs?

a. Diabetes insipidus

- b. Acute renal failure
- c. Hypothyroidism
- d. Chronic renal failure
- e. Diabetes mellitus

2615. The patient's 24-hour urine output is 6 liters, its specific gravity varies from 1003 to 1008 g/L. What pathological process can be characterized by these signs?

a. Diabetes insipidus

- b. Hypothyroidism
- c. Acute renal failure
- d. Diabetes mellitus
- e. Chronic renal failure

2616. The patient's diuresis decreased to 800 mL per 24 hours. Such change in urine output is called:

- a. Polyuria
- b. Anuria

c. Oliguria

- d. Proteinuria
- e. Leukocyturia

2617. The patient's diuresis decreased to 800 mL per 24 hours. Such change in urine output is called:

- a. Polyuria

- b. Anuria
- c. Leukocyturia

d. Oliguria

- e. Proteinuria

2618. The patient's diuresis decreased to 800 mL per 24 hours. Such change in urine output is called:

- a. Proteinuria
- b. Leukocyturia

c. Oliguria

- d. Polyuria

- e. Anuria

2619. The pharmacological effect of some antidepressants is associated with detoxification of biogenic amines in the brain. What enzyme inactivates biogenic amines?

a. Monoamine oxidase

- b. Deaminase
- c. Transaminase
- d. Decarboxylase
- e. Lactate dehydrogenase

2620. The pharmacological effect of some antidepressants is associated with detoxification of biogenic amines in the brain. What enzyme inactivates biogenic amines?

a. Monoamine oxidase

- b. Lactate dehydrogenase
- c. Deaminase
- d. Transaminase
- e. Decarboxylase

2621. The pharmacological effect of some antidepressants is associated with detoxification of biogenic amines in the brain. What enzyme inactivates biogenic amines?

- a. Transaminase
- b. Deaminase
- c. Lactate dehydrogenase
- d. Decarboxylase

e. Monoamine oxidase

2622. The pharmacopoeial method of determining the purity of antibiotics, vitamins, etc. requires studying the movement of the dispersed phase particles in a stationary dispersion medium under the effect of a difference in potentials. Name this phenomenon.

- a. Electroosmosis
- b. Sedimentation potential
- c. Brownian motion
- d. Streaming potential

e. Electrophoresis

2623. The pharmacopoeial method of determining the purity of antibiotics, vitamins, etc. requires studying the movement of the dispersed phase particles in a stationary dispersion medium under the effect of a difference in potentials. Name this phenomenon.

- a. Streaming potential
- b. Brownian motion
- c. Sedimentation potential

d. Electrophoresis

- e. Electroosmosis

2624. The pharmacopoeial method of determining the purity of antibiotics, vitamins, etc. requires studying the movement of the dispersed phase particles in a stationary dispersion medium under the effect of a difference in potentials. Name this phenomenon.

- a. Streaming potential
- b. Sedimentation potential
- c. Electroosmosis

d. Electrophoresis

- e. Brownian motion

2625. The pharmacy of a tuberculosis clinic has received tuberculin. What is the purpose of this substance?

- a. Phagotyping of mycobacteria
- b. Specific prevention of tuberculosis
- c. Allergic diagnostics of tuberculosis**
- d. Specific therapy of tuberculosis
- e. Serological diagnostics of tuberculosis

2626. The pharmacy of a tuberculosis clinic has received tuberculin. What is the purpose of this substance?

- a. Specific prevention of tuberculosis
- b. Phagotyping of mycobacteria
- c. Specific therapy of tuberculosis
- d. Serological diagnostics of tuberculosis
- e. Allergic diagnostics of tuberculosis**

2627. The pharmacy of a tuberculosis clinic has received tuberculin. What is the purpose of this substance?

- a. Specific therapy of tuberculosis
- b. Specific prevention of tuberculosis
- c. Phagotyping of mycobacteria
- d. Allergic diagnostics of tuberculosis**
- e. Serological diagnostics of tuberculosis

2628. The population is being vaccinated for specific disease prevention. What type of immunity is developed as the result of this vaccination?

- a. Artificially acquired active**
- b. Naturally acquired active
- c. -
- d. Naturally acquired passive
- e. Artificially acquired passive

2629. The population is being vaccinated for specific disease prevention. What type of immunity is developed as the result of this vaccination?

- a. -
- b. Artificially acquired passive
- c. Naturally acquired passive
- d. Artificially acquired active**
- e. Naturally acquired active

2630. The population is being vaccinated for specific disease prevention. What type of immunity is developed as the result of this vaccination?

- a. Naturally acquired passive
- b. Naturally acquired active
- c. Artificially acquired passive
- d. -
- e. Artificially acquired active**

2631. The presence of storage proteins in a microslide prepared from *Phaseolus vulgaris* endosperm can be confirmed, if the microslide colors golden-yellow when stained with Lugol solution. In plant seeds, such protein deposits are called:

- a. Inulin
- b. Starch grains
- c. Chlorophyll grains
- d. Aleurone grains**
- e. Glycogen

2632. The presence of storage proteins in a microslide prepared from *Phaseolus vulgaris* endosperm can be confirmed, if the microslide colors golden-yellow when stained with Lugol solution. In plant seeds, such protein deposits are called:

- a. Inulin
- b. Starch grains

- c. Glycogen
- d. Chlorophyll grains

e. Aleurone grains

2633. The presence of storage proteins in a microslide prepared from *Phaseolus vulgaris* endosperm can be confirmed, if the microslide colors golden-yellow when stained with Lugol solution. In plant seeds, such protein deposits are called:

- a. Starch grains
- b. Glycogen

c. Aleurone grains

- d. Chlorophyll grains
- e. Inulin

2634. The process of glycolysis starts with irreversible reaction of glucose transforming into glucose 6-phosphate. What enzyme catalyzes this reaction?

- a. Aldolase
- b. Creatine kinase

c. Hexokinase

- d. Lipase
- e. Catalase

2635. The process of glycolysis starts with irreversible reaction of glucose transforming into glucose 6-phosphate. What enzyme catalyzes this reaction?

- a. Catalase
- b. Creatine kinase
- c. Lipase

d. Hexokinase

- e. Aldolase

2636. The process of glycolysis starts with irreversible reaction of glucose transforming into glucose 6-phosphate. What enzyme catalyzes this reaction?

- a. Creatine kinase
- b. Lipase
- c. Catalase
- d. Aldolase

e. Hexokinase

2637. The process of putrefaction is a component of physicochemical changes that occur with food proteins in the human gastrointestinal tract. What product is excreted with the urine and is an indicator of the intensity of the protein putrefaction in the large intestine?

- a. Ammonia
- b. Benzene

c. Indican

- d. Bilirubin
- e. Cholesterol

2638. The process of putrefaction is a component of physicochemical changes that occur with food proteins in the human gastrointestinal tract. What product is excreted with the urine and is an indicator of the intensity of the protein putrefaction in the large intestine?

- a. Ammonia
- b. Benzene

c. Indican

- d. Cholesterol
- e. Bilirubin

2639. The process of putrefaction is a component of physicochemical changes that occur with food proteins in the human gastrointestinal tract. What product is excreted with the urine and is an indicator of the intensity of the protein putrefaction in the large intestine?

- a. Cholesterol
- b. Ammonia
- c. Benzene

d. Indican

e. Bilirubin

2640. The products of condensation of aldehydes with hydroxylamine belong to the following class:

- a. Hemiacetals
- b. Ketoximes
- c. Hydrazones
- d. Hydrazides

e. Aldoximes

2641. The products of condensation of aldehydes with hydroxylamine belong to the following class:

- a. Hydrazones
- b. Aldoximes**
- c. Ketoximes
- d. Hemiacetals
- e. Hydrazides

2642. The products of condensation of aldehydes with hydroxylamine belong to the following class:

- a. Hydrazones
- b. Hemiacetals
- c. Aldoximes**
- d. Ketoximes
- e. Hydrazides

2643. The process of one substance drawing the other in only with its surface is called:

- a. Adsorption**
- b. Chemisorption
- c. Coagulation
- d. Desorption
- e. Absorption

2644. The process of one substance drawing the other in only with its surface is called:

- a. Coagulation
- b. Desorption
- c. Absorption
- d. Chemisorption
- e. Adsorption**

2645. The process of one substance drawing the other in only with its surface is called:

- a. Coagulation
- b. Desorption
- c. Chemisorption
- d. Adsorption**
- e. Absorption

2646. The second stage of detoxification involves joining certain chemical compounds with functional groups of toxins. Select one such compound:

- a. Glucuronic acid**
- b. Glucose
- c. Higher fatty acids
- d. Cholesterol
- e. Pyruvate

2647. The second stage of detoxification involves joining certain chemical compounds with functional groups of toxins. Select one such compound:

- a. Cholesterol
- b. Glucuronic acid**
- c. Pyruvate
- d. Glucose
- e. Higher fatty acids

2648. The second stage of detoxification involves joining certain chemical compounds with functional groups of toxins. Select one such compound:

- a. Cholesterol
- b. Higher fatty acids

c. Pyruvate

d. Glucose

e. Glucuronic acid

2649. The secondary structure of eukaryotic DNA is a double helix. What bonds keep the strands of DNA molecule together?

a. Hydrogen

b. Ester

c. Disulfide

d. Glycosidic

e. Peptide

2650. The secondary structure of eukaryotic DNA is a double helix. What bonds keep the strands of DNA molecule together?

a. Hydrogen

b. Glycosidic

c. Peptide

d. Disulfide

e. Ester

2651. The secondary structure of eukaryotic DNA is a double helix. What bonds keep the strands of DNA molecule together?

a. Peptide

b. Disulfide

c. Hydrogen

d. Ester

e. Glycosidic

2652. The stem surface of a woody plant is being studied. It is noted that the cells are parenchymal, dead, with suberized membranes. Therefore, this is:

a. Cork

b. Phelloderm

c. Phellogen

d. Sclerenchyma fibers

e. Vessels

2653. The stem surface of a woody plant is being studied. It is noted that the cells are parenchymal, dead, with suberized membranes. Therefore, this is:

a. Sclerenchyma fibers

b. Cork

c. Phelloderm

d. Phellogen

e. Vessels

2654. The stem surface of a woody plant is being studied. It is noted that the cells are parenchymal, dead, with suberized membranes. Therefore, this is:

a. Vessels

b. Cork

c. Sclerenchyma fibers

d. Phelloderm

e. Phellogen

2655. The structure of the bacterial cell that provides microbes with increased resistance to the environmental factors and can remain intact for a long time can be detected by staining a smear according to the Ozheshko technique. What is this structure called?

a. Spore

b. Flagella

c. Pilus

d. Plasmid

e. Capsule

2656. The structure of the bacterial cell that provides microbes with increased resistance to the environmental factors and can remain intact for a long time can be detected by staining a smear

according to the Ozheshko technique. What is this structure called?

- a. Flagella
- b. Plasmid
- c. Pilus
- d. Capsule

e. Spore

2657. The structure of the bacterial cell that provides microbes with increased resistance to the environmental factors and can remain intact for a long time can be detected by staining a smear according to the Ozheshko technique. What is this structure called?

- a. Pilus
- b. Capsule

c. Spore

- d. Flagella
- e. Plasmid

2658. The study of home-made canned vegetables revealed growth of microorganisms with the shape that resembled a tennis racket after inoculation on the Kitt-Tarozzi medium. What disease can be caused by these pathogens?

a. Botulism

- b. Cholera
- c. Salmonellosis
- d. Shigellosis
- e. Escherichiosis

2659. The study of home-made canned vegetables revealed growth of microorganisms with the shape that resembled a tennis racket after inoculation on the Kitt-Tarozzi medium. What disease can be caused by these pathogens?

- a. Cholera
- b. Salmonellosis

c. Botulism

- d. Shigellosis
- e. Escherichiosis

2660. The study of home-made canned vegetables revealed growth of microorganisms with the shape that resembled a tennis racket after inoculation on the Kitt-Tarozzi medium. What disease can be caused by these pathogens?

- a. Salmonellosis
- b. Shigellosis
- c. Cholera
- d. Escherichiosis

e. Botulism

2661. The study of the main root ontogenesis shows that it has developed from:

a. Lateral meristem

b. Radicle

- c. Intercalary meristem
- d. Pericycle
- e. Apical meristem

2662. The study of the main root ontogenesis shows that it has developed from:

- a. Lateral meristem
- b. Pericycle
- c. Intercalary meristem

d. Radicle

e. Apical meristem

2663. The study of the main root ontogenesis shows that it has developed from:

- a. Pericycle
- b. Apical meristem
- c. Intercalary meristem
- d. Lateral meristem

e. Radicle

2664. The surface activity of diphilic molecules can be described using the Traube-Duclos rule. How will the surface activity of fatty acids change in the area of low concentrations, if the length of the hydrocarbon radical increases by three $-\text{CH}_2-$ groups?

- a. It will become 27 times lower
- b. It will become 9 times higher

c. It will become 27 times higher

- d. It will become 3 times lower
- e. It will remain unchanged

2665. The surface activity of diphilic molecules can be described using the Traube-Duclos rule. How will the surface activity of fatty acids change in the area of low concentrations, if the length of the hydrocarbon radical increases by three $-\text{CH}_2-$ groups?

- a. It will become 9 times higher
- b. It will become 3 times lower

c. It will become 27 times higher

- d. It will become 27 times lower
- e. It will remain unchanged

2666. The surface activity of diphilic molecules can be described using the Traube-Duclos rule. How will the surface activity of fatty acids change in the area of low concentrations, if the length of the hydrocarbon radical increases by three $-\text{CH}_2-$ groups?

- a. It will remain unchanged
- b. It will become 3 times lower

c. It will become 27 times higher

- d. It will become 9 times higher
- e. It will become 27 times lower

2667. The synthesis of thyroid hormones is carried out from tyrosine within a special protein of the thyroid gland. Name this protein.

- a. Albumin
- b. Histone
- c. Immunoglobulin

d. Thyroglobulin

- e. Interferon

2668. The synthesis of thyroid hormones is carried out from tyrosine within a special protein of the thyroid gland. Name this protein.

- a. Albumin
- b. Interferon
- c. Immunoglobulin

d. Thyroglobulin

- e. Histone

2669. The synthesis of thyroid hormones is carried out from tyrosine within a special protein of the thyroid gland. Name this protein.

- a. Histone
- b. Albumin

c. Thyroglobulin

- d. Immunoglobulin
- e. Interferon

2670. The technology of drug production widely uses the phenomena of absorption and ion exchange. Which of the ions will be selectively adsorbed on the surface of a silver chloride crystal from an aqueous solution?

- a. Cu^{2+}
- b. NO_3^-
- c. H^+
- d. OH^-

e. Ag^+

2671. The technology of drug production widely uses the phenomena of absorption and ion exchange.

Which of the ions will be selectively adsorbed on the surface of a silver chloride crystal from an aqueous solution?

- a. Cu^{2+}
- b. OH^-
- c. NO_3^-
- d. H^+

e. Ag^+

2672. The technology of drug production widely uses the phenomena of absorption and ion exchange. Which of the ions will be selectively adsorbed on the surface of a silver chloride crystal from an aqueous solution?

- a. H^+
- b. NO_3^-

c. Ag^+

- d. Cu^{2+}
- e. OH^-

2673. The third analytical group of cations (acid-base classification) includes Ca^{2+} , Sr^{2+} , Ba^{2+} . What acid can function as a precipitator agent (group reagent) for these cations?

a. H_2SO_4

- b. HClO_4
- c. HNO_3
- d. CH_3COOH
- e. HCl

2674. The third analytical group of cations (acid-base classification) includes Ca^{2+} , Sr^{2+} , Ba^{2+} . What acid can function as a precipitator agent (group reagent) for these cations?

- a. CH_3COOH
- b. HNO_3
- c. HCl

d. H_2SO_4

e. HClO_4

2675. The third analytical group of cations (acid-base classification) includes Ca^{2+} , Sr^{2+} , Ba^{2+} . What acid can function as a precipitator agent (group reagent) for these cations?

- a. HClO_4
- b. CH_3COOH

c. H_2SO_4

d. HCl

e. HNO_3

2676. The titrant of mercurimetry method is:

- a. 0,1mol solution of KSCN
- b. 0,1mol solution of NH_4SCN
- c. 0,1mol solution of AgNO_3

d. 0,1mol solution of $\text{Hg}_2(\text{NO}_3)_2$

e. 0,1mol solution of NaNO_2

2677. The titrant of mercurimetry method is:

a. 0,1mol solution of NaNO_2

b. 0,1mol solution of $\text{Hg}_2(\text{NO}_3)_2$

c. 0,1mol solution of NH_4SCN

d. 0,1mol solution of KSCN

e. 0,1mol solution of AgNO_3

2678. The titrant of mercurimetry method is:

a. 0,1mol solution of NaNO_2

b. 0,1mol solution of AgNO_3

c. 0,1mol solution of $\text{Hg}_2(\text{NO}_3)_2$

d. 0,1mol solution of KSCN

e. 0,1mol solution of NH_4SCN

2679. There are plants selected, that have tubular, ligulate, pseudoligulate and funnelliform flowers,

clustered in simple flowerheads. These plants belong to the following family:

- a. Solanaceae
- b. Valerianaceae
- c. Tiliaceae

d. Asteraceae (Compositae)

- e. Ericaceae

2680. There are plants selected, that have tubular, ligulate, pseudoligulate and funnellform flowers, clustered in simple flowerheads. These plants belong to the following family:

- a. Tiliaceae

b. Asteraceae (Compositae)

- c. Ericaceae
- d. Valerianaceae
- e. Solanaceae

2681. Thermolabile medicinal preparation for extemporal use was heated to 65°C thrice with intervals of one day between the heatings. What method of sterilization was used in this case?

a. Tyndallization

- b. Filtration
- c. Koch's steam sterilization
- d. Pasteurization
- e. Calcination

2682. Thermolabile medicinal preparation for extemporal use was heated to 65°C thrice with intervals of one day between the heatings. What method of sterilization was used in this case?

a. Tyndallization

- b. Koch's steam sterilization
- c. Pasteurization
- d. Filtration
- e. Calcination

2683. Thermolabile medicinal preparation for extemporal use was heated to 65°C thrice with intervals of one day between the heatings. What method of sterilization was used in this case?

- a. Pasteurization
- b. Calcination
- c. Filtration
- d. Koch's steam sterilization

e. Tyndallization

2684. Thiocyanatometric titration method requires secondary standard solution of potassium thiocyanate that is standardized with standard solution of:

- a. Copper(II) nitrate
- b. Sulfuric acid
- c. Hydrochloric acid
- d. Iron(II) sulfate

e. Silver nitrate

2685. Thiocyanatometric titration method requires secondary standard solution of potassium thiocyanate that is standardized with standard solution of:

- a. Iron(II) sulfate
- b. Hydrochloric acid
- c. Copper(II) nitrate

d. Silver nitrate

- e. Sulfuric acid

2686. Thiocyanatometric titration method requires secondary standard solution of potassium thiocyanate that is standardized with standard solution of:

- a. Sulfuric acid
- b. Hydrochloric acid
- c. Copper(II) nitrate

d. Silver nitrate

- e. Iron(II) sulfate

2687. Throughout the last year, a 2-year-old child had frequent infectious diseases of a bacterial genesis with a protracted course. Study of the patient's immunogram detected hypogammaglobulinemia. What cells are most likely to be dysfunctional in this case, causing these clinical presentation and laboratory findings?

- a. Phagocytes
- b. B lymphocytes**
- c. Macrophages
- d. NK cells
- e. Killer T cells

2688. Throughout the last year, a 2-year-old child had frequent infectious diseases of a bacterial genesis with a protracted course. Study of the patient's immunogram detected hypogammaglobulinemia. What cells are most likely to be dysfunctional in this case, causing these clinical presentation and laboratory findings?

- a. Phagocytes
- b. Macrophages
- c. NK cells
- d. B lymphocytes**
- e. Killer T cells

2689. Throughout the last year, a 2-year-old child had frequent infectious diseases of a bacterial genesis with a protracted course. Study of the patient's immunogram detected hypogammaglobulinemia. What cells are most likely to be dysfunctional in this case, causing these clinical presentation and laboratory findings?

- a. Phagocytes
- b. NK cells
- c. B lymphocytes**
- d. Macrophages
- e. Killer T cells

2690. Tissue respiration is accompanied by formation of carbon dioxide and water. What component of the mitochondrial respiratory chain ensures the reduction of oxygen and formation of water?

- a. ATP / ADP translocase
- b. Acylcarnitine transferase
- c. Cytochrome oxidase**
- d. Ubiquinone
- e. Cytochrome C

2691. Tissue respiration is accompanied by formation of carbon dioxide and water. What component of the mitochondrial respiratory chain ensures the reduction of oxygen and formation of water?

- a. ATP / ADP translocase
- b. Cytochrome C
- c. Acylcarnitine transferase
- d. Cytochrome oxidase**
- e. Ubiquinone

2692. Tissue respiration is accompanied by formation of carbon dioxide and water. What component of the mitochondrial respiratory chain ensures the reduction of oxygen and formation of water?

- a. Ubiquinone
- b. Acylcarnitine transferase
- c. Cytochrome oxidase**
- d. Cytochrome C
- e. ATP / ADP translocase

2693. To accurately calculate the reaction velocity constant by the activation energy value, the steric factor is used, which takes into account:

- a. Concentration of the reactants
- b. Mutual orientation of the reacting molecules**
- c. Chemical properties of the interacting compounds
- d. Temperature of the reaction mixture
- e. Structure of the molecules in the interacting compounds

2694. To accurately calculate the reaction velocity constant by the activation energy value, the steric factor is used, which takes into account:

- a. Structure of the molecules in the interacting compounds
- b. Chemical properties of the interacting compounds
- c. Temperature of the reaction mixture
- d. Mutual orientation of the reacting molecules**
- e. Concentration of the reactants

2695. To accurately calculate the reaction velocity constant by the activation energy value, the steric factor is used, which takes into account:

- a. Temperature of the reaction mixture
- b. Mutual orientation of the reacting molecules**
- c. Chemical properties of the interacting compounds
- d. Concentration of the reactants
- e. Structure of the molecules in the interacting compounds

2696. To choose an indicator for acid-base titration, a titration curve needs to be built. This curve reflects the dependence of:

- a. Solution pH from the volume of the added titrant**
- b. Solution pH from the temperature
- c. Concentration of the analyzed compound from solution pH
- d. Solution pH from the concentration of the added titrant solution
- e. Solution pH from the volume of the solution being analyzed

2697. To choose an indicator for acid-base titration, a titration curve needs to be built. This curve reflects the dependence of:

- a. Solution pH from the concentration of the added titrant solution
- b. Concentration of the analyzed compound from solution pH
- c. Solution pH from the volume of the solution being analyzed
- d. Solution pH from the temperature
- e. Solution pH from the volume of the added titrant**

2698. To choose an indicator for acid-base titration, a titration curve needs to be built. This curve reflects the dependence of:

- a. Solution pH from the temperature
- b. Solution pH from the volume of the added titrant**
- c. Concentration of the analyzed compound from solution pH
- d. Solution pH from the volume of the solution being analyzed
- e. Solution pH from the concentration of the added titrant solution

2699. To create a vaccine for hepatitis B prevention the gene responsible for HBsAg production was integrated into the genome of vaccinia virus. What type of vaccine is obtained in this way?

- a. Genetically engineered vaccine**
- b. Inactivated
- c. Synthetic
- d. Anatoxin
- e. Chemical

2700. To create a vaccine for hepatitis B prevention the gene responsible for HBsAg production was integrated into the genome of vaccinia virus. What type of vaccine is obtained in this way?

- a. Inactivated
- b. Genetically engineered vaccine**
- c. Chemical
- d. Synthetic
- e. Anatoxin

2701. To create a vaccine for hepatitis B prevention the gene responsible for HBsAg production was integrated into the genome of vaccinia virus. What type of vaccine is obtained in this way?

- a. Synthetic
- b. Chemical
- c. Inactivated
- d. Anatoxin

e. Genetically engineered vaccine

2702. To determine a certain second group cation, the <<golden rain>> reaction is used with slow cooling of the preheated reagents. What reaction product is formed during the slow precipitation?

a. PbI_2

b. $PbCl_2$

c. AgI

d. Hg_{2I_2}

e. HgI₂

2703. To determine a certain second group cation, the <<golden rain>> reaction is used with slow cooling of the preheated reagents. What reaction product is formed during the slow precipitation?

a. AgI

b. PbI_2

c. Hg_{2I_2}

d. $PbCl_2$

e. HgI₂

2704. To determine a certain second group cation, the <<golden rain>> reaction is used with slow cooling of the preheated reagents. What reaction product is formed during the slow precipitation?

a. $PbCl_2$

b. AgI

c. HgI₂

d. PbI_2

e. Hg_{2I_2}

2705. To determine causative agent of the disease, a Gram-stained smear was prepared from the material obtained from the patient with furunculosis. Staphylococci were detected in the smear. What microscopic presentation allows making this conclusion?

a. Gram-positive cocci in grape-like clusters

b. Gram-positive cocci in short chains

c. Gram-negative cocci in grape-like clusters

d. Gram-negative cocci in short chains

e. Gram-negative bacilli in short chains

2706. To determine causative agent of the disease, a Gram-stained smear was prepared from the material obtained from the patient with furunculosis. Staphylococci were detected in the smear. What microscopic presentation allows making this conclusion?

a. Gram-negative bacilli in short chains

b. Gram-negative cocci in grape-like clusters

c. Gram-positive cocci in grape-like clusters

d. Gram-negative cocci in short chains

e. Gram-positive cocci in short chains

2707. To determine causative agent of the disease, a Gram-stained smear was prepared from the material obtained from the patient with furunculosis. Staphylococci were detected in the smear. What microscopic presentation allows making this conclusion?

a. Gram-negative cocci in short chains

b. Gram-negative bacilli in short chains

c. Gram-positive cocci in grape-like clusters

d. Gram-negative cocci in grape-like clusters

e. Gram-positive cocci in short chains

2708. To determine qualitative content of a drug, the drug sample was processed with 2M solution of HCl. White precipitate soluble in aqueous ammonia solution was formed. This analytical effect indicates the presence of the following cations:

a. Lead(II)

b. Mercury(II)

c. Silver(I)

d. Tin(II)

e. Mercury(I)

2709. To determine qualitative content of a drug, the drug sample was processed with 2M solution of

HCl. White precipitate soluble in aqueous ammonia solution was formed. This analytical effect indicates the presence of the following cations:

a. Tin(II)

b. Silver(I)

c. Mercury(I)

d. Mercury(II)

e. Lead(II)

2710. To determine qualitative content of a drug, the drug sample was processed with 2M solution of HCl. White precipitate soluble in aqueous ammonia solution was formed. This analytical effect indicates the presence of the following cations:

a. Tin(II)

b. Lead(II)

c. Mercury(II)

d. Silver(I)

e. Mercury(I)

2711. To determine the end point of an acid-base titration the following indicators are used:

a. pH-indicators

b. Redox indicators

c. Metal indicators

d. Adsorption indicators

e. Luminescent indicators

2712. To determine the end point of an acid-base titration the following indicators are used:

a. Luminescent indicators

b. pH-indicators

c. Metal indicators

d. Redox indicators

e. Adsorption indicators

2713. To determine the end point of an acid-base titration the following indicators are used:

a. Metal indicators

b. Luminescent indicators

c. Adsorption indicators

d. Redox indicators

e. pH-indicators

2714. To determine the mass-volume fraction of ammonia in the solution, neutralization back titration was used. Specify the pair of titrants necessary in this case:

a. HCl, NaOH

b. CH_3COOH , KOH

c. HCl, $\text{Hg}_2(\text{NO}_3)_2$

d. HCl, AgNO_3

e. HCl, $\text{Hg}(\text{NO}_3)_2$

2715. To determine the mass-volume fraction of ammonia in the solution, neutralization back titration was used. Specify the pair of titrants necessary in this case:

a. HCl, NaOH

b. HCl, AgNO_3

c. HCl, $\text{Hg}(\text{NO}_3)_2$

d. CH_3COOH , KOH

e. HCl, $\text{Hg}_2(\text{NO}_3)_2$

2716. To determine the mass-volume fraction of ammonia in the solution, neutralization back titration was used. Specify the pair of titrants necessary in this case:

a. HCl, $\text{Hg}(\text{NO}_3)_2$

b. HCl, AgNO_3

c. HCl, NaOH

d. CH_3COOH , KOH

e. HCl, $\text{Hg}_2(\text{NO}_3)_2$

2717. To determine the species of disease agent it is necessary to study its destructive enzymes.

What enzyme of those listed below is one of them?

a. Hyaluronidase

- b. Peroxidase
- c. Catalase
- d. Hydrolase
- e. Isomerase

2718. To determine the species of disease agent it is necessary to study its destructive enzymes. What enzyme of those listed below is one of them?

- a. Catalase
- b. Peroxidase
- c. Hydrolase

d. Hyaluronidase

e. Isomerase

2719. To disinfect a burn surface, an antiseptic was used. When interacting with tissues, this antiseptic releases atomic oxygen and manganese dioxide. What antiseptic was used in this case?

- a. Ethyl alcohol
- b. Iodine alcohol solution
- c. Brilliant green

d. Potassium permanganate

e. Hydrogen peroxide

2720. To disinfect a burn surface, an antiseptic was used. When interacting with tissues, this antiseptic releases atomic oxygen and manganese dioxide. What antiseptic was used in this case?

- a. Iodine alcohol solution
- b. Hydrogen peroxide

c. Potassium permanganate

- d. Brilliant green
- e. Ethyl alcohol

2721. To disinfect a burn surface, an antiseptic was used. When interacting with tissues, this antiseptic releases atomic oxygen and manganese dioxide. What antiseptic was used in this case?

- a. Iodine alcohol solution
- b. Hydrogen peroxide
- c. Ethyl alcohol
- d. Brilliant green

e. Potassium permanganate

2722. To enhance the solubility of the individual components of a number of liquid drug formulations, the colloidal surfactant are added. This process is based on the following physico-chemical phenomenon:

a. Solubilization

- b. Diffusion
- c. Sedimentation
- d. Extraction
- e. Coagulation

2723. To enhance the solubility of the individual components of a number of liquid drug formulations, the colloidal surfactant are added. This process is based on the following physico-chemical phenomenon:

a. Coagulation

b. Solubilization

- c. Diffusion
- d. Extraction
- e. Sedimentation

2724. To enhance the solubility of the individual components of a number of liquid drug formulations, the colloidal surfactant are added. This process is based on the following physico-chemical phenomenon:

- a. Sedimentation
- b. Coagulation

c. Solubilization

d. Extraction

e. Diffusion

2725. To identify a drug by thin-layer chromatography the following parameter is used:

a. R_f

b. I, A

c. E, mV

d. K_p

e. n

2726. To identify a drug by thin-layer chromatography the following parameter is used:

a. I, A

b. E, mV

c. R_f

d. K_p

e. n

2727. To identify a drug by thin-layer chromatography the following parameter is used:

a. K_p

b. E, mV

c. I, A

d. n

e. R_f

2728. To identify iodide ions in a solution, a reaction with lead cations was conducted. The obtained precipitate was dissolved in water by means of heating; afterwards the test glass was cooled. What analytical effect could be observed in the process?

a. Blue precipitate

b. Brown precipitate

c. Golden scales

d. White precipitate

e. Gas bubbles

2729. To identify iodide ions in a solution, a reaction with lead cations was conducted. The obtained precipitate was dissolved in water by means of heating; afterwards the test glass was cooled. What analytical effect could be observed in the process?

a. Gas bubbles

b. Golden scales

c. Brown precipitate

d. Blue precipitate

e. White precipitate

2730. To identify iodide ions in a solution, a reaction with lead cations was conducted. The obtained precipitate was dissolved in water by means of heating; afterwards the test glass was cooled. What analytical effect could be observed in the process?

a. White precipitate

b. Brown precipitate

c. Blue precipitate

d. Golden scales

e. Gas bubbles

2731. To induce diabetes mellitus in a rabbit, beta-cells of pancreatic islets (islets of Langerhans) were selectively damaged with alloxan. What method of diabetes induction was used in this experiment?

a. Shutdown

b. Irritation

c. Stimulation

d. Introduction of enzymes, hormones

e. Isolated organs

2732. To induce diabetes mellitus in a rabbit, beta-cells of pancreatic islets (islets of Langerhans) were selectively damaged with alloxan. What method of diabetes induction was used in this

experiment?

a. Introduction of enzymes, hormones

b. Shutdown

c. Irritation

d. Isolated organs

e. Stimulation

2733. To induce diabetes mellitus in a rabbit, beta-cells of pancreatic islets (islets of Langerhans) were selectively damaged with alloxan. What method of diabetes induction was used in this experiment?

a. Stimulation

b. Shutdown

c. Isolated organs

d. Irritation

e. Introduction of enzymes, hormones

2734. To introduce a medicine into the body through the airways, the following type of substance must be used:

a. Foam

b. Emulsion

c. Suspension

d. Ointment

e. Aerosol

2735. To introduce a medicine into the body through the airways, the following type of substance must be used:

a. Ointment

b. Aerosol

c. Foam

d. Emulsion

e. Suspension

2736. To introduce a medicine into the body through the airways, the following type of substance must be used:

a. Ointment

b. Foam

c. Suspension

d. Aerosol

e. Emulsion

2737. To isolate a pure culture of the disease's pathogen, its specific biological properties were used: growth at low temperatures, type of respiration, pathogenicity for laboratory animals, growth on selective nutrient media, and the ability for "creeping growth" on the surface of the medium. What microbial culture is expected to be isolated in this case?

a. *Enterococcus faecalis*

b. *Pseudomonas aeruginosa*

c. *Staphylococcus aureus*

d. *Proteus vulgaris*

e. *Yersinia pestis*

2738. To isolate a pure culture of the disease's pathogen, its specific biological properties were used: growth at low temperatures, type of respiration, pathogenicity for laboratory animals, growth on selective nutrient media, and the ability for "creeping growth" on the surface of the medium. What microbial culture is expected to be isolated in this case?

a. *Pseudomonas aeruginosa*

b. *Yersinia pestis*

c. *Enterococcus faecalis*

d. *Staphylococcus aureus*

e. *Proteus vulgaris*

2739. To isolate a pure culture of the disease's pathogen, its specific biological properties were used: growth at low temperatures, type of respiration, pathogenicity for laboratory animals, growth on

selective nutrient media, and the ability for "creeping growth" on the surface of the medium. What microbial culture is expected to be isolated in this case?

a. *Yersinia pestis*

b. *Proteus vulgaris*

c. *Enterococcus faecalis*

d. *Staphylococcus aureus*

e. *Pseudomonas aeruginosa*

2740. To obtain water-soluble iodine preparations (iodoforms), iodine is dissolved in surfactants that form micelles. The process, when compounds that are insoluble in a certain solvent, spontaneously dissolve in the micellar systems, is called:

a. Adsorption

b. Solubilization

c. Neutralization

d. Sedimentation

e. Coagulation

2741. To obtain water-soluble iodine preparations (iodoforms), iodine is dissolved in surfactants that form micelles. The process, when compounds that are insoluble in a certain solvent, spontaneously dissolve in the micellar systems, is called:

a. Neutralization

b. Adsorption

c. Solubilization

d. Coagulation

e. Sedimentation

2742. To prevent the development of muscular dystrophy, a doctor prescribed potassium orotate to a patient. This compound is an intermediate product of the synthesis of a certain substance. What substance is it?

a. Bile acids

b. Cholesterol

c. Pyrimidine nucleotides

d. Glucose

e. Ketone bodies

2743. To prevent the development of muscular dystrophy, a doctor prescribed potassium orotate to a patient. This compound is an intermediate product of the synthesis of a certain substance. What substance is it?

a. Bile acids

b. Ketone bodies

c. Glucose

d. Pyrimidine nucleotides

e. Cholesterol

2744. To prevent the development of muscular dystrophy, a doctor prescribed potassium orotate to a patient. This compound is an intermediate product of the synthesis of a certain substance. What substance is it?

a. Cholesterol

b. Bile acids

c. Pyrimidine nucleotides

d. Ketone bodies

e. Glucose

2745. To quantitatively determine Fe^{3+} ions, a photometric reaction with sulfosalicylic acid was conducted. Photometric determination of the obtained solution requires measuring of the following:

a. Refractive index

b. Optical density

c. Wavelength

d. Specific rotation

e. Half-wave potential

2746. To quantitatively determine Fe^{3+} ions, a photometric reaction with sulfosalicylic acid was

conducted. Photometric determination of the obtained solution requires measuring of the following:

- a. Refractive index
- b. Specific rotation
- c. Half-wave potential
- d. Wavelength

e. Optical density

2747. To quantitatively determine Fe^{3+} ions, a photometric reaction with sulfosalicylic acid was conducted. Photometric determination of the obtained solution requires measuring of the following:

a. Wavelength

b. Optical density

- c. Half-wave potential
- d. Specific rotation
- e. Refractive index

2748. To quickly relieve the state of acute psychosis, the patient was prescribed a rapid/short-acting psychotropic drug. Name this drug:

- a. Amitriptyline
- b. Piracetam
- c. Valerian extract

d. Droperidol

e. Caffeine and sodium benzoate

2749. To quickly relieve the state of acute psychosis, the patient was prescribed a rapid/short-acting psychotropic drug. Name this drug:

- a. Amitriptyline
- b. Valerian extract
- c. Piracetam
- d. Caffeine and sodium benzoate

e. Droperidol

2750. To quickly relieve the state of acute psychosis, the patient was prescribed a rapid/short-acting psychotropic drug. Name this drug:

a. Valerian extract

b. Droperidol

- c. Caffeine and sodium benzoate
- d. Amitriptyline
- e. Piracetam

2751. To quickly stop an attack of angina pectoris, a 55-year-old patient was prescribed an organic nitrate drug. What drug is it?

- a. Nifedipine
- b. Labetalol

c. Nitroglycerin

- d. Octadine (Guanethidine)
- e. Prazosin

2752. To quickly stop an attack of angina pectoris, a 55-year-old patient was prescribed an organic nitrate drug. What drug is it?

a. Octadine (Guanethidine)

b. Nitroglycerin

- c. Prazosin
- d. Labetalol
- e. Nifedipine

2753. To quickly stop an attack of angina pectoris, a 55-year-old patient was prescribed an organic nitrate drug. What drug is it?

- a. Prazosin
- b. Nifedipine

c. Nitroglycerin

- d. Octadine (Guanethidine)
- e. Labetalol

2754. To relieve dry cough, a patient with bronchitis was prescribed a drug that is an alkaloid of yellow horned-poppy. Name this drug:

- a. Glaucine hydrochloride**
- b. Codeine phosphate
- c. Oxeladin
- d. Codterpin
- e. Libexin (Prenoxdiazine)

2755. To relieve dry cough, a patient with bronchitis was prescribed a drug that is an alkaloid of yellow horned-poppy. Name this drug:

- a. Codterpin
- b. Glaucine hydrochloride**
- c. Oxeladin
- d. Codeine phosphate
- e. Libexin (Prenoxdiazine)

2756. To relieve dry cough, a patient with bronchitis was prescribed a drug that is an alkaloid of yellow horned-poppy. Name this drug:

- a. Libexin (Prenoxdiazine)
- b. Glaucine hydrochloride**
- c. Codeine phosphate
- d. Codterpin
- e. Oxeladin

2757. To reproduce Ehrlich carcinoma in a rabbit, a certain amount of benzpyrene (a polycyclic aromatic hydrocarbon) was daily applied to a dehaired patch of skin of the animal. What method is used for tumor modelling in this case?

- a. Induction**
- b. Ionizing radiation
- c. Hormone administration
- d. Transplantation
- e. Explantation

2758. To reproduce Ehrlich carcinoma in a rabbit, a certain amount of benzpyrene (a polycyclic aromatic hydrocarbon) was daily applied to a dehaired patch of skin of the animal. What method is used for tumor modelling in this case?

- a. Explantation
- b. Induction**
- c. Transplantation
- d. Hormone administration
- e. Ionizing radiation

2759. To reproduce Ehrlich carcinoma in a rabbit, a certain amount of benzpyrene (a polycyclic aromatic hydrocarbon) was daily applied to a dehaired patch of skin of the animal. What method is used for tumor modelling in this case?

- a. Ionizing radiation
- b. Transplantation
- c. Explantation
- d. Induction**
- e. Hormone administration

2760. To stimulate birth activity, a certain neurohypophyseal hormone is used. Name this hormone:

- a. Insulin
- b. Glucagon
- c. Oxytocin**
- d. Testosterone
- e. Thyroxine

2761. To stimulate birth activity, a certain neurohypophyseal hormone is used. Name this hormone:

- a. Insulin
- b. Testosterone
- c. Glucagon

d. Thyroxine

e. Oxytocin

2762. To stimulate birth activity, a certain neurohypophyseal hormone is used. Name this hormone:

a. Insulin

b. Thyroxine

c. Glucagon

d. Testosterone

e. Oxytocin

2763. To study the sanitary and microbiological quality of water at a laboratory, the minimum volume of water, in which bacteria of the Escherichia coli group can be detected, was determined. According to the State Standard of Ukraine, this value must be no less than:

a. 300

b. 200

c. 100

d. 400

e. 500

2764. To study the sanitary and microbiological quality of water at a laboratory, the minimum volume of water, in which bacteria of the Escherichia coli group can be detected, was determined. According to the State Standard of Ukraine, this value must be no less than:

a. 300

b. 400

c. 100

d. 500

e. 200

2765. To study the sanitary and microbiological quality of water at a laboratory, the minimum volume of water, in which bacteria of the Escherichia coli group can be detected, was determined. According to the State Standard of Ukraine, this value must be no less than:

a. 100

b. 400

c. 300

d. 500

e. 200

2766. To treat atherosclerosis a patient has obtained hypolipidemic agent - Fenofibrate - from pharmacy. What is the pharmacological group of this drug?

a. Muscarinic cholinergic receptor antagonists

b. Calcium channel blocking agents

c. Nitrofuranes

d. Fibrates

e. beta-adrenergic blocking agents

2767. To treat atherosclerosis a patient has obtained hypolipidemic agent - Fenofibrate - from pharmacy. What is the pharmacological group of this drug?

a. Muscarinic cholinergic receptor antagonists

b. Calcium channel blocking agents

c. Nitrofuranes

d. beta-adrenergic blocking agents

e. Fibrates

2768. To treat atherosclerosis a patient has obtained hypolipidemic agent - Fenofibrate - from pharmacy. What is the pharmacological group of this drug?

a. Nitrofuranes

b. Fibrates

c. Muscarinic cholinergic receptor antagonists

d. Calcium channel blocking agents

e. beta-adrenergic blocking agents

2769. To treat glaucoma a doctor made a decision to prescribe a cholinomimetic agent of direct action. Name this drug:

a. Pilocarpine hydrochloride

- b. Atropine sulfate
- c. Platyphylline hydrotartrate
- d. Zinc sulfate
- e. Sulfacyl-sodium (Sulfacetamide)

2770. To treat glaucoma a doctor made a decision to prescribe a cholinomimetic agent of direct action. Name this drug:

a. Pilocarpine hydrochloride

- b. Platyphylline hydrotartrate
- c. Atropine sulfate
- d. Zinc sulfate
- e. Sulfacyl-sodium (Sulfacetamide)

2771. To treat glaucoma a doctor made a decision to prescribe a cholinomimetic agent of direct action. Name this drug:

- a. Atropine sulfate
- b. Zinc sulfate

c. Pilocarpine hydrochloride

- d. Platyphylline hydrotartrate
- e. Sulfacyl-sodium (Sulfacetamide)

2772. To treat peptic ulcer disease of the stomach, the patient was prescribed an H₂-receptor antagonist under the brand name of Quamatel. What can be used as a substitute, if this brand is not available in the pharmacy?

a. Famotidine

- b. De-Nol (Bismuth subnitrate)
- c. Omeprazole
- d. Pirenzepine
- e. Pantoprazole

2773. To treat peptic ulcer disease of the stomach, the patient was prescribed an H₂-receptor antagonist under the brand name of Quamatel. What can be used as a substitute, if this brand is not available in the pharmacy?

a. Famotidine

- b. Omeprazole
- c. De-Nol (Bismuth subnitrate)
- d. Pantoprazole
- e. Pirenzepine

2774. To treat peptic ulcer disease of the stomach, the patient was prescribed an H₂-receptor antagonist under the brand name of Quamatel. What can be used as a substitute, if this brand is not available in the pharmacy?

- a. De-Nol (Bismuth subnitrate)
- b. Pirenzepine
- c. Omeprazole
- d. Pantoprazole

e. Famotidine

2775. Transformation C₂H₄ (alkene) \rightarrow C₂H₆ (alkane) occurs during the following reaction:

- a. Dehydration
- b. Dehydrogenation

c. Hydrogenation

- d. Dimerization
- e. Hydration

2776. Transformation C₂H₄ (alkene) \rightarrow C₂H₆ (alkane) occurs during the following reaction:

- a. Hydration
- b. Dimerization
- c. Dehydration

d. Dehydrogenation

e. Hydrogenation

2777. Transverse section of an axial organ has revealed conductive bundle with phloem and xylem radiating in separate alternate areas. Name the organ and type of conductive bundle:

a. Bundle is radial, organ is root of primary structure

b. Bundle is amphivasal (lepto centric), organ is monocotyledon rhizome

c. Bundle is amphicribal (hadro centric), organ is fern rhizome

d. Bundle is collateral open, organ is dicotyledon stem

e. Bundle is collateral closed, organ is monocotyledon stem

2778. Transverse section of an axial organ has revealed conductive bundle with phloem and xylem radiating in separate alternate areas. Name the organ and type of conductive bundle:

a. Bundle is radial, organ is root of primary structure

b. Bundle is collateral closed, organ is monocotyledon stem

c. Bundle is collateral open, organ is dicotyledon stem

d. Bundle is amphicribal (hadro centric), organ is fern rhizome

e. Bundle is amphivasal (lepto centric), organ is monocotyledon rhizome

2779. Transverse section of an axial organ has revealed conductive bundle with phloem and xylem radiating in separate alternate areas. Name the organ and type of conductive bundle:

a. Bundle is amphivasal (lepto centric), organ is monocotyledon rhizome

b. Bundle is radial, organ is root of primary structure

c. Bundle is collateral open, organ is dicotyledon stem

d. Bundle is amphicribal (hadro centric), organ is fern rhizome

e. Bundle is collateral closed, organ is monocotyledon stem

2780. Treatment of withdrawal syndrome in cases of morphine discontinuation requires the use of a drug that is an opiate receptor antagonist. Select this drug from the list.

a. Codeine phosphate

b. Naloxone hydrochloride

c. Omnopon

d. Riboflavin

e. Ketorolac

2781. Treatment of withdrawal syndrome in cases of morphine discontinuation requires the use of a drug that is an opiate receptor antagonist. Select this drug from the list.

a. Codeine phosphate

b. Riboflavin

c. Omnopon

d. Ketorolac

e. Naloxone hydrochloride

2782. Treatment of withdrawal syndrome in cases of morphine discontinuation requires the use of a drug that is an opiate receptor antagonist. Select this drug from the list.

a. Omnopon

b. Riboflavin

c. Codeine phosphate

d. Naloxone hydrochloride

e. Ketorolac

2783. Trimerization of acetylene results in the following product:

a. Benzene (benzol)

b. 2-Butyne

c. Vinylacetylene

d. Cyclooctatetraene

e. Trimethylbenzene

2784. Trimerization of acetylene results in the following product:

a. 2-Butyne

b. Cyclooctatetraene

c. Benzene (benzol)

d. Trimethylbenzene

e. Vinylacetylene

2785. Trimerization of acetylene results in the following product:

a. Trimethylbenzene

b. Benzene (benzol)

c. Cyclooctatetraene

d. Vinylacetylene

e. 2-Butyne

2786. Trypsin is a proteolytic enzyme used to clean purulent wounds. Combined with water, it causes the breakdown of complex organic compounds (proteins, peptides) into simpler ones. According to the modern international Nomenclature and Classification of Enzymes, trypsin belongs to:

a. Ligases

b. Isomerases

c. Transferases

d. Hydrolases

e. Oxidoreductases

2787. Trypsin is a proteolytic enzyme used to clean purulent wounds. Combined with water, it causes the breakdown of complex organic compounds (proteins, peptides) into simpler ones. According to the modern international Nomenclature and Classification of Enzymes, trypsin belongs to:

a. Transferases

b. Hydrolases

c. Ligases

d. Oxidoreductases

e. Isomerases

2788. Trypsin is a proteolytic enzyme used to clean purulent wounds. Combined with water, it causes the breakdown of complex organic compounds (proteins, peptides) into simpler ones. According to the modern international Nomenclature and Classification of Enzymes, trypsin belongs to:

a. Transferases

b. Oxidoreductases

c. Isomerases

d. Hydrolases

e. Ligases

2789. Ultramicroscopy is used to determine the radius of dispersed phase particles. The following should be measured to make the necessary calculations:

a. Number of particles in a definite volume

b. Time interval in which a tagged particle travels a certain distance

c. Intensity of transmitted light

d. Distance traveled by a tagged particle

e. Intensity of scattered light

2790. Ultramicroscopy is used to determine the radius of dispersed phase particles. The following should be measured to make the necessary calculations:

a. Intensity of transmitted light

b. Number of particles in a definite volume

c. Distance traveled by a tagged particle

d. Intensity of scattered light

e. Time interval in which a tagged particle travels a certain distance

2791. Ultramicroscopy is used to determine the radius of dispersed phase particles. The following should be measured to make the necessary calculations:

a. Intensity of transmitted light

b. Intensity of scattered light

c. Time interval in which a tagged particle travels a certain distance

d. Number of particles in a definite volume

e. Distance traveled by a tagged particle

2792. Ultraviolet irradiation is used in medicine in various physiotherapeutic procedures. What mechanism of medicinal action is characteristic of ultraviolet rays?

a. Decrease of melanin synthesis in the skin

b. Activation of vitamin D synthesis

- c. Activation of lipid peroxidation
- d. Intensification of cell division
- e. Activation of drug action

2793. Ultraviolet irradiation is used in medicine in various physiotherapeutic procedures. What mechanism of medicinal action is characteristic of ultraviolet rays?

- a. Decrease of melanin synthesis in the skin
- b. Activation of lipid peroxidation
- c. Activation of drug action

d. Activation of vitamin D synthesis

- e. Intensification of cell division

2794. Ultraviolet irradiation is used in medicine in various physiotherapeutic procedures. What mechanism of medicinal action is characteristic of ultraviolet rays?

- a. Decrease of melanin synthesis in the skin
- b. Intensification of cell division

c. Activation of vitamin D synthesis

- d. Activation of drug action
- e. Activation of lipid peroxidation

2795. Under certain conditions, solutions of high-molecular substances can lose their flowability, meaning that the bonds begin to form between macromolecules, leading to the formation of a spatial grid. Name this process:

a. Gel formation

- b. Condensation
- c. Peptization
- d. Coagulation
- e. Coacervation

2796. Under certain conditions, solutions of high-molecular substances can lose their flowability, meaning that the bonds begin to form between macromolecules, leading to the formation of a spatial grid. Name this process:

b. Gel formation

- c. Peptization
- d. Condensation
- e. Coagulation

2797. Under certain conditions, solutions of high-molecular substances can lose their flowability, meaning that the bonds begin to form between macromolecules, leading to the formation of a spatial grid. Name this process:

- a. Condensation
- b. Coacervation
- c. Coagulation

d. Gel formation

- e. Peptization

2798. Under what condition is the solubilization process possible?

- a. Surfactant concentration in the solution is arbitrary

b. Surfactant is in the form of micelles

- c. Surfactant is in the form of molecules
- d. Surfactant was comminuted before the dissolution
- e. Solute has high solubility in a certain solvent

2799. Under what condition is the solubilization process possible?

- a. Surfactant concentration in the solution is arbitrary
- b. Surfactant was comminuted before the dissolution
- c. Surfactant is in the form of molecules
- d. Solute has high solubility in a certain solvent

e. Surfactant is in the form of micelles

2800. Under what condition is the solubilization process possible?

- a. Surfactant was comminuted before the dissolution
- b. Surfactant is in the form of molecules
- c. Surfactant concentration in the solution is arbitrary

d. Surfactant is in the form of micelles

- e. Solute has high solubility in a certain solvent

2801. Upon examination of a flower it is determined to have one pistil made up of single free carpel. Therefore, this gynoecium can be identified as:

a. Monocarpous

- b. Lysicarpous
- c. Paracarpous
- d. Syncarpous
- e. Apocarpous

2802. Upon examination of a flower it is determined to have one pistil made up of single free carpel. Therefore, this gynoecium can be identified as:

- a. Apocarpous
- b. Paracarpous

c. Monocarpous

- d. Syncarpous
- e. Lysicarpous

2803. Upon examination of a flower it is determined to have one pistil made up of single free carpel. Therefore, this gynoecium can be identified as:

- a. Lysicarpous
- b. Syncarpous
- c. Apocarpous
- d. Paracarpous

e. Monocarpous

2804. Upon taking a herbal medicine, a 30-year-old patient has developed anaphylactic allergic reaction. Blood leukocytosis was observed. What kind of leukocytosis is characteristic of this case?

a. Eosinophilia

- b. Basophilia
- c. Lymphocytosis
- d. Heutrophilia
- e. Monocytosis

2805. Upon taking a herbal medicine, a 30-year-old patient has developed anaphylactic allergic reaction. Blood leukocytosis was observed. What kind of leukocytosis is characteristic of this case?

- a. Lymphocytosis
- b. Monocytosis
- c. Basophilia
- d. Heutrophilia

e. Eosinophilia

2806. Upon taking a herbal medicine, a 30-year-old patient has developed anaphylactic allergic reaction. Blood leukocytosis was observed. What kind of leukocytosis is characteristic of this case?

- a. Monocytosis
- b. Basophilia

c. Eosinophilia

- d. Heutrophilia
- e. Lymphocytosis

2807. Uric acid is the end product of purine nucleotide breakdown. Elevated levels of uric acid in blood lead to the development of:

a. Gout

- b. Diabetes mellitus
- c. Glycogenosis
- d. Gastritis
- e. Hepatitis

2808. Uric acid is the end product of purine nucleotide breakdown. Elevated levels of uric acid in

blood lead to the development of:

- a. Gastritis
- b. Diabetes mellitus
- c. Hepatitis

d. Gout

- e. Glycogenosis

2809. Uric acid is the end product of purine nucleotide breakdown. Elevated levels of uric acid in blood lead to the development of:

- a. Gastritis
- b. Hepatitis

c. Gout

- d. Glycogenosis
- e. Diabetes mellitus

2810. Velamen is a specific multilayer absorbent tissue that often is photosynthetic. It provides protection against mechanical damage and water loss. It is formed on the roots of the following type of plants:

- a. Hygrophytes

b. Epiphytes

- c. Mesophytes
- d. Xerophytes
- e. Hydrophytes

2811. Velamen is a specific multilayer absorbent tissue that often is photosynthetic. It provides protection against mechanical damage and water loss. It is formed on the roots of the following type of plants:

- a. Mesophytes
- b. Xerophytes
- c. Hydrophytes

d. Epiphytes

- e. Hygrophytes

2812. Velamen is a specific multilayer absorbent tissue that often is photosynthetic. It provides protection against mechanical damage and water loss. It is formed on the roots of the following type of plants:

- a. Xerophytes
- b. Mesophytes

c. Epiphytes

- d. Hygrophytes
- e. Hydrophytes

2813. Vitamin B₆ is a part of the pyridoxal phosphate coenzyme (PLP). What reactions involve PLP?

a. Decarboxylation and transamination of amino acids

- b. Synthesis of bile acids and cholesterol
- c. Synthesis of steroid hormones and cholesterol
- d. Synthesis of ketone bodies and bile acids
- e. Synthesis of nucleic acids and phospholipids

2814. Vitamin B₆ is a part of the pyridoxal phosphate coenzyme (PLP). What reactions involve PLP?

- a. Synthesis of steroid hormones and cholesterol

b. Decarboxylation and transamination of amino acids

- c. Synthesis of ketone bodies and bile acids
- d. Synthesis of nucleic acids and phospholipids
- e. Synthesis of bile acids and cholesterol

2815. Vitamin B₆ is a part of the pyridoxal phosphate coenzyme (PLP). What reactions involve PLP?

- a. Synthesis of steroid hormones and cholesterol
- b. Synthesis of ketone bodies and bile acids
- c. Synthesis of nucleic acids and phospholipids
- d. Synthesis of bile acids and cholesterol

e. Decarboxylation and transamination of amino acids

2816. Vitamins and vitamin-like compounds are required for activation of higher fatty acids and their transport through the mitochondrial membrane. Name one such compound:

- a. Riboflavin
- b. Ubiquinone
- c. Thiamine
- d. Biotin

e. Carnitine

2817. Vitamins and vitamin-like compounds are required for activation of higher fatty acids and their transport through the mitochondrial membrane. Name one such compound:

- a. Thiamine
- b. Biotin

c. Carnitine

- d. Ubiquinone
- e. Riboflavin

2818. Vitamins and vitamin-like compounds are required for activation of higher fatty acids and their transport through the mitochondrial membrane. Name one such compound:

- a. Ubiquinone

b. Carnitine

- c. Riboflavin
- d. Biotin
- e. Thiamine

2819. What Brassicaceae family plant has a cardiotonic effect?

- a. *Capsella bursa-pastoris*
- b. *Adonis vernalis*
- c. *Rheum tanguticum*

d. *Erysimum diffusum*

- e. *Leonurus cardiaca*

2820. What Brassicaceae family plant has a cardiotonic effect?

- a. *Capsella bursa-pastoris*
- b. *Rheum tanguticum*
- c. *Leonurus cardiaca*

d. *Erysimum diffusum*

- e. *Adonis vernalis*

2821. What Brassicaceae family plant has a cardiotonic effect?

- a. *Leonurus cardiaca*
- b. *Adonis vernalis*

c. *Erysimum diffusum*

- d. *Capsella bursa-pastoris*
- e. *Rheum tanguticum*

2822. What analytical effect is observed during fixation of the end point in the Volhard titration?

- a. A red precipitate is produced

b. The solution colors red

- c. A yellow precipitate is produced
- d. The solution colors yellow
- e. A brown precipitate is produced

2823. What analytical effect is observed during fixation of the end point in the Volhard titration?

- a. A yellow precipitate is produced
- b. A red precipitate is produced
- c. A brown precipitate is produced

d. The solution colors red

- e. The solution colors yellow

2824. What analytical effect is observed during fixation of the end point in the Volhard titration?

- a. A yellow precipitate is produced
- b. The solution colors yellow
- c. A brown precipitate is produced

d. The solution colors red

e. A red precipitate is produced

2825. What analytical effect is observed when a solution that contains acetate ions is heated with ethyl alcohol and concentrated sulfuric acid?

a. Formation of a black precipitate

b. Release of a characteristic odor

c. Formation of a blue precipitate

d. Formation of a white precipitate

e. Formation of a yellow precipitate

2826. What analytical effect is observed when a solution that contains acetate ions is heated with ethyl alcohol and concentrated sulfuric acid?

a. Formation of a blue precipitate

b. Formation of a black precipitate

c. Formation of a white precipitate

d. Release of a characteristic odor

e. Formation of a yellow precipitate

2827. What analytical effect is observed when a solution that contains acetate ions is heated with ethyl alcohol and concentrated sulfuric acid?

a. Formation of a blue precipitate

b. Formation of a yellow precipitate

c. Formation of a black precipitate

d. Release of a characteristic odor

e. Formation of a white precipitate

2828. What analytical method can be used to quantify hydrogen peroxide without any special indicators?

a. Argentometry

b. Nitritometry

c. Permanganatometry

d. Complexonometry

e. Iodometry

2829. What analytical method can be used to quantify hydrogen peroxide without any special indicators?

a. Complexonometry

b. Argentometry

c. Nitritometry

d. Iodometry

e. Permanganatometry

2830. What analytical method can be used to quantify hydrogen peroxide without any special indicators?

a. Iodometry

b. Argentometry

c. Nitritometry

d. Permanganatometry

e. Complexonometry

2831. What anion of the 2nd analytic group produces black precipitate with group reagent AgNO_3 ?

a. S^{2-}

b. I^-

c. NCS^-

d. Br^-

e. Cl^-

2832. What anion of the 2nd analytic group produces black precipitate with group reagent AgNO_3 ?

a. I^-

b. Cl^-

c. S^{2-}

d. NCS^-

e. Br^-

2833. What anion of the 2nd analytic group produces black precipitate with group reagent AgNO_3 ?

a. I^-

b. Cl^-

c. NCS^-

d. Br^-

e. S^{2-}

2834. What anions form a precipitate soluble in 12% ammonium carbonate solution as a result of their interaction with a silver(I) nitrate solution?

a. Chloride ions

b. Sulfide ions

c. Bromide ions

d. Thiocyanate ions

e. Iodide ions

2835. What anions form a precipitate soluble in 12% ammonium carbonate solution as a result of their interaction with a silver(I) nitrate solution?

a. Chloride ions

b. Thiocyanate ions

c. Iodide ions

d. Sulfide ions

e. Bromide ions

2836. What anions form a precipitate soluble in 12% ammonium carbonate solution as a result of their interaction with a silver(I) nitrate solution?

a. Bromide ions

b. Iodide ions

c. Thiocyanate ions

d. Chloride ions

e. Sulfide ions

2837. What anions interfere with the determination of halide ions by means of the Volhard method, because they form a strong colorless complex with iron(III) ions?

a. MnO_4^-

b. NO_3^-

c. F^-

d. NO_2^-

e. SO_3^{2-}

2838. What anions interfere with the determination of halide ions by means of the Volhard method, because they form a strong colorless complex with iron(III) ions?

a. MnO_4^-

b. SO_3^{2-}

c. NO_2^-

d. F^-

e. NO_3^-

2839. What anions interfere with the determination of halide ions by means of the Volhard method, because they form a strong colorless complex with iron(III) ions?

a. SO_3^{2-}

b. MnO_4^-

c. F^-

d. NO_2^-

e. NO_3^-

2840. What anti-gout drug, based on its mechanism of action, is a urate-lowering agent and a xanthine oxidase inhibitor?

a. Allopurinol

b. Urolesane

c. Urosulfan (Sulfacarbamide)

d. Urodan

e. Etamide

2841. What anti-gout drug, based on its mechanism of action, is a urate-lowering agent and a xanthine oxidase inhibitor?

a. Allopurinol

b. Urosulfan (Sulfacarbamide)

c. Etamide

d. Urodan

e. Urolesane

2842. What anti-gout drug, based on its mechanism of action, is a urate-lowering agent and a xanthine oxidase inhibitor?

a. Urosulfan (Sulfacarbamide)

b. Allopurinol

c. Etamide

d. Urodan

e. Urolesane

2843. What antibiotic is a drug of choice for treatment of syphilis?

a. Lincomycin hydrochloride

b. Streptomycin sulfate

c. Levorin sodium salt

d. Polymyxin M sulfate

e. Benzylpenicillin sodium salt (Penicillin G sodium salt)

2844. What antibiotic is a drug of choice for treatment of syphilis?

a. Polymyxin M sulfate

b. Streptomycin sulfate

c. Levorin sodium salt

d. Benzylpenicillin sodium salt (Penicillin G sodium salt)

e. Lincomycin hydrochloride

2845. What antibiotic is a drug of choice for treatment of syphilis?

a. Streptomycin sulfate

b. Levorin sodium salt

c. Polymyxin M sulfate

d. Benzylpenicillin sodium salt (Penicillin G sodium salt)

e. Lincomycin hydrochloride

2846. What antibiotic is used for treatment of syphilis?

a. Benzylpenicillin

b. Amphotericin

c. Streptomycin

d. Kanamycin

e. Nystatin

2847. What antibiotic is used for treatment of syphilis?

a. Benzylpenicillin

b. Nystatin

c. Amphotericin

d. Kanamycin

e. Streptomycin

2848. What antibiotic is used for treatment of syphilis?

a. Streptomycin

b. Benzylpenicillin

c. Amphotericin

d. Kanamycin

e. Nystatin

2849. What anticholinesterase agent is used to stimulate intestinal peristalsis in the patients during the postoperative period?

a. Dithylin (Suxamethonium)

b. Metoprolol

c. Prozerin (Neostigmine)

- d. Adrenaline hydrochloride
- e. Salbutamol

2850. What anticholinesterase agent is used to stimulate intestinal peristalsis in the patients during the postoperative period?

- a. Metoprolol
- b. Adrenaline hydrochloride
- c. Salbutamol
- d. Dithylin (Suxamethonium)

e. Prozerin (Neostigmine)

2851. What anticholinesterase agent is used to stimulate intestinal peristalsis in the patients during the postoperative period?

- a. Salbutamol
- b. Adrenaline hydrochloride

c. Prozerin (Neostigmine)

- d. Dithylin (Suxamethonium)
- e. Metoprolol

2852. What antidote must be used in case of narcotic analgesics overdose?

a. Naloxone

- b. Unithiol (Dimercaptopropansulfonate sodium)
- c. Calcium chloride
- d. Diazepam
- e. Caffeine and sodium benzoate

2853. What antidote must be used in case of narcotic analgesics overdose?

- a. Diazepam
- b. Unithiol (Dimercaptopropansulfonate sodium)
- c. Calcium chloride

d. Naloxone

- e. Caffeine and sodium benzoate

2854. What antidote must be used in case of narcotic analgesics overdose?

- a. Unithiol (Dimercaptopropansulfonate sodium)
- b. Diazepam
- c. Caffeine and sodium benzoate

d. Naloxone

- e. Calcium chloride

2855. What antifungal antibiotic is poorly absorbed in the gastrointestinal tract and is effective against intestinal candidiasis?

- a. Griseofulvin

b. Nystatin

- c. Fluconazole
- d. Terbinafine
- e. Ketoconazole

2856. What antifungal antibiotic is poorly absorbed in the gastrointestinal tract and is effective against intestinal candidiasis?

- a. Griseofulvin

b. Nystatin

- c. Ketoconazole
- d. Terbinafine
- e. Fluconazole

2857. What antifungal antibiotic is poorly absorbed in the gastrointestinal tract and is effective against intestinal candidiasis?

- a. Ketoconazole

b. Nystatin

- c. Terbinafine
- d. Griseofulvin

e. Fluconazole

2858. What antihistamine with marked sedative effect should be prescribed to be taken before bed?

a. Alerius (Desloratadine)

b. Dimedrol (Diphenhydramin)

c. Loratadine

d. Fexofenadine

e. Guttalax (Sodium picosulfate)

2859. What antihistamine with marked sedative effect should be prescribed to be taken before bed?

a. Fexofenadine

b. Dimedrol (Diphenhydramin)

c. Loratadine

d. Alerius (Desloratadine)

e. Guttalax (Sodium picosulfate)

2860. What antihistamine with marked sedative effect should be prescribed to be taken before bed?

a. Fexofenadine

b. Guttalax (Sodium picosulfate)

c. Dimedrol (Diphenhydramin)

d. Loratadine

e. Alerius (Desloratadine)

2861. What bacteria indicate the presence of fecal contamination?

a. Anthracoids

b. Serratia

c. Sarcina

d. Escherichia coli

e. Klebsiella

2862. What bacteria indicate the presence of fecal contamination?

a. Sarcina

b. Klebsiella

c. Anthracoids

d. Escherichia coli

e. Serratia

2863. What bacteria indicate the presence of fecal contamination?

a. Serratia

b. Escherichia coli

c. Klebsiella

d. Sarcina

e. Anthracoids

2864. What broad-spectrum antibiotic is contraindicated for children under 14 years of age because it disrupts the formation of the skeleton?

a. Doxycycline

b. Ampicillin

c. Azithromycin

d. Ceftriaxone

e. Acyclovir

2865. What broad-spectrum antibiotic is contraindicated for children under 14 years of age because it disrupts the formation of the skeleton?

a. Acyclovir

b. Doxycycline

c. Ampicillin

d. Azithromycin

e. Ceftriaxone

2866. What broad-spectrum antibiotic is contraindicated for children under 14 years of age because it disrupts the formation of the skeleton?

a. Ceftriaxone

b. Azithromycin

c. Doxycycline

d. Acyclovir

e. Ampicillin

2867. What carboxylic acid is an aromatic monocarboxylic acid and can be used in treatment of skin diseases as an external antiseptic and fungicide?

a. Formic acid

b. Acetic acid

c. Valeric acid

d. Benzoic acid

e. Butyric acid

2868. What carboxylic acid is an aromatic monocarboxylic acid and can be used in treatment of skin diseases as an external antiseptic and fungicide?

a. Valeric acid

b. Acetic acid

c. Formic acid

d. Benzoic acid

e. Butyric acid

2869. What carboxylic acid is an aromatic monocarboxylic acid and can be used in treatment of skin diseases as an external antiseptic and fungicide?

a. Valeric acid

b. Butyric acid

c. Benzoic acid

d. Formic acid

e. Acetic acid

2870. What cation can be detected with Chugaiev's agent (Dimethylglyoxime)?

a. Ca^{2+}

b. Co^{2+}

c. Ni^{2+}

d. K^{+}

e. Mn^{2+}

2871. What cation can be detected with Chugaiev's agent (Dimethylglyoxime)?

a. K^{+}

b. Ni^{2+}

c. Mn^{2+}

d. Co^{2+}

e. Ca^{2+}

2872. What cation can be detected with Chugaiev's agent (Dimethylglyoxime)?

a. K^{+}

b. Ca^{2+}

c. Co^{2+}

d. Mn^{2+}

e. Ni^{2+}

2873. What cation is present in the solution, if its heating with an alkali produces a gas with pungent odor?

a. Lead(II)

b. Mercury(I)

c. Mercury(II)

d. Ammonium

e. Silver(I)

2874. What cation is present in the solution, if its heating with an alkali produces a gas with pungent odor?

a. Mercury(I)

b. Mercury(II)

c. Silver(I)

d. Lead(II)

e. Ammonium

2875. What cation is present in the solution, if its heating with an alkali produces a gas with pungent odor?

- a. Silver(I)
- b. Lead(II)
- c. Mercury(II)
- d. Mercury(I)

e. Ammonium

2876. What cation of the V analytical group (acid-base classification) is present in the solution, if a black precipitate is produced when tin(II) chloride dissolved in an alkaline medium is added into this solution?

a. Bismuth(III)

- b. Iron(III)
- c. Antimony(III)
- d. Iron(II)
- e. Manganese(II)

2877. What cation of the V analytical group (acid-base classification) is present in the solution, if a black precipitate is produced when tin(II) chloride dissolved in an alkaline medium is added into this solution?

a. Antimony(III)

b. Bismuth(III)

- c. Iron(III)
- d. Manganese(II)
- e. Iron(II)

2878. What cation of the V analytical group (acid-base classification) is present in the solution, if a black precipitate is produced when tin(II) chloride dissolved in an alkaline medium is added into this solution?

- a. Iron(II)
- b. Antimony(III)
- c. Manganese(II)
- d. Iron(III)

e. Bismuth(III)

2879. What cations have the highest mobility among those listed below?

- a. Ammonium cations
- b. Lithium cations
- c. Sodium cations
- d. Potassium cations

e. Hydroxonium cations

2880. What cations have the highest mobility among those listed below?

- a. Lithium cations
- b. Ammonium cations
- c. Potassium cations
- d. Sodium cations

e. Hydroxonium cations

2881. What cations have the highest mobility among those listed below?

a. Potassium cations

b. Hydroxonium cations

- c. Sodium cations
- d. Lithium cations
- e. Ammonium cations

2882. What cations of the fifth analytical group (acid-base classification) form colored hydroxides when precipitated with a group reagent?

- a. Ag^+ , Al^{3+}
- b. Ca^{2+} , Ba^{2+}
- c. Sn^{2+} , Sr^{2+}

d. Fe^{2+} , Fe^{3+}

e. Na^{+} , K^{+}

2883. What cations of the fifth analytical group (acid-base classification) form colored hydroxides when precipitated with a group reagent?

a. Ca^{2+} , Ba^{2+}

b. Ag^{+} , Al^{3+}

c. Na^{+} , K^{+}

d. Sn^{2+} , Sr^{2+}

e. Fe^{2+} , Fe^{3+}

2884. What cations of the fifth analytical group (acid-base classification) form colored hydroxides when precipitated with a group reagent?

a. Ca^{2+} , Ba^{2+}

b. Sn^{2+} , Sr^{2+}

c. Ag^{+} , Al^{3+}

d. Na^{+} , K^{+}

e. Fe^{2+} , Fe^{3+}

2885. What causes the dry cough that developed in a patient who has been taking lisinopril for a long time to treat her essential hypertension?

a. Accumulation of angiotensin II

b. Inhibition of angiotensin receptors

c. Increased bradykinin levels

d. Depletion of the noradrenaline reserves

e. Decreased renin levels

2886. What causes the dry cough that developed in a patient who has been taking lisinopril for a long time to treat her essential hypertension?

a. Decreased renin levels

b. Inhibition of angiotensin receptors

c. Depletion of the noradrenaline reserves

d. Accumulation of angiotensin II

e. Increased bradykinin levels

2887. What causes the dry cough that developed in a patient who has been taking lisinopril for a long time to treat her essential hypertension?

a. Depletion of the noradrenaline reserves

b. Accumulation of angiotensin II

c. Inhibition of angiotensin receptors

d. Decreased renin levels

e. Increased bradykinin levels

2888. What changes occur with the entropy of an isolated system, when it spontaneously approaches the equilibrium state?

a. Reaches its maximum

b. Does not change

c. Decreases linearly

d. Tends to infinity

e. Reaches its minimum

2889. What changes occur with the entropy of an isolated system, when it spontaneously approaches the equilibrium state?

a. Does not change

b. Reaches its maximum

c. Decreases linearly

d. Reaches its minimum

e. Tends to infinity

2890. What changes occur with the entropy of an isolated system, when it spontaneously approaches the equilibrium state?

a. Reaches its minimum

b. Decreases linearly

c. Does not change

d. Reaches its maximum

e. Tends to infinity

2891. What characteristic is used in titrimetric methods of analysis, when choosing the indicator?

a. Transition interval

b. Neutralization point

c. Titration jump

d. Indicator constant

e. Titration index

2892. What characteristic is used in titrimetric methods of analysis, when choosing the indicator?

a. Neutralization point

b. Titration index

c. Titration jump

d. Indicator constant

e. Transition interval

2893. What characteristic is used in titrimetric methods of analysis, when choosing the indicator?

a. Titration index

b. Indicator constant

c. Neutralization point

d. Titration jump

e. Transition interval

2894. What characteristic is used to choose indicator for titration analysis?

a. Transition interval

b. Indicator constant

c. Titration curve jump

d. Equivalence point

e. Titration indicator

2895. What characteristic is used to choose indicator for titration analysis?

a. Transition interval

b. Titration curve jump

c. Equivalence point

d. Indicator constant

e. Titration indicator

2896. What characteristic is used to choose indicator for titration analysis?

a. Titration indicator

b. Titration curve jump

c. Equivalence point

d. Indicator constant

e. Transition interval

2897. What chemotherapeutic agent is a drug of choice for treatment of herpes?

a. Acyclovir

b. Chingamin

c. Metronidazole

d. Rifampicin

e. Doxycycline hydrochloride

2898. What chemotherapeutic agent is a drug of choice for treatment of herpes?

a. Chingamin

b. Doxycycline hydrochloride

c. Acyclovir

d. Metronidazole

e. Rifampicin

2899. What chemotherapeutic agent is a drug of choice for treatment of herpes?

a. Metronidazole

b. Rifampicin

c. Doxycycline hydrochloride

d. Chingamin

e. Acyclovir

2900. What component of a plant cell determines the water content in the plant's internal environment, regulates water-salt metabolism, maintains turgor, and accumulates substances?

- a. Chloroplasts
- b. Endoplasmic reticulum
- c. Mitochondria
- d. Golgi complex

e. Vacuoles

2901. What component of a plant cell determines the water content in the plant's internal environment, regulates water-salt metabolism, maintains turgor, and accumulates substances?

- a. Endoplasmic reticulum
- b. Chloroplasts
- c. Golgi complex
- d. Mitochondria

e. Vacuoles

2902. What component of a plant cell determines the water content in the plant's internal environment, regulates water-salt metabolism, maintains turgor, and accumulates substances?

- a. Mitochondria
- b. Endoplasmic reticulum
- c. Golgi complex

d. Vacuoles

e. Chloroplasts

2903. What compound can be classified as a condensed arene?

a. Naphthalene

- b. Diphenylmethane
- c. Biphenyl
- d. Triphenylmethane
- e. Benzene

2904. What compound can be classified as a condensed arene?

a. Diphenylmethane

b. Naphthalene

- c. Triphenylmethane
- d. Benzene
- e. Biphenyl

2905. What compound can be classified as a condensed arene?

- a. Triphenylmethane
- b. Benzene

c. Naphthalene

- d. Biphenyl
- e. Diphenylmethane

2906. What compound has no carboxyl group but nevertheless is called an acid?

- a. Malic acid
- b. Valeric acid
- c. Tartaric acid

d. Picric acid

e. Lactic acid

2907. What compound has no carboxyl group but nevertheless is called an acid?

- a. Tartaric acid
- b. Valeric acid
- c. Lactic acid
- d. Malic acid

e. Picric acid

2908. What compound has no carboxyl group but nevertheless is called an acid?

- a. Valeric acid

- b. Malic acid
- c. Lactic acid
- d. Tartaric acid

e. Picric acid

2909. What compound is added along with the murexide indicator to reach pH>12, when detecting calcium cations?

a. Acetate buffer

b. Sodium hydroxide

- c. Ammonium hydroxide
- d. Urotropin
- e. Ammoniac buffer

2910. What compound is added along with the murexide indicator to reach pH>12, when detecting calcium cations?

a. Urotropin

b. Sodium hydroxide

- c. Ammoniac buffer
- d. Ammonium hydroxide
- e. Acetate buffer

2911. What compound is added along with the murexide indicator to reach pH>12, when detecting calcium cations?

a. Urotropin

b. Acetate buffer

c. Ammoniac buffer

d. Sodium hydroxide

e. Ammonium hydroxide

2912. What compound is formed as a result of interaction between aniline and concentrated sulfuric acid in a high-boiling solvent and is a structural fragment of a large group of medicines?

a. Methylamine

b. Uric acid

c. Sulfanilic acid

d. Salicylic acid

e. Gamma-aminobutyric acid

2913. What compound is formed as a result of interaction between aniline and concentrated sulfuric acid in a high-boiling solvent and is a structural fragment of a large group of medicines?

a. Uric acid

b. Methylamine

c. Gamma-aminobutyric acid

d. Sulfanilic acid

e. Salicylic acid

2914. What compound is formed as a result of interaction between aniline and concentrated sulfuric acid in a high-boiling solvent and is a structural fragment of a large group of medicines?

a. Uric acid

b. Salicylic acid

c. Methylamine

d. Sulfanilic acid

e. Gamma-aminobutyric acid

2915. What compound is obtained as the result of propylene interacting with bromine $\text{CH}_3\text{-CH=CH}_2 + \text{Br}_2 \rightarrow$

a. -

b. 1,1-Dibromopropane

c. 1,2-Dibromopropane

d. 1,2-Dibromopropene

e. 1,3-Dibromopropane

2916. What compound is obtained as the result of propylene interacting with bromine $\text{CH}_3\text{-CH=CH}_2 + \text{Br}_2 \rightarrow$

- a. 1,1-Dibromopropane
- b. 1,2-Dibromopropene
- c. 1,2-Dibromopropane**
- d. -
- e. 1,3-Dibromopropane

2917. What compound is obtained as the result of propylene interacting with bromine $\text{CH}_3\text{-CH=CH}_2 + \text{Br}_2 \rightarrow$?

- a. 1,2-Dibromopropene
- b. 1,2-Dibromopropane**
- c. 1,3-Dibromopropane
- d. 1,1-Dibromopropane
- e. -

2918. What compound will react with propane under the given conditions?

- a. Cl_2 , FeCl_3
- b. $\text{CH}_3\text{COONO}_2$
- c. H_2SO_4 concentrated
- d. HNO_3 concentrated

e. Br_2 , hnu, 20°C

2919. What compound will react with propane under the given conditions?

- a. HNO_3 concentrated

b. Br_2 , hnu, 20°C

- c. Cl_2 , FeCl_3
- d. $\text{CH}_3\text{COONO}_2$
- e. H_2SO_4 concentrated

2920. What compound will react with propane under the given conditions?

- a. HNO_3 concentrated
- b. Cl_2 , FeCl_3
- c. $\text{CH}_3\text{COONO}_2$

d. Br_2 , hnu, 20°C

- e. H_2SO_4 concentrated

2921. What conditions are necessary for the formation of crystalline precipitates?

a. Slow precipitation in hot dilute solutions

- b. Slow precipitation in cold concentrated solutions
- c. Rapid precipitation in hot dilute solutions
- d. Slow precipitation in cold dilute solutions
- e. Rapid precipitation in hot concentrated solutions

2922. What conditions are necessary for the formation of crystalline precipitates?

- a. Rapid precipitation in hot concentrated solutions
- b. Rapid precipitation in hot dilute solutions
- c. Slow precipitation in cold concentrated solutions
- d. Slow precipitation in cold dilute solutions

e. Slow precipitation in hot dilute solutions

2923. What conditions are necessary for the formation of crystalline precipitates?

- a. Rapid precipitation in hot dilute solutions
- b. Rapid precipitation in hot concentrated solutions
- c. Slow precipitation in hot dilute solutions**
- d. Slow precipitation in cold concentrated solutions
- e. Slow precipitation in cold dilute solutions

2924. What coordinates are used to build monomolecular adsorption isotherms?

- a. Inverse adsorption - concentration
- b. Logarithm of adsorption - concentration

c. Adsorption - concentration

- d. Surface tension - concentration
- e. Inverse adsorption - inverse concentration

2925. What coordinates are used to build monomolecular adsorption isotherms?

- a. Inverse adsorption - concentration
- b. Logarithm of adsorption - concentration
- c. Inverse adsorption - inverse concentration
- d. Surface tension - concentration

e. Adsorption - concentration

2926. What coordinates are used to build monomolecular adsorption isotherms?

- a. Logarithm of adsorption - concentration
- b. Inverse adsorption - concentration
- c. Surface tension - concentration

d. Adsorption - concentration

- e. Inverse adsorption - inverse concentration

2927. What device is used to measure surface tension of a liquid?

- a. Areometer

b. Stalagmometer

- c. Viscometer
- d. Nephelometer
- e. Calorimeter

2928. What device is used to measure surface tension of a liquid?

- a. Areometer
- b. Nephelometer

c. Stalagmometer

- d. Viscometer
- e. Calorimeter

2929. What device is used to measure surface tension of a liquid?

- a. Nephelometer

b. Stalagmometer

- c. Viscometer
- d. Calorimeter
- e. Areometer

2930. What disaccharide is a reducing one?

a. Maltose

- b. Starch
- c. Sucrose
- d. Cellulose
- e. Ribose

2931. What disaccharide is a reducing one?

- a. Ribose

b. Maltose

- c. Cellulose
- d. Sucrose
- e. Starch

2932. What disaccharide is a reducing one?

- a. Starch
- b. Sucrose
- c. Ribose

d. Maltose

- e. Cellulose

2933. What disperse system can be classified as liquid-liquid based on its aggregate state?

- a. Activated carbon
- b. Lather
- c. Fog

d. Milk

- e. Smoke

2934. What disperse system can be classified as liquid-liquid based on its aggregate state?

- a. Activated carbon

- b. Lather
- c. Fog
- d. Smoke

e. Milk

2935. What disperse system can be classified as liquid-liquid based on its aggregate state?

a. Lather

b. Milk

- c. Smoke
- d. Activated carbon
- e. Fog

2936. What diuretic reduces excretion of uric acid?

a. Hydrochlorothiazide

- b. Mannitol
- c. Acetazolamide
- d. Verospiron (Spironolactone)
- e. Furosemide

2937. What diuretic reduces excretion of uric acid?

a. Furosemide

b. Mannitol

c. Hydrochlorothiazide

- d. Acetazolamide
- e. Verospiron (Spironolactone)

2938. What diuretic reduces excretion of uric acid?

a. Mannitol

b. Acetazolamide

c. Hydrochlorothiazide

- d. Verospiron (Spironolactone)
- e. Furosemide

2939. What drug can be classified as an angiotensin-converting enzyme blocker based on its mechanism of action?

- a. Benzohexonium
- b. Valsartan
- c. Verapamil
- d. Furosemide

e. Lisinopril

2940. What drug can be classified as an angiotensin-converting enzyme blocker based on its mechanism of action?

- a. Furosemide
- b. Valsartan
- c. Benzohexonium
- d. Verapamil

e. Lisinopril

2941. What drug can be classified as an angiotensin-converting enzyme blocker based on its mechanism of action?

- a. Verapamil
- b. Benzohexonium
- c. Valsartan
- d. Furosemide

e. Lisinopril

2942. What drug can be used to stop a bronchospasm?

- a. Amoxicillin
- b. Atenolol

c. Salbutamol

- d. Omnoponum
- e. Aspirin

2943. What drug can be used to stop a bronchospasm?

- a. Atenolol
- b. Aspirin
- c. Omnoponum
- d. Amoxicillin

e. Salbutamol

2944. What drug can be used to stop a bronchospasm?

- a. Omnoponum
- b. Atenolol

c. Salbutamol

- d. Amoxicillin
- e. Aspirin

2945. What drug has an anxiolytic and anticonvulsant effect?

a. Diazepam

- b. Phenobarbital
- c. Aminazine (Chlorpromazine)
- d. Reserpine
- e. Droperidol

2946. What drug has an anxiolytic and anticonvulsant effect?

a. Diazepam

- b. Reserpine
- c. Aminazine (Chlorpromazine)
- d. Droperidol
- e. Phenobarbital

2947. What drug has an anxiolytic and anticonvulsant effect?

- a. Aminazine (Chlorpromazine)
- b. Reserpine

c. Diazepam

- d. Droperidol
- e. Phenobarbital

2948. What drug is administered in case of uterine inertia?

a. Oxytocin

- b. No-spa
- c. Fenoterol
- d. Vikasolum
- e. Progesterone

2949. What drug is administered in case of uterine inertia?

- a. Fenoterol
- b. No-spa
- c. Vikasolum

d. Oxytocin

- e. Progesterone

2950. What drug is administered in case of uterine inertia?

- a. Progesterone
- b. No-spa

c. Oxytocin

- d. Vikasolum
- e. Fenoterol

2951. What drug is advisable for individual malaria prophylaxis?

- a. Ampicillin
- b. Rifampicin
- c. Trimethoprim/sulfamethoxazole (Co-trimoxazole)
- d. Gentamicin

e. Chingamin

2952. What drug is advisable for individual malaria prophylaxis?

- a. Gentamicin
- b. Trimethoprim/sulfamethoxazole (Co-trimoxazole)

c. Chingamin

- d. Rifampicin
- e. Ampicillin

2953. What drug is advisable for individual malaria prophylaxis?

- a. Trimethoprim/sulfamethoxazole (Co-trimoxazole)
- b. Ampicillin
- c. Rifampicin

d. Chingamin

- e. Gentamicin

2954. What drug is an H₂-histamine receptor blocker?

a. Famotidine

- b. Almagel
- c. Gastrotzepin (Pirenzepine)
- d. Allochol
- e. Omeprazole

2955. What drug is an H₂-histamine receptor blocker?

- a. Allochol

b. Famotidine

- c. Gastrotzepin (Pirenzepine)
- d. Almagel
- e. Omeprazole

2956. What drug is an H₂-histamine receptor blocker?

- a. Gastrotzepin (Pirenzepine)
- b. Omeprazole
- c. Allochol

d. Famotidine

- e. Almagel

2957. What drug is indicated in case of an overdose of depolarizing muscle relaxants?

- a. Magnesium sulfate
- b. Naloxone
- c. Metoprolol
- d. Unithiol

e. Prozerin (Neostigmine)

2958. What drug is indicated in case of an overdose of depolarizing muscle relaxants?

- a. Metoprolol

b. Prozerin (Neostigmine)

- c. Unithiol
- d. Naloxone
- e. Magnesium sulfate

2959. What drug is indicated in case of an overdose of depolarizing muscle relaxants?

- a. Unithiol
- b. Metoprolol

c. Prozerin (Neostigmine)

- d. Naloxone
- e. Magnesium sulfate

2960. What drug is prescribed for prevention of myocardial infarction, if there are contraindications to acetylsalicylic acid?

a. Ticlopidine

- b. Heparin
- c. Phenilin (Phenindione)
- d. Streptokinase
- e. Neodicoumarin (ethyl biscoumacetate)

2961. What drug is prescribed for prevention of myocardial infarction, if there are contraindications to

acetylsalicylic acid?

- a. Phenylin (Phenindione)
- b. Streptokinase
- c. Heparin

d. Ticlopidine

- e. Neodicoumarin (ethyl biscoumacetate)

2962. What drug is prescribed for prevention of myocardial infarction, if there are contraindications to acetylsalicylic acid?

- a. Streptokinase
- b. Neodicoumarin (ethyl biscoumacetate)
- c. Phenylin (Phenindione)
- d. Heparin

e. Ticlopidine

2963. What drug is used as an antidote in cases of overdose with narcotic analgesics?

- a. Cordiamine (Nikethamide)

b. Naloxone

- c. Unithiol
- d. Ephedrine
- e. Atropine

2964. What drug is used as an antidote in cases of overdose with narcotic analgesics?

- a. Cordiamine (Nikethamide)
- b. Atropine

c. Naloxone

- d. Unithiol
- e. Ephedrine

2965. What drug is used as an antidote in cases of overdose with narcotic analgesics?

- a. Cordiamine (Nikethamide)
- b. Unithiol

c. Naloxone

- d. Ephedrine
- e. Atropine

2966. What drug must be prescribed to treat a patient with malaria?

a. Chingamine (Chloroquine)

- b. Tetracycline
- c. Chloramine
- d. Sulfamethoxazole
- e. Ceftriaxone

2967. What drug must be prescribed to treat a patient with malaria?

- a. Ceftriaxone

b. Chingamine (Chloroquine)

- c. Sulfamethoxazole
- d. Tetracycline
- e. Chloramine

2968. What drug must be prescribed to treat a patient with malaria?

- a. Sulfamethoxazole
- b. Chloramine
- c. Tetracycline

d. Chingamine (Chloroquine)

- e. Ceftriaxone

2969. What drug selectively suppresses the secretion of the gastric glands by blocking H₂-histamine receptors?

- a. Atropine sulfate
- b. Omeprazole

c. Famotidine

- d. Ipratropium bromide

e. Loratadine

2970. What drug selectively suppresses the secretion of the gastric glands by blocking H₂-histamine receptors?

a. Ipratropium bromide

b. Famotidine

c. Atropine sulfate

d. Loratadine

e. Omeprazole

2971. What drug selectively suppresses the secretion of the gastric glands by blocking H₂-histamine receptors?

a. Ipratropium bromide

b. Omeprazole

c. Famotidine

d. Loratadine

e. Atropine sulfate

2972. What drug should a doctor choose for substitution therapy after surgical removal of thyroid gland?

a. Insulin

b. Mercazolil (Thiamazole)

c. Prednisolone

d. L-thyroxine

e. Parathyreoidine

2973. What drug should a doctor choose for substitution therapy after surgical removal of thyroid gland?

a. Mercazolil (Thiamazole)

b. L-thyroxine

c. Insulin

d. Parathyreoidine

e. Prednisolone

2974. What drug should a doctor choose for substitution therapy after surgical removal of thyroid gland?

a. Parathyreoidine

b. L-thyroxine

c. Mercazolil (Thiamazole)

d. Prednisolone

e. Insulin

2975. What drug should be administered for individual prevention of malaria?

a. Ampicillin

b. Gentamicin

c. Biseptol (Co-Trimoxazole)

d. Rifampicin

e. Chingamin

2976. What drug should be administered for individual prevention of malaria?

a. Ampicillin

b. Gentamicin

c. Rifampicin

d. Chingamin

e. Biseptol (Co-Trimoxazole)

2977. What drug should be administered for individual prevention of malaria?

a. Gentamicin

b. Ampicillin

c. Rifampicin

d. Biseptol (Co-Trimoxazole)

e. Chingamin

2978. What drug should be prescribed to inhibit the synthesis of thyroid hormones?

a. Antistrumin (potassium iodide)

b. Mercazolil (Thiamazole)

c. Thyroidin

d. L-thyroxine

e. Parathyroidin

2979. What drug should be prescribed to inhibit the synthesis of thyroid hormones?

a. Parathyroidin

b. L-thyroxine

c. Mercazolil (Thiamazole)

d. Thyroidin

e. Antistrumin (potassium iodide)

2980. What drug should be prescribed to inhibit the synthesis of thyroid hormones?

a. Thyroidin

b. L-thyroxine

c. Parathyroidin

d. Antistrumin (potassium iodide)

e. Mercazolil (Thiamazole)

2981. What electrochemical method of quantitative analysis is based on measuring the amount of electric current that has been used for electrochemical reduction or oxidation of ions or elements that are being determined in the process of electrolysis?

a. Conductometry

b. Coulometry

c. Potentiometry

d. Amperometry

e. Polarography

2982. What electrochemical method of quantitative analysis is based on measuring the amount of electric current that has been used for electrochemical reduction or oxidation of ions or elements that are being determined in the process of electrolysis?

a. Polarography

b. Amperometry

c. Potentiometry

d. Coulometry

e. Conductometry

2983. What electrochemical method of quantitative analysis is based on measuring the amount of electric current that has been used for electrochemical reduction or oxidation of ions or elements that are being determined in the process of electrolysis?

a. Potentiometry

b. Coulometry

c. Polarography

d. Conductometry

e. Amperometry

2984. What electrophilic reagent is used for sulfonation of pyrrole and furan?

a. Pyridine-sulfur trioxide complex

b. Mixture of sulfuric acid and nitric acid

c. Diluted sulfuric acid

d. Concentrated sulfuric acid

e. Oleum

2985. What electrophilic reagent is used for sulfonation of pyrrole and furan?

a. Concentrated sulfuric acid

b. Mixture of sulfuric acid and nitric acid

c. Pyridine-sulfur trioxide complex

d. Diluted sulfuric acid

e. Oleum

2986. What electrophilic reagent is used for sulfonation of pyrrole and furan?

a. Mixture of sulfuric acid and nitric acid

- b. Oleum
- c. Diluted sulfuric acid
- d. Concentrated sulfuric acid

e. Pyridine-sulfur trioxide complex

2987. What emulsions can be stabilized by emulsifiers, if the solubility of these emulsifiers is higher in water than in oil?

a. Concentrated emulsions

b. Direct emulsions

- c. Emulsions of the second type
- d. Invert emulsions
- e. Dilute emulsions

2988. What emulsions can be stabilized by emulsifiers, if the solubility of these emulsifiers is higher in water than in oil?

a. Invert emulsions

b. Direct emulsions

- c. Concentrated emulsions
- d. Emulsions of the second type
- e. Dilute emulsions

2989. What emulsions can be stabilized by emulsifiers, if the solubility of these emulsifiers is higher in water than in oil?

a. Invert emulsions

b. Dilute emulsions

c. Direct emulsions

- d. Emulsions of the second type
- e. Concentrated emulsions

2990. What enzyme catalyzes the reaction of activation of amino acids and their attachment to a specific tRNA?

- a. DNA ligase
- b. Deoxyribonuclease
- c. Ribonuclease
- d. Nucleotidase

e. Aminoacyl-tRNA synthetase

2991. What enzyme catalyzes the reaction of activation of amino acids and their attachment to a specific tRNA?

- a. DNA ligase
- b. Ribonuclease

c. Aminoacyl-tRNA synthetase

- d. Nucleotidase
- e. Deoxyribonuclease

2992. What enzyme catalyzes the reaction of activation of amino acids and their attachment to a specific tRNA?

- a. Deoxyribonuclease
- b. Nucleotidase

c. Aminoacyl-tRNA synthetase

- d. DNA ligase
- e. Ribonuclease

2993. What factor of those named below is leading in developing symptom group characteristic of altitude sickness?

a. Decrease of oxygen partial pressure in air

- b. Solar radiation
- c. Speed of ascent
- d. Heavy physical exertion
- e. Daytime and nighttime temperature difference

2994. What factor of those named below is leading in developing symptom group characteristic of altitude sickness?

- a. Heavy physical exertion
- b. Decrease of oxygen partial pressure in air**
- c. Solar radiation
- d. Daytime and nighttime temperature difference
- e. Speed of ascent

2995. What factor of those named below is leading in developing symptom group characteristic of altitude sickness?

- a. Solar radiation
- b. Speed of ascent
- c. Decrease of oxygen partial pressure in air**
- d. Heavy physical exertion
- e. Daytime and nighttime temperature difference

2996. What factor will cause an increase in glomerular filtration in the kidneys?

- a. Increased oncotic blood pressure
- b. Increased intra-renal pressure
- c. Reduced number of functioning glomeruli
- d. Reduced oncotic blood pressure**
- e. Reduced hydrostatic pressure in the glomerular capillaries

2997. What factor will cause an increase in glomerular filtration in the kidneys?

- a. Increased oncotic blood pressure
- b. Reduced hydrostatic pressure in the glomerular capillaries
- c. Reduced number of functioning glomeruli
- d. Increased intra-renal pressure
- e. Reduced oncotic blood pressure**

2998. What factor will cause an increase in glomerular filtration in the kidneys?

- a. Reduced number of functioning glomeruli
- b. Increased intra-renal pressure
- c. Reduced oncotic blood pressure**
- d. Increased oncotic blood pressure
- e. Reduced hydrostatic pressure in the glomerular capillaries

2999. What feature of a leaf is characteristic of Poaceae?

- a. Leaf sheath**
- b. Stipules
- c. Petiole
- d. Ochrea
- e. Leaf blade

3000. What feature of a leaf is characteristic of Poaceae?

- a. Ochrea
- b. Leaf sheath**
- c. Stipules
- d. Leaf blade
- e. Petiole

3001. What feature of a leaf is characteristic of Poaceae?

- a. Petiole
- b. Stipules
- c. Ochrea
- d. Leaf blade
- e. Leaf sheath**

3002. What forms of erythrocytes will be observed in a case of B₁₂ deficiency anemia?

- a. Megalocytes**
- b. Annulocytes (Codocytes)
- c. Ovalocytes
- d. Normocytes
- e. Microcytes

3003. What forms of erythrocytes will be observed in a case of B₁₂ deficiency anemia?

- a. Normocytes
- b. Microcytes
- c. Ovalocytes

d. Megalocytes

- e. Annulocytes (Codocytes)

3004. What forms of erythrocytes will be observed in a case of B₁₂ deficiency anemia?

- a. Normocytes
- b. Ovalocytes

c. Megalocytes

- d. Annulocytes (Codocytes)
- e. Microcytes

3005. What forms when gelatin dissolves in water at an elevated temperature?

- a. Brittle xerogel
- b. Emulsion
- c. Elastic xerogel
- d. Suspension

e. Molecular solution

3006. What forms when gelatin dissolves in water at an elevated temperature?

- a. Elastic xerogel

b. Molecular solution

- c. Suspension
- d. Emulsion
- e. Brittle xerogel

3007. What forms when gelatin dissolves in water at an elevated temperature?

- a. Elastic xerogel
- b. Suspension
- c. Brittle xerogel

d. Molecular solution

- e. Emulsion

3008. What fruits are apocarpous?

- a. Cremocarp, disk-shaped schizocarp
- b. Bean, single nutlet

c. Aggregate drupe, follicetum

- d. Apple, acorn
- e. Capsule, berry

3009. What fruits are apocarpous?

- a. Cremocarp, disk-shaped schizocarp
- b. Bean, single nutlet

c. Aggregate drupe, follicetum

- d. Capsule, berry
- e. Apple, acorn

3010. What fruits are apocarpous?

- a. Cremocarp, disk-shaped schizocarp
- b. Bean, single nutlet
- c. Capsule, berry

d. Aggregate drupe, follicetum

- e. Apple, acorn

3011. What geometrical shape does methane molecule have?

- a. Planar

b. Tetrahedral

- c. Triangular
- d. Linear
- e. Spherical

3012. What geometrical shape does methane molecule have?

- a. Spherical

- b. Planar
- c. Triangular

d. Tetrahedral

- e. Linear

3013. What geometrical shape does methane molecule have?

- a. Triangular

b. Tetrahedral

- c. Planar
- d. Linear
- e. Spherical

3014. What group of diuretics completely rules out simultaneous prescription of hypotensive drugs that are inhibitors of angiotensin converting enzyme?

a. Potassium-sparing

- b. Xanthine
- c. Osmotic
- d. Loop
- e. Thiazide

3015. What group of diuretics completely rules out simultaneous prescription of hypotensive drugs that are inhibitors of angiotensin converting enzyme?

- a. Osmotic
- b. Loop
- c. Thiazide
- d. Xanthine

e. Potassium-sparing

3016. What group of diuretics completely rules out simultaneous prescription of hypotensive drugs that are inhibitors of angiotensin converting enzyme?

- a. Thiazide
- b. Xanthine
- c. Loop

d. Potassium-sparing

- e. Osmotic

3017. What groups of antibiotics can be classified as beta-lactam antibiotics?

- a. Cephalosporins, monobactams, aminoglycosides
- b. Penicillins, cephalosporins, tetracyclines
- c. Penicillins, cephalosporins, macrolides, carbapenems

d. Penicillins, cephalosporins, monobactams, carbapenems

- e. Cephalosporins, macrolides, aminoglycosides

3018. What groups of antibiotics can be classified as beta-lactam antibiotics?

- a. Penicillins, cephalosporins, macrolides, carbapenems

b. Penicillins, cephalosporins, monobactams, carbapenems

- c. Cephalosporins, monobactams, aminoglycosides
- d. Cephalosporins, macrolides, aminoglycosides
- e. Penicillins, cephalosporins, tetracyclines

3019. What groups of antibiotics can be classified as beta-lactam antibiotics?

- a. Penicillins, cephalosporins, tetracyclines
- b. Cephalosporins, macrolides, aminoglycosides

c. Penicillins, cephalosporins, monobactams, carbapenems

- d. Cephalosporins, monobactams, aminoglycosides
- e. Penicillins, cephalosporins, macrolides, carbapenems

3020. What has an effect on the coagulating action of a coagulant ion, according to the Schulze-Hardy rule?

a. Ion charge

- b. Ion size
- c. Adsorbability
- d. Polarization

e. Hydration ability

3021. What has an effect on the coagulating action of a coagulant ion, according to the Schulze-Hardy rule?

a. Hydration ability

b. Ion charge

c. Adsorbability

d. Polarization

e. Ion size

3022. What has an effect on the coagulating action of a coagulant ion, according to the Schulze-Hardy rule?

a. Polarization

b. Ion charge

c. Ion size

d. Adsorbability

e. Hydration ability

3023. What heterocycle has acidophobic properties?

a. Pteridine

b. Pyrrole

c. Pyrimidine

d. Thiophene

e. Quinoline

3024. What heterocycle has acidophobic properties?

a. Pteridine

b. Pyrimidine

c. Pyrrole

d. Thiophene

e. Quinoline

3025. What heterocycle has acidophobic properties?

a. Quinoline

b. Pteridine

c. Thiophene

d. Pyrimidine

e. Pyrrole

3026. What hormone can cause hypernatremia and hypokalemia, if its secretion becomes increased?

a. Atrial natriuretic hormone (peptide)

b. Aldosterone

c. Adrenaline

d. Glucagon

e. Parathormone

3027. What hormone can cause hypernatremia and hypokalemia, if its secretion becomes increased?

a. Atrial natriuretic hormone (peptide)

b. Aldosterone

c. Parathormone

d. Adrenaline

e. Glucagon

3028. What hormone can cause hypernatremia and hypokalemia, if its secretion becomes increased?

a. Parathormone

b. Adrenaline

c. Aldosterone

d. Atrial natriuretic hormone (peptide)

e. Glucagon

3029. What hormone can provoke an increase in blood pressure and elevated blood levels of glucose and lipids in a patient with hypotension, who has taken it as a component of a drug?

a. Insulin

b. Folliculin

c. Adrenaline

d. Progesterone

e. Testosterone

3030. What hormone can provoke an increase in blood pressure and elevated blood levels of glucose and lipids in a patient with hypotension, who has taken it as a component of a drug?

a. Progesterone

b. Insulin

c. Testosterone

d. Adrenaline

e. Folliculin

3031. What hormone can provoke an increase in blood pressure and elevated blood levels of glucose and lipids in a patient with hypotension, who has taken it as a component of a drug?

a. Testosterone

b. Adrenaline

c. Folliculin

d. Progesterone

e. Insulin

3032. What hormone changes glucose levels in the blood and is produced in the pancreas?

a. Insulin

b. Aldosterone

c. Growth hormone

d. Testosterone

e. Somatostatin

3033. What hormone changes glucose levels in the blood and is produced in the pancreas?

a. Aldosterone

b. Insulin

c. Testosterone

d. Somatostatin

e. Growth hormone

3034. What hormone changes glucose levels in the blood and is produced in the pancreas?

a. Aldosterone

b. Testosterone

c. Growth hormone

d. Insulin

e. Somatostatin

3035. What indicator is used for the quantitative determination of sodium carbonate in a preparation by the method of acid-base titration?

a. Methylene blue

b. Diphenylamine

c. Murexide

d. Methyl orange

e. Ferroin

3036. What indicator is used for the quantitative determination of sodium carbonate in a preparation by the method of acid-base titration?

a. Murexide

b. Diphenylamine

c. Ferroin

d. Methyl orange

e. Methylene blue

3037. What indicator is used in determination of primary aromatic amines using the nitritometric method?

a. Phenolphthalein

b. Tropeolin 00

c. Potassium chromate

d. Methyl orange

e. Eosin

3038. What indicator is used in determination of primary aromatic amines using the nitritometric method?

- a. Phenolphthalein
- b. Potassium chromate
- c. Eosin

d. Tropaeolin OO

e. Methyl orange

3039. What indicator is used in determination of primary aromatic amines using the nitritometric method?

- a. Potassium chromate
- b. Methyl orange
- c. Eosin
- d. Phenolphthalein

e. Tropaeolin OO

3040. What indicator is used in the Fajans-Khodakov method to determine sodium iodide (NaI)?

a. Eosin

- b. Potassium chromate
- c. Ammonium iron(III) sulfate
- d. Diphenylcarbazone
- e. Methyl orange

3041. What indicator is used in the Fajans-Khodakov method to determine sodium iodide (NaI)?

a. Ammonium iron(III) sulfate

b. Eosin

- c. Potassium chromate
- d. Diphenylcarbazone
- e. Methyl orange

3042. What indicator is used in the Fajans-Khodakov method to determine sodium iodide (NaI)?

a. Methyl orange

b. Eosin

- c. Diphenylcarbazone
- d. Ammonium iron(III) sulfate
- e. Potassium chromate

3043. What indicator should be chosen for standardization of a hydrochloric acid solution using Na_2CO_3 and $\text{Na}_2\text{B}_4\text{O}_7$ solutions?

a. Methyl red

- b. Murexide
- c. Thymol blue
- d. Eosin
- e. Tropaeolin OO

3044. What indicator should be chosen for standardization of a hydrochloric acid solution using Na_2CO_3 and $\text{Na}_2\text{B}_4\text{O}_7$ solutions?

a. Eosin

b. Murexide

c. Methyl red

- d. Thymol blue
- e. Tropaeolin OO

3045. What indicator should be chosen for standardization of a hydrochloric acid solution using Na_2CO_3 and $\text{Na}_2\text{B}_4\text{O}_7$ solutions?

a. Murexide

b. Thymol blue

c. Methyl red

d. Eosin

e. Tropaeolin OO

3046. What indicators are used to determine the titration endpoint in the acid-base titration method?

- a. Luminescent indicators
- b. Metal indicators
- c. Redox indicators

d. pH indicators

- e. Adsorption indicators

3047. What indicators are used to determine the titration endpoint in the acid-base titration method?

- a. Metal indicators
- b. Adsorption indicators
- c. Redox indicators
- d. Luminescent indicators

e. pH indicators

3048. What indicators are used to determine the titration endpoint in the acid-base titration method?

- a. Redox indicators

b. pH indicators

- c. Metal indicators
- d. Adsorption indicators
- e. Luminescent indicators

3049. What inflammatory mediator contributes to an increase in body temperature?

- a. Serotonin

b. Interleukin-1

- c. Bradykinin
- d. Histamine
- e. Thromboxane

3050. What inflammatory mediator contributes to an increase in body temperature?

- a. Serotonin
- b. Bradykinin
- c. Thromboxane

d. Interleukin-1

- e. Histamine

3051. What inflammatory mediator contributes to an increase in body temperature?

- a. Thromboxane
- b. Histamine
- c. Bradykinin

d. Interleukin-1

- e. Serotonin

3052. What integumentary tissue of roots consists of cells with thin cellulose membranes and outgrowths - root hairs?

- a. Periderm
- b. Periblem

c. Rhizoderm (epiblem)

- d. Pleroma
- e. Phelloderm

3053. What integumentary tissue of roots consists of cells with thin cellulose membranes and outgrowths - root hairs?

- a. Phelloderm
- b. Pleroma
- c. Periderm
- d. Periblem

e. Rhizoderm (epiblem)

3054. What ion has the maximum coagulating effect when added into positively charged sols?

- a. Cl^-
- b. K^+
- c. SO_4^{2-}
- d. PO_4^{3-}**
- e. Al^{3+}

3055. What ion has the maximum coagulating effect when added into positively charged sols?

- a. K^{+}
- b. PO_4^{3-}
- c. Cl^{-}
- d. Al^{3+}
- e. SO_4^{2-}

3056. What ion has the maximum coagulating effect when added into positively charged sols?

- a. K^{+}
- b. SO_4^{2-}
- c. PO_4^{3-}
- d. Cl^{-}
- e. Al^{3+}

3057. What ion increases osmotic pressure in the focus of inflammation?

- a. Potassium
- b. Chlorine
- c. Magnesium
- d. Fluorine
- e. Calcium

3058. What ion increases osmotic pressure in the focus of inflammation?

- a. Calcium
- b. Fluorine
- c. Magnesium
- d. Potassium
- e. Chlorine

3059. What ion increases osmotic pressure in the focus of inflammation?

- a. Fluorine
- b. Calcium
- c. Chlorine
- d. Magnesium
- e. Potassium

3060. What is represented by such a pharmacokinetic value of a drug as its biological half-life ($T_{1/2}$)?

- a. Time period in which plasma drug concentration decreases by 50%
- b. Correlation between the drug clearance rate and plasma drug concentration
- c. Blood plasma volume cleared of drug within a time unit
- d. Period of total body clearance
- e. Renal clearance rate

3061. What is represented by such a pharmacokinetic value of a drug as its biological half-life ($T_{1/2}$)?

- a. Time period in which plasma drug concentration decreases by 50%
- b. Correlation between the drug clearance rate and plasma drug concentration
- c. Period of total body clearance
- d. Renal clearance rate
- e. Blood plasma volume cleared of drug within a time unit

3062. What is represented by such a pharmacokinetic value of a drug as its biological half-life ($T_{1/2}$)?

- a. Correlation between the drug clearance rate and plasma drug concentration
- b. Renal clearance rate
- c. Blood plasma volume cleared of drug within a time unit
- d. Period of total body clearance
- e. Time period in which plasma drug concentration decreases by 50%

3063. What is the generative reproductive organ of gymnosperms and angiosperms?

- a. Seed
- b. Strobilus
- c. Macro- and microspores
- d. Flower
- e. Fruit

3064. What is the generative reproductive organ of gymnosperms and angiosperms?

- a. Fruit
- b. Strobilus
- c. Flower
- d. Macro- and microspores

e. Seed

3065. What is the generative reproductive organ of gymnosperms and angiosperms?

- a. Macro- and microspores
- b. Fruit
- c. Strobilus
- d. Flower

e. Seed

3066. What is the main mechanism of benzylpenicillin bactericidal action on the coccal flora?

a. Disturbed synthesis of microbial cell wall

- b. Disturbed cytoplasmic membrane permeability
- c. Inhibition of protein synthesis
- d. Activation of macroorganism immune system
- e. Increased phagocytic activity of leukocytes

3067. What is the main mechanism of benzylpenicillin bactericidal action on the coccal flora?

a. Disturbed synthesis of microbial cell wall

- b. Inhibition of protein synthesis
- c. Increased phagocytic activity of leukocytes
- d. Activation of macroorganism immune system
- e. Disturbed cytoplasmic membrane permeability

3068. What is the main mechanism of benzylpenicillin bactericidal action on the coccal flora?

a. Activation of macroorganism immune system

b. Disturbed synthesis of microbial cell wall

- c. Increased phagocytic activity of leukocytes
- d. Inhibition of protein synthesis
- e. Disturbed cytoplasmic membrane permeability

3069. What is the main substrate for eicosanoid synthesis in the human body?

a. Oleic acid

b. Arachidonic acid

- c. Palmitic acid
- d. Caproic acid
- e. Stearic acid

3070. What is the main substrate for eicosanoid synthesis in the human body?

- a. Oleic acid
- b. Caproic acid
- c. Stearic acid
- d. Palmitic acid

e. Arachidonic acid

3071. What is the main substrate for eicosanoid synthesis in the human body?

- a. Palmitic acid
- b. Stearic acid

c. Arachidonic acid

- d. Caproic acid
- e. Oleic acid

3072. What is the mechanism of Br₂ attaching to propene?

a. A_N

b. A_E

- c. S_E
- d. S_R
- e. S_N

3073. What is the mechanism of Br₂ attaching to propene?

a. A_N

b. A_E

c. S_R

d. S_E

e. S_N

3074. What is the mechanism of Br₂ attaching to propene?

a. S_R

b. A_E

c. A_N

d. S_N

e. S_E

3075. What is the mechanism of action of a catalyst in a chemical reaction?

a. Changes the degree of dispersion

b. Increases activation energy

c. Does not change the activation energy

d. Reduces activation energy

e. Changes the nature of the reagents

3076. What is the mechanism of action of a catalyst in a chemical reaction?

a. Changes the nature of the reagents

b. Changes the degree of dispersion

c. Increases activation energy

d. Does not change the activation energy

e. Reduces activation energy

3077. What is the mechanism of action of a catalyst in a chemical reaction?

a. Does not change the activation energy

b. Increases activation energy

c. Changes the nature of the reagents

d. Changes the degree of dispersion

e. Reduces activation energy

3078. What is the mechanism of action of the antiviral drug acyclovir?

a. Inhibition of nucleic acid synthesis

b. Blockade of cellular wall synthesis

c. Increase of cellular membrane permeability

d. Antagonism with para-aminobenzoic acid

e. Inhibition of protein synthesis

3079. What is the mechanism of action of the antiviral drug acyclovir?

a. Increase of cellular membrane permeability

b. Inhibition of nucleic acid synthesis

c. Inhibition of protein synthesis

d. Antagonism with para-aminobenzoic acid

e. Blockade of cellular wall synthesis

3080. What is the mechanism of action of the antiviral drug acyclovir?

a. Increase of cellular membrane permeability

b. Antagonism with para-aminobenzoic acid

c. Inhibition of protein synthesis

d. Inhibition of nucleic acid synthesis

e. Blockade of cellular wall synthesis

3081. What is the most common side-effect of inhaled corticosteroids?

a. Oropharyngeal candidiasis

b. Increased body mass

c. Subcapsular cataract

d. Arterial hypertension

e. Osteoporosis

3082. What is the most common side-effect of inhaled corticosteroids?

a. Increased body mass

b. Arterial hypertension

c. Subcapsular cataract

d. Oropharyngeal candidiasis

e. Osteoporosis

3083. What is the most common side-effect of inhaled corticosteroids?

a. Subcapsular cataract

b. Arterial hypertension

c. Oropharyngeal candidiasis

d. Osteoporosis

e. Increased body mass

3084. What is the name of an elongated dehiscent fruit formed from a coenocarpous gynoecium and divided by a membranous partition with seeds?

a. Silique

b. Disk-shaped schizocarp

c. Legume

d. Capsule

e. Cremocarp

3085. What is the name of an elongated dehiscent fruit formed from a coenocarpous gynoecium and divided by a membranous partition with seeds?

a. Disk-shaped schizocarp

b. Legume

c. Cremocarp

d. Capsule

e. Silique

3086. What is the name of an elongated dehiscent fruit formed from a coenocarpous gynoecium and divided by a membranous partition with seeds?

a. Legume

b. Cremocarp

c. Silique

d. Disk-shaped schizocarp

e. Capsule

3087. What is the name of the lower expanded hollow part of the pistil of a flower, where ovules are located?

a. Receptacle

b. Stylus

c. Stigma

d. Ovary

e. Gynoecium

3088. What is the name of the lower expanded hollow part of the pistil of a flower, where ovules are located?

a. Stigma

b. Ovary

c. Receptacle

d. Stylus

e. Gynoecium

3089. What is the name of the lower expanded hollow part of the pistil of a flower, where ovules are located?

a. Stigma

b. Receptacle

c. Stylus

d. Ovary

e. Gynoecium

3090. What is the name of the lower expanded hollow part of the pistil that contains ovules in a flower?

a. Ovary

b. Receptacle

- c. Gynoecium
- d. Stigma
- e. Style

3091. What is the name of the lower expanded hollow part of the pistil that contains ovules in a flower?

- a. Receptacle
- b. Style
- c. Stigma
- d. Gynoecium

e. Ovary

3092. What is the name of the lower expanded hollow part of the pistil that contains ovules in a flower?

- a. Stigma
- b. Gynoecium
- c. Style

d. Ovary

e. Receptacle

3093. What is the name of the phenomenon when one drug enhances the effect of another?

- a. Sensitization
- b. Withdrawal

c. Synergism

- d. Antagonism
- e. Tachyphylaxis

3094. What is the name of the phenomenon when one drug enhances the effect of another?

- a. Tachyphylaxis
- b. Sensitization
- c. Antagonism
- d. Withdrawal

e. Synergism

3095. What is the name of the phenomenon when one drug enhances the effect of another?

- a. Tachyphylaxis
- b. Sensitization
- c. Withdrawal
- d. Antagonism

e. Synergism

3096. What is the name of the single elongated crystals with pointed ends that can be detected during the microscopy of the herbal raw material harvested from a monocotyledonous plant?

a. Styloids

- b. Druses
- c. Globoids
- d. Cystoliths
- e. Crystalline sand

3097. What is the name of the single elongated crystals with pointed ends that can be detected during the microscopy of the herbal raw material harvested from a monocotyledonous plant?

- a. Crystalline sand
- b. Cystoliths
- c. Druses

d. Styloids

e. Globoids

3098. What is the name of the single elongated crystals with pointed ends that can be detected during the microscopy of the herbal raw material harvested from a monocotyledonous plant?

a. Cystoliths

b. Styloids

- c. Druses
- d. Crystalline sand

e. Globoids

3099. What is the order of the kinetic equation that describes the process of coagulation according to the Smoluchowski theory of rapid coagulation?

a. Second order

b. Fractional order

c. Third order

d. Zero order

e. First order

3100. What is the order of the kinetic equation that describes the process of coagulation according to the Smoluchowski theory of rapid coagulation?

a. First order

b. Zero order

c. Fractional order

d. Third order

e. Second order

3101. What is the order of the kinetic equation that describes the process of coagulation according to the Smoluchowski theory of rapid coagulation?

a. Zero order

b. First order

c. Second order

d. Fractional order

e. Third order

3102. What is the taxonomic division of a plant with periphloematic fibrovascular bundles that were detected during the study of the anatomical structure of its rhizome?

a. Green algae

b. Angiosperms

c. Polypodiophyta

d. Bryobionta

e. Gymnosperms

3103. What is the taxonomic division of a plant with periphloematic fibrovascular bundles that were detected during the study of the anatomical structure of its rhizome?

a. Green algae

b. Bryobionta

c. Angiosperms

d. Gymnosperms

e. Polypodiophyta

3104. What is the taxonomic division of a plant with periphloematic fibrovascular bundles that were detected during the study of the anatomical structure of its rhizome?

a. Gymnosperms

b. Bryobionta

c. Angiosperms

d. Green algae

e. Polypodiophyta

3105. What is the type of leaf attachment to the stem in *Papaver somniferum*?

a. Clasping

b. Perfoliate

c. Ochreate

d. Auriculate

e. Sheathing

3106. What is the type of leaf attachment to the stem in *Papaver somniferum*?

a. Ochreate

b. Clasping

c. Auriculate

d. Sheathing

e. Perfoliate

3107. What is the type of leaf attachment to the stem in *Papaver somniferum*?

- a. Sheathing
- b. Auriculate
- c. Clasping**
- d. Perfoliate
- e. Ochreate

3108. What kind of ground (functional) tissue is characteristic of above-ground organs of succulent plants, *Cactaceae* in particular?

- a. Folded parenchyma
- b. Starch storage parenchyma
- c. Hydroparenchyma**
- d. Aerenchyma
- e. Spongy parenchyma

3109. What kind of ground (functional) tissue is characteristic of above-ground organs of succulent plants, *Cactaceae* in particular?

- a. Folded parenchyma
- b. Starch storage parenchyma
- c. Hydroparenchyma**
- d. Spongy parenchyma
- e. Aerenchyma

3110. What kind of ground (functional) tissue is characteristic of above-ground organs of succulent plants, *Cactaceae* in particular?

- a. Spongy parenchyma
- b. Starch storage parenchyma
- c. Aerenchyma
- d. Folded parenchyma
- e. Hydroparenchyma**

3111. What local anesthetic is given to patients with cardiac rhythm disorder?

- a. Lidocaine**
- b. Caffeine and sodium benzoate
- c. Morphine hydrochloride
- d. Paracetamol
- e. Nitrazepam

3112. What local anesthetic is given to patients with cardiac rhythm disorder?

- a. Caffeine and sodium benzoate
- b. Paracetamol
- c. Lidocaine**
- d. Morphine hydrochloride
- e. Nitrazepam

3113. What local anesthetic is given to patients with cardiac rhythm disorder?

- a. Nitrazepam
- b. Lidocaine**
- c. Morphine hydrochloride
- d. Caffeine and sodium benzoate
- e. Paracetamol

3114. What local anesthetic is used to treat ventricular arrhythmia?

- a. Lidocaine hydrochloride**
- b. Ropivacaine
- c. Anesthesin (Benzocaine)
- d. Ultracaine
- e. Bupivacaine

3115. What local anesthetic is used to treat ventricular arrhythmia?

- a. Anesthesin (Benzocaine)
- b. Lidocaine hydrochloride**
- c. Ropivacaine

- d. Ultracaine
- e. Bupivacaine

3116. What local anesthetic is used to treat ventricular arrhythmia?

- a. Anesthesin (Benzocaine)
- b. Ultracaine

c. Lidocaine hydrochloride

- d. Bupivacaine
- e. Ropivacaine

3117. What medicine increases the risk of toxic effects when taken along with gentamicin?

a. Furosemide

- b. Erythromycin
- c. Methylprednisolone
- d. Caffeine
- e. Penicillin

3118. What medicine increases the risk of toxic effects when taken along with gentamicin?

- a. Caffeine
- b. Methylprednisolone
- c. Penicillin

d. Furosemide

- e. Erythromycin

3119. What medicine increases the risk of toxic effects when taken along with gentamicin?

- a. Methylprednisolone
- b. Erythromycin
- c. Caffeine

d. Furosemide

- e. Penicillin

3120. What medicine must be prescribed to a patient diagnosed with rheumatoid arthritis, if this patient's medical history indicates gastritis as a concomitant diagnosis?

- a. Diclofenac
- b. Ibuprofen
- c. Aspirin (acetylsalicylic acid)
- d. Indomethacin

e. Celecoxib

3121. What medicine must be prescribed to a patient diagnosed with rheumatoid arthritis, if this patient's medical history indicates gastritis as a concomitant diagnosis?

- a. Ibuprofen

b. Celecoxib

- c. Aspirin (acetylsalicylic acid)
- d. Indomethacin
- e. Diclofenac

3122. What medicine must be prescribed to a patient diagnosed with rheumatoid arthritis, if this patient's medical history indicates gastritis as a concomitant diagnosis?

- a. Ibuprofen
- b. Indomethacin
- c. Aspirin (acetylsalicylic acid)
- d. Diclofenac

e. Celecoxib

3123. What medium is necessary for determining the halide ions argentometrically using the Volhard method?

- a. Neutral medium
- b. Strong alkaline medium
- c. Weak alkaline medium

d. Nitric acid medium

- e. Acetic acid medium

3124. What medium is necessary for determining the halide ions argentometrically using the Volhard

method?

- a. Neutral medium
- b. Weak alkaline medium

c. Nitric acid medium

- d. Strong alkaline medium
- e. Acetic acid medium

3125. What medium is necessary for determining the halide ions argentometrically using the Volhard method?

- a. Weak alkaline medium
- b. Acetic acid medium

c. Nitric acid medium

- d. Neutral medium
- e. Strong alkaline medium

3126. What method can be used to determine the moisture content in thermally unstable preparations?

- a. Bromatometric method
- b. Nitritometric method
- c. Iodometric method
- d. Permanganatometric method

e. Non-aqueous titration using the Fischer's method

3127. What method can be used to determine the moisture content in thermally unstable preparations?

- a. Iodometric method
- b. Permanganatometric method
- c. Nitritometric method

d. Non-aqueous titration using the Fischer's method

- e. Bromatometric method

3128. What method can be used to determine the moisture content in thermally unstable preparations?

- a. Nitritometric method
- b. Permanganatometric method
- c. Bromatometric method
- d. Iodometric method

e. Non-aqueous titration using the Fischer's method

3129. What method is used for quantification of magnesium sulfate solution for injections?

- a. Acid-base titration

b. Complexonometry

- c. Iodine monochloride titration
- d. Cerimetry
- e. Nitritometry

3130. What method is used for quantification of magnesium sulfate solution for injections?

- a. Acid-base titration
- b. Cerimetry
- c. Nitritometry
- d. Iodine monochloride titration

e. Complexonometry

3131. What method is used for quantification of magnesium sulfate solution for injections?

- a. Iodine monochloride titration
- b. Nitritometry
- c. Acid-base titration

d. Complexonometry

- e. Cerimetry

3132. What method is used for simultaneous elimination of the effect of foreign substances, concentration, and determination of concentration?

- a. Differential spectrophotometry

b. Refractometry

c. Fluorimetry

d. Extraction-photometric analysis

e. Polarimetry

3133. What method is used for simultaneous elimination of the effect of foreign substances, concentration, and determination of concentration?

a. Refractometry

b. Differential spectrophotometry

c. Polarimetry

d. Fluorimetry

e. Extraction-photometric analysis

3134. What method is used for simultaneous elimination of the effect of foreign substances, concentration, and determination of concentration?

a. Refractometry

b. Polarimetry

c. Extraction-photometric analysis

d. Differential spectrophotometry

e. Fluorimetry

3135. What method is used for the quantification of ammonia?

a. Alkalimetry, back titration

b. Alkalimetry, direct titration

c. Complexonometry

d. Acidimetry, back titration

e. Acidimetry, direct titration

3136. What method is used for the quantification of ammonia?

a. Acidimetry, back titration

b. Alkalimetry, back titration

c. Complexonometry

d. Acidimetry, direct titration

e. Alkalimetry, direct titration

3137. What method is used for the quantification of ammonia?

a. Complexonometry

b. Alkalimetry, direct titration

c. Acidimetry, direct titration

d. Alkalimetry, back titration

e. Acidimetry, back titration

3138. What method is used for the quantification of bismuth in a preparation?

a. Complexonometry

b. Iodometry

c. Mercurimetry

d. Argentometry

e. Permanganatometry

3139. What method is used for the quantification of bismuth in a preparation?

a. Argentometry

b. Mercurimetry

c. Complexonometry

d. Iodometry

e. Permanganatometry

3140. What method is used for the quantification of bismuth in a preparation?

a. Iodometry

b. Mercurimetry

c. Complexonometry

d. Argentometry

e. Permanganatometry

3141. What method is used for the quantification of magnesium sulfate solution for injections?

a. Complexonometry

- b. Cerimetry
- c. Acid-base titration
- d. Nitritometry
- e. Iodine monochloride titration

3142. What method is used for the quantification of magnesium sulfate solution for injections?

- a. Iodine monochloride titration

b. Complexonometry

- c. Nitritometry
- d. Acid-base titration
- e. Cerimetry

3143. What method is used for the quantification of magnesium sulfate solution for injections?

- a. Nitritometry
- b. Iodine monochloride titration

c. Complexonometry

- d. Cerimetry
- e. Acid-base titration

3144. What method is used to destroy an emulsion?

- a. Condensation
- b. Homogenization

c. Centrifugation

- d. Dispersion
- e. Emulsification

3145. What method is used to destroy an emulsion?

- a. Dispersion
- b. Homogenization
- c. Condensation

d. Centrifugation

- e. Emulsification

3146. What method is used to destroy an emulsion?

- a. Emulsification
- b. Dispersion
- c. Homogenization
- d. Condensation

e. Centrifugation

3147. What method of microspecimen staining is used to detect Mycobacterium tuberculosis?

a. Ziehl-Nielsen stain

- b. Neisser stain
- c. Burri-Gins stain
- d. Romanowsky-Giemsa stain
- e. Gram stain

3148. What method of microspecimen staining is used to detect Mycobacterium tuberculosis?

- a. Burri-Gins stain
- b. Romanowsky-Giemsa stain

c. Ziehl-Nielsen stain

- d. Gram stain
- e. Neisser stain

3149. What method of microspecimen staining is used to detect Mycobacterium tuberculosis?

- a. Romanowsky-Giemsa stain
- b. Neisser stain
- c. Gram stain
- d. Burri-Gins stain

e. Ziehl-Nielsen stain

3150. What method of redox titration uses specific pH indicators for fixation of the titration endpoint?

- a. Nitritometry

b. Cerimetry

c. Bromatometry

d. Iodometry

e. Permanganatometry

3151. What method of redox titration uses specific pH indicators for fixation of the titration endpoint?

a. Nitritometry

b. Cerimetry

c. Permanganatometry

d. Iodometry

e. Bromatometry

3152. What method of redox titration uses specific pH indicators for fixation of the titration endpoint?

a. Permanganatometry

b. Nitritometry

c. Iodometry

d. Bromatometry

e. Cerimetry

3153. What method of titrimetric analysis is used to quantify streptocide (sulfanilamide) with a KBrO_3 solution in the presence of KBr ?

a. Bromatometry

b. Vanadatometry

c. Permanganometry

d. Iodometry

e. Dichromatometry

3154. What method of titrimetric analysis is used to quantify streptocide (sulfanilamide) with a KBrO_3 solution in the presence of KBr ?

a. Iodometry

b. Bromatometry

c. Vanadatometry

d. Permanganometry

e. Dichromatometry

3155. What method of titrimetric analysis is used to quantify streptocide (sulfanilamide) with a KBrO_3 solution in the presence of KBr ?

a. Vanadatometry

b. Permanganometry

c. Iodometry

d. Bromatometry

e. Dichromatometry

3156. What method of titrimetric analysis requires the use of both external and internal indicators?

a. Nitrite titration

b. Argentometry

c. Alkalimetry

d. Permanganatometry

e. Complexometric titration

3157. What method of titrimetric analysis requires the use of both external and internal indicators?

a. Complexometric titration

b. Argentometry

c. Permanganatometry

d. Nitrite titration

e. Alkalimetry

3158. What method of titrimetric analysis requires the use of both external and internal indicators?

a. Permanganatometry

b. Nitrite titration

c. Complexometric titration

d. Argentometry

e. Alkalimetry

3159. What mucolytic agent would you recommend for the patient with acute bronchitis to facilitate expectoration?

a. Acetylcysteine

b. Glaucine

c. Codeine

d. Libexin (Prenoxdiazine)

e. Hydrocodone

3160. What mucolytic agent would you recommend for the patient with acute bronchitis to facilitate expectoration?

a. Acetylcysteine

b. Hydrocodone

c. Codeine

d. Libexin (Prenoxdiazine)

e. Glaucine

3161. What mucolytic agent would you recommend for the patient with acute bronchitis to facilitate expectoration?

a. Hydrocodone

b. Acetylcysteine

c. Codeine

d. Libexin (Prenoxdiazine)

e. Glaucine

3162. What must be used to obtain a stable direct emulsion?

a. Any emulsifier

b. Calcium oleate

c. Hydrophobic emulsifier

d. Hydrophilic emulsifier

e. Lead stearate

3163. What must be used to obtain a stable direct emulsion?

a. Hydrophobic emulsifier

b. Calcium oleate

c. Hydrophilic emulsifier

d. Lead stearate

e. Any emulsifier

3164. What must be used to obtain a stable direct emulsion?

a. Lead stearate

b. Hydrophobic emulsifier

c. Any emulsifier

d. Calcium oleate

e. Hydrophilic emulsifier

3165. What non-steroidal anti-inflammatory drugs selectively block COX-2?

a. Meloxicam, Nimesulide

b. Ibuprofen, Ketoprofen

c. Mefenamic acid, Naproxen

d. Indomethacin, Diclofenac sodium

e. Ortophen, Voltaren

3166. What non-steroidal anti-inflammatory drugs selectively block COX-2?

a. Meloxicam, Nimesulide

b. Indomethacin, Diclofenac sodium

c. Mefenamic acid, Naproxen

d. Ortophen, Voltaren

e. Ibuprofen, Ketoprofen

3167. What non-steroidal anti-inflammatory drugs selectively block COX-2?

a. Ortophen, Voltaren

b. Ibuprofen, Ketoprofen

c. Mefenamic acid, Naproxen

d. Meloxicam, Nimesulide

e. Indomethacin, Diclofenac sodium

3168. What nonsteroidal anti-inflammatory drug selectively inhibits COX-2 and has no ulcerogenic effect?

a. Acetylsalicylic acid

b. Celecoxib

c. Diclofenac sodium

d. Paracetamol

e. Ibuprofen

3169. What nonsteroidal anti-inflammatory drug selectively inhibits COX-2 and has no ulcerogenic effect?

a. Acetylsalicylic acid

b. Diclofenac sodium

c. Ibuprofen

d. Paracetamol

e. Celecoxib

3170. What nonsteroidal anti-inflammatory drug selectively inhibits COX-2 and has no ulcerogenic effect?

a. Diclofenac sodium

b. Paracetamol

c. Acetylsalicylic acid

d. Ibuprofen

e. Celecoxib

3171. What nutrient medium is used for obtaining a fungal culture?

a. Casein-carbon agar

b. Endo medium

c. Sabouraud medium

d. Ploskirev medium

e. Kitt-Tarozzi medium

3172. What nutrient medium is used for obtaining a fungal culture?

a. Endo medium

b. Kitt-Tarozzi medium

c. Sabouraud medium

d. Casein-carbon agar

e. Ploskirev medium

3173. What nutrient medium is used for obtaining a fungal culture?

a. Kitt-Tarozzi medium

b. Casein-carbon agar

c. Ploskirev medium

d. Endo medium

e. Sabouraud medium

3174. What nutrient medium should be used by a laboratory technician to determine the total fungal count in a soft dosage form?

a. Sabouraud agar

b. Endo medium

c. Meat peptone agar

d. Mannitol salt agar

e. Bismuth sulfite agar

3175. What nutrient medium should be used by a laboratory technician to determine the total fungal count in a soft dosage form?

a. Endo medium

b. Meat peptone agar

c. Mannitol salt agar

d. Bismuth sulfite agar

e. Sabouraud agar

3176. What nutrient medium should be used by a laboratory technician to determine the total fungal count in a soft dosage form?

- a. Mannitol salt agar
- b. Meat peptone agar
- c. Endo medium
- d. Bismuth sulfite agar

e. Sabouraud agar

3177. What optical phenomenon is most intensive in suspensions?

- a. Light absorption
- b. Light reflection**
- c. Light scattering
- d. Light refraction
- e. Light transmission

3178. What optical phenomenon is most intensive in suspensions?

- a. Light scattering
- b. Light reflection**
- c. Light transmission
- d. Light refraction
- e. Light absorption

3179. What optical phenomenon is most intensive in suspensions?

- a. Light transmission
- b. Light reflection**
- c. Light refraction
- d. Light scattering
- e. Light absorption

3180. What organelles in a plant cell accumulate reserve and ergastic substances and water, maintain osmotic pressure and turgor of the cell, contain cell sap, and are separated from the cytoplasm by a tonoplast?

- a. Vacuoles**
- b. Chloroplasts
- c. Ribosomes
- d. Lysosomes
- e. Mitochondria

3181. What organelles in a plant cell accumulate reserve and ergastic substances and water, maintain osmotic pressure and turgor of the cell, contain cell sap, and are separated from the cytoplasm by a tonoplast?

- a. Chloroplasts
- b. Mitochondria
- c. Ribosomes
- d. Lysosomes

e. Vacuoles

3182. What organelles in a plant cell accumulate reserve and ergastic substances and water, maintain osmotic pressure and turgor of the cell, contain cell sap, and are separated from the cytoplasm by a tonoplast?

- a. Mitochondria
- b. Ribosomes
- c. Lysosomes
- d. Chloroplasts

e. Vacuoles

3183. What pair of electrodes is used in potentiometric redox titration?

- a. Copper electrode and zinc electrode
- b. Glass electrode and silver chloride electrode
- c. Silver electrode and platinum electrode
- d. Platinum electrode and silver chloride electrode**
- e. Silver sulfide electrode and silver chloride electrode

3184. What pair of electrodes is used in potentiometric redox titration?

- a. Copper electrode and zinc electrode
- b. Silver electrode and platinum electrode
- c. Glass electrode and silver chloride electrode
- d. Platinum electrode and silver chloride electrode**
- e. Silver sulfide electrode and silver chloride electrode

3185. What pair of electrodes is used in potentiometric redox titration?

- a. Silver electrode and platinum electrode
- b. Glass electrode and silver chloride electrode
- c. Silver sulfide electrode and silver chloride electrode
- d. Platinum electrode and silver chloride electrode**
- e. Copper electrode and zinc electrode

3186. What parameter determines the coagulating power of an electrolyte?

- a. Sol density
- b. Sol dispersion degree
- c. Electrolyte concentration
- d. Charge of the coagulator ion**
- e. Sol volume

3187. What parameter determines the coagulating power of an electrolyte?

- a. Sol volume
- b. Sol density
- c. Charge of the coagulator ion**
- d. Electrolyte concentration
- e. Sol dispersion degree

3188. What parameter determines the coagulating power of an electrolyte?

- a. Sol volume
- b. Sol dispersion degree
- c. Sol density
- d. Charge of the coagulator ion**
- e. Electrolyte concentration

3189. What parameter is determined during a blood test for erythrocyte sedimentation rate?

- a. Coagulation threshold
- b. -
- c. Aggregate stability
- d. Kinetic stability
- e. Sedimentation stability**

3190. What parameter is determined during a blood test for erythrocyte sedimentation rate?

- a. Coagulation threshold
- b. Aggregate stability
- c. Sedimentation stability**
- d. -
- e. Kinetic stability

3191. What parameter is determined during a blood test for erythrocyte sedimentation rate?

- a. Kinetic stability
- b. Coagulation threshold
- c. Sedimentation stability**
- d. -
- e. Aggregate stability

3192. What particles of the micelle described by the following formula: $m(\text{AgCl}) n\text{Ag}^+ + (n-x)\text{NO}_3^-$ are situated in diffusion layer?

- a. AgCl
- b. AgCl and Ag^+
- c. Ag^+ and NO_3^-
- d. Ag^+
- e. NO_3^-**

3193. What particles of the micelle described by the following formula: $m(\text{AgCl}) n\text{Ag}^+ + (n-x)\text{NO}_3^- \cdot x$ are situated in diffusion layer?

- a. AgCl and Ag^+
- b. AgCl
- c. Ag^+ and NO_3^-
- d. NO_3^-**
- e. Ag^+

3194. What particles of the micelle described by the following formula: $m(\text{AgCl}) n\text{Ag}^+ + (n-x)\text{NO}_3^- \cdot x$ are situated in diffusion layer?

- a. Ag^+ and NO_3^-
- b. Ag^+
- c. AgCl
- d. NO_3^-**
- e. AgCl and Ag^+

3195. What pathologies facilitate cumulation of drugs?

- a. Diseases of liver and kidneys**
- b. Diseases of respiratory tracts
- c. Diseases of locomotor apparatus
- d. Diseases of CNS
- e. Diseases of connective tissue

3196. What pathologies facilitate cumulation of drugs?

- a. Diseases of CNS
- b. Diseases of locomotor apparatus
- c. Diseases of respiratory tracts
- d. Diseases of connective tissue
- e. Diseases of liver and kidneys**

3197. What pathologies facilitate cumulation of drugs?

- a. Diseases of connective tissue
- b. Diseases of liver and kidneys**
- c. Diseases of respiratory tracts
- d. Diseases of CNS
- e. Diseases of locomotor apparatus

3198. What pharmacological effect of acetylsalicylic acid allows its application in patients with ischemic heart disease for prevention of thromboses?

- a. Analgesic
- b. Ulcerogenic
- c. Antipyretic
- d. Antiaggregant**
- e. Anti-inflammatory

3199. What pharmacological effect of acetylsalicylic acid allows its application in patients with ischemic heart disease for prevention of thromboses?

- a. Antipyretic
- b. Antiaggregant**
- c. Ulcerogenic
- d. Anti-inflammatory
- e. Analgesic

3200. What pharmacological effect of acetylsalicylic acid allows its application in patients with ischemic heart disease for prevention of thromboses?

- a. Ulcerogenic
- b. Antipyretic
- c. Analgesic
- d. Antiaggregant**
- e. Anti-inflammatory

3201. What pharmacological effect of acetylsalicylic acid allows using it for prevention of thrombosis in patients with ischemic heart disease?

a. Antipyretic

b. Antiaggregant

c. Analgesic

d. Ulcerogenic

e. Anti-inflammatory

3202. What pharmacological effect of acetylsalicylic acid allows using it for prevention of thrombosis in patients with ischemic heart disease?

a. Ulcerogenic

b. Analgesic

c. Anti-inflammatory

d. Antipyretic

e. Antiaggregant

3203. What pharmacological effect of acetylsalicylic acid allows using it for prevention of thrombosis in patients with ischemic heart disease?

a. Ulcerogenic

b. Anti-inflammatory

c. Antiaggregant

d. Analgesic

e. Antipyretic

3204. What physical phenomenon is measured using stalagmometry?

a. Concentration

b. Osmotic pressure

c. Isoelectric point

d. Molecular mass

e. Surface tension

3205. What physical phenomenon is measured using stalagmometry?

a. Isoelectric point

b. Surface tension

c. Molecular mass

d. Concentration

e. Osmotic pressure

3206. What physical phenomenon is measured using stalagmometry?

a. Isoelectric point

b. Osmotic pressure

c. Molecular mass

d. Surface tension

e. Concentration

3207. What plant is a component of the pectoral herbal tea and has characteristic basal long-petiolate, broadly ovate leaves that are white and downy from below and dark green, bare, and glossy from above?

a. *Thymus serpyllum*

b. *Origanum vulgare*

c. *Tussilago farfara*

d. *Sambucus nigra*

e. *Verbascum phlomoides*

3208. What plant is a component of the pectoral herbal tea and has characteristic basal long-petiolate, broadly ovate leaves that are white and downy from below and dark green, bare, and glossy from above?

a. *Verbascum phlomoides*

b. *Tussilago farfara*

c. *Thymus serpyllum*

d. *Origanum vulgare*

e. *Sambucus nigra*

3209. What plant is a component of the pectoral herbal tea and has characteristic basal long-petiolate, broadly ovate leaves that are white and downy from below and dark green, bare, and

glossy from above?

- a. *Verbascum phlomoides*
- b. *Origanum vulgare*
- c. *Sambucus nigra*

d. *Tussilago farfara*

- e. *Thymus serpyllum*

3210. What potential forms at the interface between two solutions?

- a. Electrokinetic potential

b. Diffusion potential

- c. Surface potential
- d. Electrode potential
- e. Contact potential

3211. What potential forms at the interface between two solutions?

- a. Electrokinetic potential
- b. Contact potential

c. Diffusion potential

- d. Electrode potential
- e. Surface potential

3212. What potential forms at the interface between two solutions?

- a. Electrokinetic potential
- b. Surface potential
- c. Contact potential

d. Diffusion potential

- e. Electrode potential

3213. What process occurs as a result of electrolytes effect on a solution of a high-molecular compound?

a. Salting out

- b. Thixotropy
- c. Solvation
- d. Coacervation
- e. Syneresis

3214. What process occurs as a result of electrolytes effect on a solution of a high-molecular compound?

- a. Syneresis
- b. Solvation

c. Salting out

- d. Coacervation
- e. Thixotropy

3215. What process occurs as a result of electrolytes effect on a solution of a high-molecular compound?

- a. Thixotropy
- b. Solvation
- c. Coacervation
- d. Syneresis

e. Salting out

3216. What product forms as a result of a reaction between aniline and benzaldehyde?

- a. Cyanhydrin

b. N-benzylideneaniline

- c. Oxime
- d. Hemiacetal
- e. N,N-dimethylaniline

3217. What product forms as a result of a reaction between aniline and benzaldehyde?

- a. Cyanhydrin
- b. Hemiacetal
- c. Oxime

d. N,N-dimethylaniline

e. N-benzylideneaniline

3218. What product forms as a result of a reaction between aniline and benzaldehyde?

a. Cyanohydrin

b. N,N-dimethylaniline

c. Oxime

d. Hemiacetal

e. N-benzylideneaniline

3219. What product is formed during the Wagner reaction, when alkenes are being oxidized with potassium permanganate in an aqueous medium?

a. Aldehyde

b. Glycol

c. Carboxylic acid

d. Epoxide

e. Ketone

3220. What product is formed during the Wagner reaction, when alkenes are being oxidized with potassium permanganate in an aqueous medium?

a. Carboxylic acid

b. Aldehyde

c. Glycol

d. Epoxide

e. Ketone

3221. What product is formed during the Wagner reaction, when alkenes are being oxidized with potassium permanganate in an aqueous medium?

a. Ketone

b. Glycol

c. Carboxylic acid

d. Aldehyde

e. Epoxide

3222. What reaction can be used to distinguish propyne from propene?

a. Decoloration of KMnO_4 solution

b. Decoloration of bromine water solution

c. Wurtz's reaction

d. Polymerization

e. Formation of acetylenides

3223. What reaction can be used to distinguish propyne from propene?

a. Decoloration of KMnO_4 solution

b. Polymerization

c. Decoloration of bromine water solution

d. Formation of acetylenides

e. Wurtz's reaction

3224. What reaction can be used to distinguish propyne from propene?

a. Polymerization

b. Decoloration of KMnO_4 solution

c. Wurtz's reaction

d. Formation of acetylenides

e. Decoloration of bromine water solution

3225. What reaction is the common reaction for detection of arsenic(III) and arsenic(V) compounds?

a. Reaction of reduction to arsine

b. Reaction with ammonium molybdate

c. Reaction with iodine

d. Reaction with potassium iodide

e. Reaction with sodium nitrate

3226. What reaction is the common reaction for detection of arsenic(III) and arsenic(V) compounds?

a. Reaction with ammonium molybdate

- b. Reaction with iodine
- c. Reaction with sodium nitrate

d. Reaction of reduction to arsine

- e. Reaction with potassium iodide

3227. What reaction is the common reaction for detection of arsenic(III) and arsenic(V) compounds?

- a. Reaction with sodium nitrate
- b. Reaction with potassium iodide
- c. Reaction with iodine

d. Reaction of reduction to arsine

- e. Reaction with ammonium molybdate

3228. What reaction must be conducted by an analytical chemist during the preliminary tests to determine chromium(III) ions?

- a. Reaction with ammonia

b. Reaction for formation of a perchromic acid after preliminary oxidation of chromium

- c. Reaction with potassium permanganate
- d. Reaction with sodium hydroxide
- e. Reaction with sodium hydroxide and hydrogen peroxide

3229. What reaction must be conducted by an analytical chemist during the preliminary tests to determine chromium(III) ions?

- a. Reaction with sodium hydroxide
- b. Reaction with ammonia
- c. Reaction with potassium permanganate
- d. Reaction with sodium hydroxide and hydrogen peroxide

e. Reaction for formation of a perchromic acid after preliminary oxidation of chromium

3230. What reaction must be conducted by an analytical chemist during the preliminary tests to determine chromium(III) ions?

- a. Reaction with sodium hydroxide and hydrogen peroxide
- b. Reaction with potassium permanganate
- c. Reaction with ammonia

d. Reaction for formation of a perchromic acid after preliminary oxidation of chromium

- e. Reaction with sodium hydroxide

3231. What reaction occurs when ascorbic acid is being determined by means of iodometry?

a. Redox

- b. Neutralization
- c. Precipitation
- d. Acylation
- e. Complex formation

3232. What reaction occurs when ascorbic acid is being determined by means of iodometry?

- a. Acylation
- b. Complex formation
- c. Precipitation
- d. Neutralization

e. Redox

3233. What reaction occurs when ascorbic acid is being determined by means of iodometry?

- a. Precipitation
- b. Complex formation
- c. Neutralization
- d. Acylation

e. Redox

3234. What reagent allows distinguishing between maltose (a reducing disaccharide) and sucrose (a non-reducing disaccharide)?

a. Tollens reagent

- b. FeCl_3
- c. $\text{K}_4[\text{Fe}(\text{CN}_6)]$
- d. NaOH

e. Br₂

3235. What reagent allows distinguishing between maltose (a reducing disaccharide) and sucrose (a non-reducing disaccharide)?

a. FeCl₃

b. Br₂

c. Tollens reagent

d. NaOH

e. K₄[Fe(CN)₆]

3236. What reagent allows distinguishing between maltose (a reducing disaccharide) and sucrose (a non-reducing disaccharide)?

a. NaOH

b. Br₂

c. FeCl₃

d. K₄[Fe(CN)₆]

e. Tollens reagent

3237. What reagent allows to simultaneously detect aldehyde group and glycol fragment presence in glucose molecule?

a. Cu(OH)₂

b. Br₂

c. AlCl₃

d. KMnO₄

e. FeCl₃

3238. What reagent allows to simultaneously detect aldehyde group and glycol fragment presence in glucose molecule?

a. Cu(OH)₂

b. Br₂

c. KMnO₄

d. FeCl₃

e. AlCl₃

3239. What reagent allows to simultaneously detect aldehyde group and glycol fragment presence in glucose molecule?

a. KMnO₄

b. AlCl₃

c. Br₂

d. FeCl₃

e. Cu(OH)₂

3240. What reagent can be used to distinguish between ethanol (C₂H₅OH) and glycerine?

a. FeCl₃

b. KMnO₄

c. HBr

d. Cu(OH)₂

e. Ag₂O

3241. What reagent can be used to distinguish between ethanol (C₂H₅OH) and glycerine?

a. KMnO₄

b. Ag₂O

c. FeCl₃

d. HBr

e. Cu(OH)₂

3242. What reagent can be used to distinguish between ethanol (C₂H₅OH) and glycerine?

a. KMnO₄

b. HBr

c. Ag₂O

d. FeCl₃

e. Cu(OH)₂

3243. What reagent is used to detect and photometrically determine Fe(II) and Fe(III) cations?

a. Sulfosalicylic acid

b. Chloroacetic acid

c. Phenylacetic acid

d. Oxalic acid

e. P-aminobenzoic acid

3244. What reagent is used to detect and photometrically determine Fe(II) and Fe(III) cations?

a. Sulfosalicylic acid

b. Oxalic acid

c. Chloroacetic acid

d. P-aminobenzoic acid

e. Phenylacetic acid

3245. What reagent is used to detect and photometrically determine Fe(II) and Fe(III) cations?

a. P-aminobenzoic acid

b. Sulfosalicylic acid

c. Oxalic acid

d. Chloroacetic acid

e. Phenylacetic acid

3246. What reagent will allow for unsaturated organic compounds reduction under the conditions given below?

a. HNO_3 , p, t

b. H_2 , Ni, t

c. H_2O , Hg^{2+} , H^+

d. NaOH, H_2O

e. $\text{K}_2\text{Cr}_2\text{O}_7$, H^+

3247. What reagent will allow for unsaturated organic compounds reduction under the conditions given below?

a. $\text{K}_2\text{Cr}_2\text{O}_7$, H^+

b. HNO_3 , p, t

c. NaOH, H_2O

d. H_2 , Ni, t

e. H_2O , Hg^{2+} , H^+

3248. What reagent will allow for unsaturated organic compounds reduction under the conditions given below?

a. $\text{K}_2\text{Cr}_2\text{O}_7$, H^+

b. NaOH, H_2O

c. H_2O , Hg^{2+} , H^+

d. H_2 , Ni, t

e. HNO_3 , p, t

3249. What reference electrode can be used in potentiometric analysis of a medicinal substance?

a. Antimony

b. Silver chloride

c. Quinhydrone

d. Glass

e. Zinc

3250. What reference electrode can be used in potentiometric analysis of a medicinal substance?

a. Glass

b. Quinhydrone

c. Antimony

d. Zinc

e. Silver chloride

3251. What reference electrode can be used in potentiometric analysis of a medicinal substance?

a. Zinc

b. Silver chloride

c. Quinhydrone

d. Antimony

e. Glass

3252. What rule describes the coagulation of sols under the effect of electrolytes?

a. Schulze-Hardy rule

b. Gibbs rule

c. Arrhenius equation

d. Van 't Hoff rule

e. Duclos-Traube rule

3253. What rule describes the coagulation of sols under the effect of electrolytes?

a. Arrhenius equation

b. Gibbs rule

c. Duclos-Traube rule

d. Van 't Hoff rule

e. Schulze-Hardy rule

3254. What rule describes the coagulation of sols under the effect of electrolytes?

a. Van 't Hoff rule

b. Duclos-Traube rule

c. Gibbs rule

d. Schulze-Hardy rule

e. Arrhenius equation

3255. What sanitary-indicative microorganisms are used for the assessment of the microbial contamination levels of potable water?

a. Escherichia coli

b. Clostridium perfringens

c. Candida albicans

d. Streptococcus viridans

e. Staphylococcus aureus

3256. What sanitary-indicative microorganisms are used for the assessment of the microbial contamination levels of potable water?

a. Escherichia coli

b. Clostridium perfringens

c. Streptococcus viridans

d. Candida albicans

e. Staphylococcus aureus

3257. What sanitary-indicative microorganisms are used for the assessment of the microbial contamination levels of potable water?

a. Clostridium perfringens

b. Escherichia coli

c. Candida albicans

d. Staphylococcus aureus

e. Streptococcus viridans

3258. What short-acting loop diuretic can cause significant hypokalemia?

a. Mannitol

b. Amiloride

c. Spironolactone

d. Furosemide

e. Triamterene

3259. What short-acting loop diuretic can cause significant hypokalemia?

a. Spironolactone

b. Triamterene

c. Mannitol

d. Furosemide

e. Amiloride

3260. What short-acting loop diuretic can cause significant hypokalemia?

a. Triamterene

b. Mannitol

c. Furosemide

d. Spironolactone

e. Amiloride

3261. What should be used as an indicator electrode in potentiometric titration aimed at quantifying iron(II) sulfate?

a. Antimony

b. Platinum

c. Silver chloride

d. Glass

e. Quinhydrone

3262. What should be used as an indicator electrode in potentiometric titration aimed at quantifying iron(II) sulfate?

a. Antimony

b. Glass

c. Quinhydrone

d. Platinum

e. Silver chloride

3263. What should be used as an indicator electrode in potentiometric titration aimed at quantifying iron(II) sulfate?

a. Quinhydrone

b. Platinum

c. Antimony

d. Silver chloride

e. Glass

3264. What solution can be determined by the photolorimetric method measuring self-absorbance?

a. Potassium chromate

b. Potassium chloride

c. Potassium sulphate

d. Potassium nitrate

e. Potassium phosphate

3265. What solution can be determined by the photolorimetric method measuring self-absorbance?

a. Potassium nitrate

b. Potassium chromate

c. Potassium phosphate

d. Potassium sulphate

e. Potassium chloride

3266. What solution can be determined by the photolorimetric method measuring self-absorbance?

a. Potassium phosphate

b. Potassium chromate

c. Potassium chloride

d. Potassium nitrate

e. Potassium sulphate

3267. What solution can be used to determine the presence of chloride ions in the potable water?

a. Silver nitrate

b. Potassium bromate

c. Sodium hydroxide

d. Iodine

e. Ammonia

3268. What solution can be used to determine the presence of chloride ions in the potable water?

a. Iodine

b. Silver nitrate

c. Ammonia

d. Sodium hydroxide

e. Potassium bromate

3269. What solution can be used to determine the presence of chloride ions in the potable water?

- a. Sodium hydroxide
- b. Iodine
- c. Potassium bromate

d. Silver nitrate

- e. Ammonia

3270. What solution has the highest osmotic pressure at the temperature of 298 K?

- a. Sodium benzoate solution
- b. Urea solution

c. Aluminum sulfate solution

- d. Glucose solution
- e. Sodium sulfate solution

3271. What solution has the highest osmotic pressure at the temperature of 298 K?

- a. Sodium sulfate solution
- b. Glucose solution

c. Aluminum sulfate solution

- d. Sodium benzoate solution
- e. Urea solution

3272. What solution has the highest osmotic pressure at the temperature of 298 K?

- a. Urea solution
- b. Sodium benzoate solution

c. Aluminum sulfate solution

- d. Sodium sulfate solution
- e. Glucose solution

3273. What solution is used as a process solution (titrant) in alkalimetry?

- a. Ammonium hydroxide
- b. Hydrochloric acid

c. Potassium hydroxide

- d. Oxalic acid
- e. Sodium tetraborate

3274. What solution is used as a process solution (titrant) in alkalimetry?

- a. Hydrochloric acid
- b. Oxalic acid

c. Potassium hydroxide

- d. Ammonium hydroxide
- e. Sodium tetraborate

3275. What solution is used as a process solution (titrant) in alkalimetry?

- a. Oxalic acid
- b. Hydrochloric acid

c. Potassium hydroxide

- d. Ammonium hydroxide
- e. Sodium tetraborate

3276. What solution is used to standardize the silver(I) nitrate titrant solution in Mohr's method?

- a. Potassium dichromate solution
- b. Sodium carbonate solution
- c. Sodium tetraborate solution
- d. Sodium oxalate solution

e. Sodium chloride solution

3277. What solution is used to standardize the silver(I) nitrate titrant solution in Mohr's method?

- a. Sodium carbonate solution
- b. Sodium tetraborate solution

c. Sodium chloride solution

- d. Sodium oxalate solution
- e. Potassium dichromate solution

3278. What solution is used to standardize the silver(I) nitrate titrant solution in Mohr's method?

- a. Sodium tetraborate solution

- b. Sodium oxalate solution
- c. Sodium carbonate solution

d. Sodium chloride solution

- e. Potassium dichromate solution

3279. What specific reagent is used in the qualitative analysis for Fe^{2+} cations?

a. $\text{K}_3[\text{Fe}(\text{CN})_6]$

- b. NH_4OH
- c. $\text{K}_4[\text{Fe}(\text{CN})_6]$
- d. NaOH
- e. $\text{K}_2\text{Na}[\text{Co}(\text{NO}_2)_6]$

3280. What specific reagent is used in the qualitative analysis for Fe^{2+} cations?

a. $\text{K}_2\text{Na}[\text{Co}(\text{NO}_2)_6]$

b. NH_4OH

c. $\text{K}_3[\text{Fe}(\text{CN})_6]$

- d. NaOH
- e. $\text{K}_4[\text{Fe}(\text{CN})_6]$

3281. What specific reagent is used in the qualitative analysis for Fe^{2+} cations?

a. $\text{K}_2\text{Na}[\text{Co}(\text{NO}_2)_6]$

b. NH_4OH

c. $\text{K}_4[\text{Fe}(\text{CN})_6]$

d. NaOH

e. $\text{K}_3[\text{Fe}(\text{CN})_6]$

3282. What standard solution can be used to standardize the solution of I_2 ?

a. Sodium thiosulfate solution

- b. Potassium iodide solution
- c. Potassium dichromate solution
- d. Potassium permanganate solution
- e. Sodium nitrite solution

3283. What standard solution can be used to standardize the solution of I_2 ?

a. Potassium iodide solution

b. Sodium thiosulfate solution

- c. Potassium dichromate solution
- d. Sodium nitrite solution
- e. Potassium permanganate solution

3284. What standard solution can be used to standardize the solution of I_2 ?

a. Sodium nitrite solution

b. Potassium permanganate solution

c. Sodium thiosulfate solution

- d. Potassium iodide solution
- e. Potassium dichromate solution

3285. What substance can be used to prepare primary standard solutions of titrants?

a. HCl

b. $\text{K}_2\text{Cr}_2\text{O}_7$

- c. NaOH
- d. KMnO_4
- e. I_2

3286. What substance can be used to prepare primary standard solutions of titrants?

a. KMnO_4

b. $\text{K}_2\text{Cr}_2\text{O}_7$

- c. I_2
- d. HCl
- e. NaOH

3287. What substance can be used to prepare primary standard solutions of titrants?

a. KMnO_4

b. NaOH

c. I₂

d. HCl

e. K₂Cr₂O₇

3288. What substance can enter into substitution and addition reactions?

a. Ethanol

b. Polypeptide

c. Acetylene

d. Ethylene

e. Ethane

3289. What substance can enter into substitution and addition reactions?

a. Polypeptide

b. Ethane

c. Acetylene

d. Ethylene

e. Ethanol

3290. What substance can enter into substitution and addition reactions?

a. Polypeptide

b. Ethanol

c. Ethylene

d. Ethane

e. Acetylene

3291. What substance causes impaired biotin absorption?

a. Avidin

b. Albumin

c. Globulin

d. Ferritin

e. Transferrin

3292. What substance causes impaired biotin absorption?

a. Ferritin

b. Transferrin

c. Avidin

d. Globulin

e. Albumin

3293. What substance causes impaired biotin absorption?

a. Transferrin

b. Avidin

c. Globulin

d. Ferritin

e. Albumin

3294. What substance forms colloid solution when dissolved in water?

a. Collargol

b. Sodium sulfate

c. Silver nitrate

d. Potassium gluconate

e. Sucrose

3295. What substance forms colloid solution when dissolved in water?

a. Sodium sulfate

b. Potassium gluconate

c. Silver nitrate

d. Collargol

e. Sucrose

3296. What substance forms colloid solution when dissolved in water?

a. Sodium sulfate

b. Sucrose

c. Collargol

d. Potassium gluconate

e. Silver nitrate

3297. What substance is a mediator of delayed-type hypersensitivity?

a. Lymphokines

b. Histamine

c. Serotonin

d. Prostaglandins

e. Bradykinin

3298. What substance is a mediator of delayed-type hypersensitivity?

a. Bradykinin

b. Serotonin

c. Prostaglandins

d. Histamine

e. Lymphokines

3299. What substance is a mediator of delayed-type hypersensitivity?

a. Serotonin

b. Bradykinin

c. Lymphokines

d. Histamine

e. Prostaglandins

3300. What substance is a unique accumulator, donor, and transformer of energy within the body?

a. Acetyl-CoA

b. Succinyl-CoA

c. Adenosine triphosphate

d. Creatine phosphate

e. Phosphoenolpyruvate

3301. What substance is a unique accumulator, donor, and transformer of energy within the body?

a. Creatine phosphate

b. Adenosine triphosphate

c. Phosphoenolpyruvate

d. Acetyl-CoA

e. Succinyl-CoA

3302. What substance is a unique accumulator, donor, and transformer of energy within the body?

a. Creatine phosphate

b. Acetyl-CoA

c. Adenosine triphosphate

d. Phosphoenolpyruvate

e. Succinyl-CoA

3303. What substance is deposited in the proteoplasts of seed cells of higher plants in the form of crystals and simple and complex aleurone grains?

a. Protein

b. Glycogen

c. Inulin

d. Starch

e. Fatty oil

3304. What substance is deposited in the proteoplasts of seed cells of higher plants in the form of crystals and simple and complex aleurone grains?

a. Glycogen

b. Inulin

c. Protein

d. Starch

e. Fatty oil

3305. What substance is deposited in the proteoplasts of seed cells of higher plants in the form of crystals and simple and complex aleurone grains?

a. Starch

- b. Glycogen
- c. Fatty oil

d. Protein

- e. Inulin

3306. What substance is used as a primary standard in permanganometry, bromatometry, dichromatometry, iodometry, and cerimetry?

- a. Potassium hydroxide
- b. Ammonium acetate
- c. Sodium chloride

d. Arsenic(III) oxide

- e. Sodium carbonate

3307. What substance is used as a primary standard in permanganometry, bromatometry, dichromatometry, iodometry, and cerimetry?

- a. Potassium hydroxide
- b. Sodium carbonate
- c. Ammonium acetate
- d. Sodium chloride

e. Arsenic(III) oxide

3308. What substance is used as a primary standard in permanganometry, bromatometry, dichromatometry, iodometry, and cerimetry?

- a. Sodium carbonate
- b. Ammonium acetate
- c. Sodium chloride

d. Arsenic(III) oxide

- e. Potassium hydroxide

3309. What substances given below are not surfactants?

- a. Alcohols and soaps
- b. Amines and sulfonic acids

c. Inorganic acids, bases, and their salts

- d. Aldehydes and alcohols
- e. Carboxylic acids and soaps

3310. What substances given below are not surfactants?

- a. Aldehydes and alcohols
- b. Alcohols and soaps

c. Inorganic acids, bases, and their salts

- d. Carboxylic acids and soaps
- e. Amines and sulfonic acids

3311. What substances given below are not surfactants?

- a. Carboxylic acids and soaps
- b. Aldehydes and alcohols
- c. Amines and sulfonic acids
- d. Alcohols and soaps

e. Inorganic acids, bases, and their salts

3312. What synthetic drug of the hydrazide group is typically prescribed for pulmonary tuberculosis?

a. Isoniazid

- b. Doxycycline hydrochloride
- c. Acyclovir
- d. Metronidazole
- e. Rifampicin

3313. What synthetic drug of the hydrazide group is typically prescribed for pulmonary tuberculosis?

a. Isoniazid

- b. Doxycycline hydrochloride
- c. Metronidazole
- d. Rifampicin
- e. Acyclovir

3314. What synthetic drug of the hydrazide group is typically prescribed for pulmonary tuberculosis?

- a. Rifampicin
- b. Acyclovir
- c. Doxycycline hydrochloride
- d. Metronidazole

e. Isoniazid

3315. What test is used for identification of uric acid and other compounds with purine nucleus?

a. Murexide reaction

- b. Lucas reagent
- c. Fehling reagent
- d. Copper mirror reaction
- e. Silver mirror reaction

3316. What test is used for identification of uric acid and other compounds with purine nucleus?

- a. Fehling reagent
- b. Silver mirror reaction
- c. Lucas reagent

d. Murexide reaction

e. Copper mirror reaction

3317. What test is used for identification of uric acid and other compounds with purine nucleus?

a. Silver mirror reaction

b. Murexide reaction

- c. Lucas reagent
- d. Fehling reagent
- e. Copper mirror reaction

3318. What thermodynamic parameter does not allow measuring its absolute value?

a. Internal energy

- b. Work
- c. Heat capacity
- d. Thermal effect
- e. Heat

3319. What thermodynamic parameter does not allow measuring its absolute value?

- a. Heat capacity
- b. Thermal effect
- c. Heat
- d. Work

e. Internal energy

3320. What thermodynamic parameter does not allow measuring its absolute value?

- a. Heat capacity
- b. Work
- c. Thermal effect

d. Internal energy

e. Heat

3321. What thermodynamic potential is the criterion for the direction of a spontaneous process at constant volume and temperature?

- a. Entropy
- b. Gibbs energy
- c. Chemical potential

d. Helmholtz energy

e. Enthalpy

3322. What thermodynamic potential is the criterion for the direction of a spontaneous process at constant volume and temperature?

a. Gibbs energy

b. Helmholtz energy

- c. Enthalpy
- d. Entropy

e. Chemical potential

3323. What thermodynamic potential is the criterion for the direction of a spontaneous process at constant volume and temperature?

a. Gibbs energy

b. Helmholtz energy

c. Entropy

d. Enthalpy

e. Chemical potential

3324. What titrant is used in bromatometric titration?

a. Br₂

b. KBrO₄

c. KBrO₄ + KCl

d. KBrO₃

e. KBr

3325. What titrant is used in bromatometric titration?

a. KBr

b. Br₂

c. KBrO₄ + KCl

d. KBrO₄

e. KBrO₃

3326. What titrant is used in bromatometric titration?

a. KBrO₄ + KCl

b. KBrO₃

c. Br₂

d. KBr

e. KBrO₄

3327. What titrimetric method of analysis is used for the quantification of calcium chloride?

a. Cerimetry, direct titration

b. Permanganatometry, back titration

c. Nitritometry, direct titration

d. Acidimetry, back titration

e. Permanganatometry, direct titration

3328. What titrimetric method of analysis is used for the quantification of calcium chloride?

a. Cerimetry, direct titration

b. Permanganatometry, back titration

c. Permanganatometry, direct titration

d. Acidimetry, back titration

e. Nitritometry, direct titration

3329. What titrimetric method of analysis is used for the quantification of calcium chloride?

a. Nitritometry, direct titration

b. Acidimetry, back titration

c. Cerimetry, direct titration

d. Permanganatometry, direct titration

e. Permanganatometry, back titration

3330. What titrimetric method of analysis requires the use of both external and internal indicators?

a. Nitritometry

b. Alkalimetry

c. Complexometric titration

d. Argentometry

e. Permanganatometry

3331. What titrimetric method of analysis requires the use of both external and internal indicators?

a. Permanganatometry

b. Nitritometry

c. Argentometry

d. Alkalimetry

e. Complexometric titration

3332. What titrimetric method of analysis requires the use of both external and internal indicators?

a. Permanganatometry

b. Complexometric titration

c. Nitritometry

d. Alkalimetry

e. Argentometry

3333. What titrimetry method allows to determine quantitative content of ascorbic acid using starch as an indicator?

a. Ferrometry

b. Nitritometry

c. Permanganatometry

d. Titanometry

e. Iodimetry

3334. What titrimetry method allows to determine quantitative content of ascorbic acid using starch as an indicator?

a. Nitritometry

b. Titanometry

c. Ferrometry

d. Iodimetry

e. Permanganatometry

3335. What titrimetry method allows to determine quantitative content of ascorbic acid using starch as an indicator?

a. Titanometry

b. Ferrometry

c. Iodimetry

d. Permanganatometry

e. Nitritometry

3336. What two working solutions are used in determination of hydrogen sulfide in mineral waters by means of iodometry (back titration)?

a. NaOH, HCl

b. $\text{H}_2\text{C}_2\text{O}_4$, KMnO_4

c. Na_2CO_3 , HCl

d. I_2 , $\text{Na}_2\text{S}_2\text{O}_3$

e. AgNO_3 , H_2SO_4

3337. What two working solutions are used in determination of hydrogen sulfide in mineral waters by means of iodometry (back titration)?

a. Na_2CO_3 , HCl

b. NaOH, HCl

c. I_2 , $\text{Na}_2\text{S}_2\text{O}_3$

d. $\text{H}_2\text{C}_2\text{O}_4$, KMnO_4

e. AgNO_3 , H_2SO_4

3338. What two working solutions are used in determination of hydrogen sulfide in mineral waters by means of iodometry (back titration)?

a. Na_2CO_3 , HCl

b. $\text{H}_2\text{C}_2\text{O}_4$, KMnO_4

c. AgNO_3 , H_2SO_4

d. I_2 , $\text{Na}_2\text{S}_2\text{O}_3$

e. NaOH, HCl

3339. What type of colloidal systems are foams?

a. Liquid-solid

b. Liquid-liquid

c. Gas-gas

d. Gas-liquid

e. Solid-liquid

3340. What type of colloidal systems are foams?

- a. Liquid-solid
- b. Solid-liquid
- c. Gas-liquid**
- d. Gas-gas
- e. Liquid-liquid

3341. What type of colloidal systems are foams?

- a. Solid-liquid
- b. Liquid-liquid
- c. Gas-gas
- d. Liquid-solid

e. Gas-liquid

3342. What type of conducting bundle is characteristic of primary anatomical structure of a root?

- a. Closed collateral
- b. Radial**
- c. Concentric
- d. Bicollateral
- e. Open collateral

3343. What type of conducting bundle is characteristic of primary anatomical structure of a root?

- a. Open collateral
- b. Closed collateral
- c. Bicollateral
- d. Concentric

e. Radial

3344. What type of conducting bundle is characteristic of primary anatomical structure of a root?

- a. Open collateral
- b. Closed collateral
- c. Concentric

d. Radial

e. Bicollateral

3345. What type of gynoecium has several or many free carpels?

a. Apocarpous

- b. Monocarpous
- c. Paracarpous
- d. Cenocarpous
- e. Syncarpous

3346. What type of gynoecium has several or many free carpels?

a. Apocarpous

- b. Syncarpous
- c. Monocarpous
- d. Paracarpous
- e. Cenocarpous

3347. What type of gynoecium has several or many free carpels?

a. Apocarpous

- b. Syncarpous
- c. Paracarpous
- d. Cenocarpous
- e. Monocarpous

3348. What type of parenchyma usually has aleurone or starch grains and droplets of a fatty oil in its cells?

- a. Columnar parenchyma
- b. Water-storing parenchyma
- c. Spongy parenchyma
- d. Folded parenchyma
- e. Storage parenchyma**

3349. What type of parenchyma usually has aleurone or starch grains and droplets of a fatty oil in its cells?

- a. Folded parenchyma
- b. Storage parenchyma**
- c. Spongy parenchyma
- d. Water-storing parenchyma
- e. Columnar parenchyma

3350. What type of parenchyma usually has aleurone or starch grains and droplets of a fatty oil in its cells?

- a. Water-storing parenchyma
- b. Storage parenchyma**
- c. Folded parenchyma
- d. Columnar parenchyma
- e. Spongy parenchyma

3351. What type of proenzyme activation into its active enzyme form is often used in the process of activation of hydrolases in the gastrointestinal tract?

- a. Limited proteolysis**
- b. Transamination
- c. Decarboxylation
- d. Phosphorylation
- e. Addition of a metal cation

3352. What type of proenzyme activation into its active enzyme form is often used in the process of activation of hydrolases in the gastrointestinal tract?

- a. Addition of a metal cation
- b. Limited proteolysis**
- c. Phosphorylation
- d. Decarboxylation
- e. Transamination

3353. What type of proenzyme activation into its active enzyme form is often used in the process of activation of hydrolases in the gastrointestinal tract?

- a. Phosphorylation
- b. Transamination
- c. Limited proteolysis**
- d. Decarboxylation
- e. Addition of a metal cation

3354. What type of solutions can be used as infusion solutions?

- a. Isotonic**
- b. Hypotonic
- c. Hypertonic
- d. Ideal
- e. Colloid

3355. What type of solutions can be used as infusion solutions?

- a. Hypotonic
- b. Isotonic**
- c. Ideal
- d. Hypertonic
- e. Colloid

3356. What type of solutions can be used as infusion solutions?

- a. Ideal
- b. Hypotonic
- c. Isotonic**
- d. Colloid
- e. Hypertonic

3357. What type of tautomerism is characteristic of monosaccharide?

- a. Oxo-cyclo (ring-chain)**

- b. Keto-enol
- c. Aci-nitro
- d. Lactam-lactim
- e. Azole

3358. What type of tautomerism is characteristic of monosaccharide?

- a. Azole
- b. Oxo-cyclo (ring-chain)**

- c. Keto-enol
- d. Lactam-lactim
- e. Aci-nitro

3359. What type of tautomerism is characteristic of monosaccharide?

- a. Azole
- b. Keto-enol
- c. Oxo-cyclo (ring-chain)**

- d. Lactam-lactim
- e. Aci-nitro

3360. What types of fruits are characteristic of the Ericaceae family plants?

- a. Achene, nutlet, drupe
- b. Capsule, drupe, berry**
- c. Cynarrhodium, compound drupe, fraga
- d. Legume, single follicle, single nutlet
- e. Hesperidium, silique, double-winged samara

3361. What types of fruits are characteristic of the Ericaceae family plants?

- a. Hesperidium, silique, double-winged samara
- b. Legume, single follicle, single nutlet
- c. Cynarrhodium, compound drupe, fraga
- d. Achene, nutlet, drupe

e. Capsule, drupe, berry

3362. What types of fruits are characteristic of the Ericaceae family plants?

- a. Legume, single follicle, single nutlet
- b. Cynarrhodium, compound drupe, fraga

c. Capsule, drupe, berry

- d. Achene, nutlet, drupe
- e. Hesperidium, silique, double-winged samara

3363. What types of inflorescence are characteristic of the Cruciferae family?

a. Tassel or panicle

- b. Corymb or spike
- c. Head or umbel
- d. Head or corymb
- e. Spadix or panicle

3364. What types of inflorescence are characteristic of the Cruciferae family?

a. Tassel or panicle

- b. Spadix or panicle
- c. Corymb or spike
- d. Head or corymb
- e. Head or umbel

3365. What types of inflorescence are characteristic of the Cruciferae family?

- a. Head or umbel
- b. Spadix or panicle
- c. Corymb or spike
- d. Head or corymb

e. Tassel or panicle

3366. What unstratified (or, less often, stratified) tissue in plant stems, roots, and needles has a protective integumentary function and a water-storing function?

- a. Epiblem

b. Hypodermis

- c. Periderm
- d. Epidermis
- e. Exodermis

3367. What unstratified (or, less often, stratified) tissue in plant stems, roots, and needles has a protective integumentary function and a water-storing function?

- a. Exodermis

b. Hypodermis

- c. Periderm
- d. Epidermis
- e. Epiblem

3368. What unstratified (or, less often, stratified) tissue in plant stems, roots, and needles has a protective integumentary function and a water-storing function?

- a. Exodermis
- b. Epidermis
- c. Epiblem
- d. Periderm

e. Hypodermis

3369. What vitamin supplement is typically prescribed along with folic acid in cases of hyperchromic anemia?

a. Cyanocobalamin

- b. Retinol
- c. Pyridoxine
- d. Fercoven
- e. Thiamine

3370. What vitamin supplement is typically prescribed along with folic acid in cases of hyperchromic anemia?

a. Cyanocobalamin

- b. Retinol
- c. Pyridoxine
- d. Thiamine
- e. Fercoven

3371. What vitamin supplement is typically prescribed along with folic acid in cases of hyperchromic anemia?

- a. Thiamine

b. Cyanocobalamin

- c. Retinol
- d. Pyridoxine
- e. Fercoven

3372. What will be the order of the reaction if one of the reagents participating in a bimolecular reaction was taken in a large excess?

- a. The order can be determined based on the substance taken in excess

b. Pseudomonomolecular order

- c. The order would be the same as the molecularity
- d. The order would be greater than the molecularity
- e. Third order

3373. What will be the order of the reaction if one of the reagents participating in a bimolecular reaction was taken in a large excess?

- a. The order would be greater than the molecularity
- b. The order would be the same as the molecularity
- c. The order can be determined based on the substance taken in excess
- d. Third order

e. Pseudomonomolecular order

3374. What will be the order of the reaction if one of the reagents participating in a bimolecular reaction was taken in a large excess?

a. Third order

b. Pseudomonomolecular order

c. The order would be the same as the molecularity

d. The order can be determined based on the substance taken in excess

e. The order would be greater than the molecularity

3375. What working solutions (titrants) are used in the method of precipitation titration - Volhard method?

a. AgNO₃ and NH₄SCN

b. HClO₄ and KOH

c. Na₂S₂O₃ and K(I₃)

d. H₂SO₄ and NaOH

e. KMnO₄ and KBrO₃

3376. What working solutions (titrants) are used in the method of precipitation titration - Volhard method?

a. HClO₄ and KOH

b. KMnO₄ and KBrO₃

c. H₂SO₄ and NaOH

d. AgNO₃ and NH₄SCN

e. Na₂S₂O₃ and K(I₃)

3377. What working solutions (titrants) are used in the method of precipitation titration - Volhard method?

a. Na₂S₂O₃ and K(I₃)

b. KMnO₄ and KBrO₃

c. AgNO₃ and NH₄SCN

d. H₂SO₄ and NaOH

e. HClO₄ and KOH

3378. Wheat has linear inflorescences with biflorous sessile spikelets arranged in two rows. Name this type of inflorescence:

a. Compound spike

b. Panicle

c. Corymb

d. Spadix

e. Spike

3379. Wheat has linear inflorescences with biflorous sessile spikelets arranged in two rows. Name this type of inflorescence:

a. Spadix

b. Panicle

c. Compound spike

d. Spike

e. Corymb

3380. Wheat has linear inflorescences with biflorous sessile spikelets arranged in two rows. Name this type of inflorescence:

a. Spike

b. Compound spike

c. Panicle

d. Spadix

e. Corymb

3381. When a mixture of electrolytes is added into a sol, one of them reduces the effect of another. Name this phenomenon:

a. Additivity

b. Antagonism

c. Synergism

d. Rheopexy

e. Phoresis

3382. When a mixture of electrolytes is added into a sol, one of them reduces the effect of another.

Name this phenomenon:

- a. Additivity
- b. Phoresis
- c. Synergism
- d. Antagonism**
- e. Rheopexy

3383. When a mixture of electrolytes is added into a sol, one of them reduces the effect of another. Name this phenomenon:

- a. Synergism
- b. Additivity
- c. Antagonism**
- d. Phoresis
- e. Rheopexy

3384. When activated carbon is included in the combination therapy, the absorption of the other drugs changes in the following way:

- a. Decreases**
- b. Remains unchanged
- c. Accelerates
- d. Activates
- e. Increases

3385. When activated carbon is included in the combination therapy, the absorption of the other drugs changes in the following way:

- a. Accelerates
- b. Activates
- c. Decreases**
- d. Remains unchanged
- e. Increases

3386. When activated carbon is included in the combination therapy, the absorption of the other drugs changes in the following way:

- a. Increases
- b. Activates
- c. Accelerates
- d. Remains unchanged
- e. Decreases**

3387. When an isolated system spontaneously approaches its equilibrium, its entropy:

- a. Approaches infinity
- b. Reaches maximum
- c. Demonstrates linear magnification
- d. Approaches zero**
- e. Reaches minimum

3388. When an isolated system spontaneously approaches its equilibrium, its entropy:

- a. Reaches minimum
- b. Reaches maximum
- c. Demonstrates linear magnification
- d. Approaches zero**
- e. Approaches infinity

3389. When an isolated system spontaneously approaches its equilibrium, its entropy:

- a. Reaches minimum
- b. Reaches maximum
- c. Demonstrates linear magnification
- d. Approaches infinity
- e. Approaches zero**

3390. When determining oxidizing agents by means of iodometry in the presence of starch the following phenomenon can be observed at the titration endpoint:

- a. Green coloring of solution disappears

- b. Red coloring appears
- c. Green coloring of precipitate appears
- d. White precipitate forms

e. Blue coloring disappears

3391. When determining oxidizing agents by means of iodometry in the presence of starch the following phenomenon can be observed at the titration endpoint:

a. Red coloring appears

b. Blue coloring disappears

- c. White precipitate forms
- d. Green coloring of solution disappears
- e. Green coloring of precipitate appears

3392. When determining oxidizing agents by means of iodometry in the presence of starch the following phenomenon can be observed at the titration endpoint:

- a. White precipitate forms
- b. Red coloring appears
- c. Green coloring of precipitate appears
- d. Green coloring of solution disappears

e. Blue coloring disappears

3393. When determining substances by means of mercurimetric titration, the following solution is used as a titrant:

a. Mercury(II) nitrate

- b. Mercury(I) nitrate
- c. Ammonium thiocyanate
- d. Silver(I) nitrate
- e. Potassium iodide

3394. When determining substances by means of mercurimetric titration, the following solution is used as a titrant:

a. Mercury(I) nitrate

b. Mercury(II) nitrate

- c. Ammonium thiocyanate
- d. Silver(I) nitrate
- e. Potassium iodide

3395. When determining substances by means of mercurimetric titration, the following solution is used as a titrant:

- a. Potassium iodide
- b. Ammonium thiocyanate
- c. Silver(I) nitrate
- d. Mercury(I) nitrate

e. Mercury(II) nitrate

3396. When dividing cations into analytical groups according to the acid-base classification, the group reagents can be acids or bases. What acids are used as group reagents?

a. HCl, H₂SO₄

- b. HClO₄
- c. H₂CO₃
- d. H₃PO₄, H₂C₂O₄
- e. HNO₃, CH₃COOH

3397. When dividing cations into analytical groups according to the acid-base classification, the group reagents can be acids or bases. What acids are used as group reagents?

a. HCl, H₂SO₄

- b. HClO₄
- c. H₃PO₄, H₂C₂O₄
- d. HNO₃, CH₃COOH
- e. H₂CO₃

3398. When dividing cations into analytical groups according to the acid-base classification, the group reagents can be acids or bases. What acids are used as group reagents?

a. HNO_3 , CH_3COOH

b. HCl , H_2SO_4

c. HClO_4

d. H_3PO_4 , $\text{H}_2\text{C}_2\text{O}_4$

e. H_2CO_3

3399. When do order and molecularity of chemical reactions coincide?

a. In simple one-stage reactions only

b. In complex multi-stage reactions only

c. Always coincide

d. Never coincide

e. In enzymatic reactions

3400. When do order and molecularity of chemical reactions coincide?

a. Always coincide

b. In complex multi-stage reactions only

c. In enzymatic reactions

d. Never coincide

e. In simple one-stage reactions only

3401. When do order and molecularity of chemical reactions coincide?

a. In enzymatic reactions

b. In complex multi-stage reactions only

c. In simple one-stage reactions only

d. Always coincide

e. Never coincide

3402. When dosage forms are being tested by accelerated aging method, it is assumed that decomposition reaction of the active substance is of the following order:

a. Reaction order does not matter

b. Third-order

c. First-order

d. Second-order

e. Zero-order

3403. When dosage forms are being tested by accelerated aging method, it is assumed that decomposition reaction of the active substance is of the following order:

a. Third-order

b. Zero-order

c. First-order

d. Reaction order does not matter

e. Second-order

3404. When dosage forms are being tested by accelerated aging method, it is assumed that decomposition reaction of the active substance is of the following order:

a. Zero-order

b. Second-order

c. Reaction order does not matter

d. First-order

e. Third-order

3405. When food products are thermally processed, the spatial structure of the proteins changes. This process is called:

a. Denaturation

b. Hydration

c. Renaturation

d. Salting out

e. Dialysis

3406. When food products are thermally processed, the spatial structure of the proteins changes. This process is called:

a. Dialysis

b. Renaturation

c. Denaturation

d. Salting out

e. Hydration

3407. When food products are thermally processed, the spatial structure of the proteins changes. This process is called:

a. Renaturation

b. Hydration

c. Denaturation

d. Dialysis

e. Salting out

3408. When herbal raw material of *Calendula officinalis* and *Matricaria chamomilla* is being harvested, inflorescences of the following type are being collected:

a. Corymb

b. Spike

c. Capitulum

d. Anthodium

e. Umbel

3409. When herbal raw material of *Calendula officinalis* and *Matricaria chamomilla* is being harvested, inflorescences of the following type are being collected:

a. Spike

b. Capitulum

c. Anthodium

d. Umbel

e. Corymb

3410. When herbal raw material of *Calendula officinalis* and *Matricaria chamomilla* is being harvested, inflorescences of the following type are being collected:

a. Spike

b. Umbel

c. Capitulum

d. Corymb

e. Anthodium

3411. When hydrogen peroxide solution is administered to bleeding wounds, it is broken up by one of the blood enzymes. Point out this enzyme:

a. Aspartate aminotransferase

b. Catalase

c. Cytochrome oxidase

d. Monoamine oxidase

e. Lactate dehydrogenase

3412. When hydrogen peroxide solution is administered to bleeding wounds, it is broken up by one of the blood enzymes. Point out this enzyme:

a. Aspartate aminotransferase

b. Catalase

c. Monoamine oxidase

d. Cytochrome oxidase

e. Lactate dehydrogenase

3413. When hydrogen peroxide solution is administered to bleeding wounds, it is broken up by one of the blood enzymes. Point out this enzyme:

a. Lactate dehydrogenase

b. Aspartate aminotransferase

c. Cytochrome oxidase

d. Catalase

e. Monoamine oxidase

3414. When measuring the antimicrobial activity of drugs, their minimum concentration that suppresses the growth of microbes must be determined. What is this parameter?

a. The lowest drug concentration that inhibits growth of a bacterial test culture

- b. The lowest drug concentration that causes development of selective strains of test cultures
- c. The lowest drug concentration that has a bactericidal effect
- d. The lowest drug concentration that inhibits enzyme biosynthesis in the macroorganism
- e. -

3415. When measuring the antimicrobial activity of drugs, their minimum concentration that suppresses the growth of microbes must be determined. What is this parameter?

- a. The lowest drug concentration that causes development of selective strains of test cultures
- b. The lowest drug concentration that inhibits growth of a bacterial test culture**
- c. The lowest drug concentration that has a bactericidal effect
- d. -
- e. The lowest drug concentration that inhibits enzyme biosynthesis in the macroorganism

3416. When measuring the antimicrobial activity of drugs, their minimum concentration that suppresses the growth of microbes must be determined. What is this parameter?

- a. The lowest drug concentration that inhibits enzyme biosynthesis in the macroorganism
- b. -
- c. The lowest drug concentration that causes development of selective strains of test cultures
- d. The lowest drug concentration that has a bactericidal effect

e. The lowest drug concentration that inhibits growth of a bacterial test culture

3417. When protective action of proteins weakens, cholesterol accumulates on the vessel walls because its particles become glued together. Name this phenomenon:

- a. Coagulation**
- b. Thixotropy
- c. Sensitization
- d. Sedimentation
- e. Synergism

3418. When protective action of proteins weakens, cholesterol accumulates on the vessel walls because its particles become glued together. Name this phenomenon:

- a. Sedimentation
- b. Coagulation**
- c. Sensitization
- d. Synergism
- e. Thixotropy

3419. When protective action of proteins weakens, cholesterol accumulates on the vessel walls because its particles become glued together. Name this phenomenon:

- a. Sensitization
- b. Thixotropy
- c. Synergism
- d. Sedimentation
- e. Coagulation**

3420. When smeared with turpentine, the rabbit's tongue turns red and its blood supply increases. What type of arterial hyperemia occurs in this case?

- a. Metabolic hyperemia
- b. Work hyperemia
- c. Neuroparalytic hyperemia
- d. Neurotonic hyperemia**
- e. Reactive hyperemia

3421. When smeared with turpentine, the rabbit's tongue turns red and its blood supply increases. What type of arterial hyperemia occurs in this case?

- a. Work hyperemia
- b. Neurotonic hyperemia**
- c. Reactive hyperemia
- d. Neuroparalytic hyperemia
- e. Metabolic hyperemia

3422. When smeared with turpentine, the rabbit's tongue turns red and its blood supply increases. What type of arterial hyperemia occurs in this case?

- a. Work hyperemia
- b. Reactive hyperemia
- c. Metabolic hyperemia

d. Neurotonic hyperemia

- e. Neuroparalytic hyperemia

3423. When studying a herbarium specimen of *Persicaria maculosa*, the following diagnostic sign, characteristic of all Polygonaceae family representatives, was noted:

- a. Compound leaves
- b. Essential oil glands

c. Ochrea

- d. Legume fruits
- e. No petioles

3424. When studying a herbarium specimen of *Persicaria maculosa*, the following diagnostic sign, characteristic of all Polygonaceae family representatives, was noted:

- a. Essential oil glands

b. Ochrea

- c. Compound leaves
- d. No petioles
- e. Legume fruits

3425. When studying a herbarium specimen of *Persicaria maculosa*, the following diagnostic sign, characteristic of all Polygonaceae family representatives, was noted:

- a. Legume fruits
- b. Compound leaves
- c. Essential oil glands

d. Ochrea

- e. No petioles

3426. When studying five herbarium specimens of medicinal plants, it was determined that one of them belongs to Fabaceae family. Which one is it?

a. *Ononis arvensis*

- b. *Hyoscyamus niger*
- c. *Datura stramonium*
- d. *Solanum dulcamara*
- e. *Atropa belladonna*

3427. When studying five herbarium specimens of medicinal plants, it was determined that one of them belongs to Fabaceae family. Which one is it?

- a. *Atropa belladonna*
- b. *Datura stramonium*
- c. *Hyoscyamus niger*

d. *Ononis arvensis*

- e. *Solanum dulcamara*

3428. When studying five herbarium specimens of medicinal plants, it was determined that one of them belongs to Fabaceae family. Which one is it?

- a. *Hyoscyamus niger*
- b. *Datura stramonium*

c. *Ononis arvensis*

- d. *Atropa belladonna*
- e. *Solanum dulcamara*

3429. When working in the garden, a man accidentally cut his hand. The wound remained untreated. Shortly after that the wounded area developed inflammation with accumulation of exudate that contained numerous viable and degenerate neutrophils. What type of exudate is it?

a. Purulent

- b. Hemorrhagic
- c. Serous
- d. Catarrhal
- e. Fibrinous

3430. When working in the garden, a man accidentally cut his hand. The wound remained untreated. Shortly after that the wounded area developed inflammation with accumulation of exudate that contained numerous viable and degenerate neutrophils. What type of exudate is it?

a. Purulent

b. Serous

c. Fibrinous

d. Catarrhal

e. Hemorrhagic

3431. When working in the garden, a man accidentally cut his hand. The wound remained untreated. Shortly after that the wounded area developed inflammation with accumulation of exudate that contained numerous viable and degenerate neutrophils. What type of exudate is it?

a. Purulent

b. Serous

c. Hemorrhagic

d. Fibrinous

e. Catarrhal

3432. Which alkadiene of those listed below is a diene with cumulated double bonds?

a. $\text{CH}_2 = \text{CH} - \text{CH} = \text{CH}_2$

b. $\text{CH}_2 = \text{C} = \text{CH}_2$

c. $\text{CH}_2 = \text{CH} - \text{CH}_2 - \text{CH} = \text{CH}_2$

d. $\text{CH}_2 = \text{CH} - \text{CH}_2 - \text{CH}_2 - \text{CH} = \text{CH}_2$

e. $\text{CH}_3 - \text{CH} = \text{CH} - \text{CH}_2 - \text{CH} = \text{CH}_2$

3433. Which alkadiene of those listed below is a diene with cumulated double bonds?

a. $\text{CH}_2 = \text{CH} - \text{CH} = \text{CH}_2$

b. $\text{CH}_2 = \text{CH} - \text{CH}_2 - \text{CH} = \text{CH}_2$

c. $\text{CH}_3 - \text{CH} = \text{CH} - \text{CH}_2 - \text{CH} = \text{CH}_2$

d. $\text{CH}_2 = \text{C} = \text{CH}_2$

e. $\text{CH}_2 = \text{CH} - \text{CH}_2 - \text{CH}_2 - \text{CH} = \text{CH}_2$

3434. Which alkadiene of those listed below is a diene with cumulated double bonds?

a. $\text{CH}_2 = \text{CH} - \text{CH}_2 - \text{CH} = \text{CH}_2$

b. $\text{CH}_2 = \text{C} = \text{CH}_2$

c. $\text{CH}_3 - \text{CH} = \text{CH} - \text{CH}_2 - \text{CH} = \text{CH}_2$

d. $\text{CH}_2 = \text{CH} - \text{CH} = \text{CH}_2$

e. $\text{CH}_2 = \text{CH} - \text{CH}_2 - \text{CH}_2 - \text{CH} = \text{CH}_2$

3435. Which compound has the most markedly expressed basic properties?

a. $\text{CH}_3\text{CH}_2\text{OH}$

b. $\text{CH}_3\text{CH}_2\text{SH}$

c. $\text{CH}_3\text{CH}_2\text{NH}_2$

d. CH_3COOH

e. CHequiv CH

3436. Which compound has the most markedly expressed basic properties?

a. $\text{CH}_3\text{CH}_2\text{SH}$

b. $\text{CH}_3\text{CH}_2\text{OH}$

c. CHequiv CH

d. CH_3COOH

e. $\text{CH}_3\text{CH}_2\text{NH}_2$

3437. Which compound has the most markedly expressed basic properties?

a. CHequiv CH

b. $\text{CH}_3\text{CH}_2\text{OH}$

c. $\text{CH}_3\text{CH}_2\text{NH}_2$

d. CH_3COOH

e. $\text{CH}_3\text{CH}_2\text{SH}$

3438. Which medicine of those listed below is the least active among the local anesthetics, poorly dissolves in water, and can be used for topical anesthesia in the form of ointments, pastes, and powders?

- a. Lidocaine
- b. Novocaine (Procaine)
- c. Ropivacaine
- d. Ultracaine (Articaine)

e. Anesthesin (Benzocaine)

3439. Which medicine of those listed below is the least active among the local anesthetics, poorly dissolves in water, and can be used for topical anesthesia in the form of ointments, pastes, and powders?

- a. Lidocaine
- b. Novocaine (Procaine)
- c. Ultracaine (Articaine)
- d. Ropivacaine

e. Anesthesin (Benzocaine)

3440. Which medicine of those listed below is the least active among the local anesthetics, poorly dissolves in water, and can be used for topical anesthesia in the form of ointments, pastes, and powders?

- a. Novocaine (Procaine)
- b. Ropivacaine
- c. Ultracaine (Articaine)
- d. Lidocaine

e. Anesthesin (Benzocaine)

3441. Which of the amines listed below is a primary amine?

- a. $C_6H_5CH_2N(CH_3)_2$
- b. $C_6H_5CH_2NHCH_3$
- c. $C_6H_5N(CH_3)_2$
- d. $C_6H_5NHCH_3$

e. $C_6H_5CH_2NH_2$

3442. Which of the amines listed below is a primary amine?

- a. $C_6H_5CH_2NHCH_3$
- b. $C_6H_5NHCH_3$
- c. $C_6H_5CH_2N(CH_3)_2$

d. $C_6H_5CH_2NH_2$

- e. $C_6H_5N(CH_3)_2$

3443. Which of the amines listed below is a primary amine?

- a. $C_6H_5NHCH_3$
- b. $C_6H_5N(CH_3)_2$

c. $C_6H_5CH_2NH_2$

- d. $C_6H_5CH_2N(CH_3)_2$
- e. $C_6H_5CH_2NHCH_3$

3444. Which of the drugs listed below quickly arrests angina pectoris attack when taken sublingually?

- a. Amiodarone

b. Nitroglycerine

- c. Convallariae glycoside
- d. Digoxin
- e. Lisinopril

3445. Which of the drugs listed below quickly arrests angina pectoris attack when taken sublingually?

- a. Amiodarone

b. Nitroglycerine

- c. Digoxin
- d. Lisinopril
- e. Convallariae glycoside

3446. Which of the drugs listed below quickly arrests angina pectoris attack when taken sublingually?

- a. Convallariae glycoside
- b. Digoxin
- c. Amiodarone

d. Lisinopril

e. Nitroglycerine

3447. Which of the following compounds is a complex ether (an ester)?

a. $\text{CH}_3\text{-O-C}_2\text{H}_5$

b. $\text{CH}_3\text{COOCH}_3$

c. $\text{C}_{15}\text{H}_{31}\text{COOH}$

d. $\text{C}_2\text{H}_5\text{OH}$

e. $\text{CH}_3\text{-O-CH}_3$

3448. Which of the following compounds is a complex ether (an ester)?

a. $\text{CH}_3\text{-O-C}_2\text{H}_5$

b. $\text{CH}_3\text{COOCH}_3$

c. $\text{C}_2\text{H}_5\text{OH}$

d. $\text{C}_{15}\text{H}_{31}\text{COOH}$

e. $\text{CH}_3\text{-O-CH}_3$

3449. Which of the following compounds is a complex ether (an ester)?

a. $\text{C}_{15}\text{H}_{31}\text{COOH}$

b. $\text{CH}_3\text{-O-CH}_3$

c. $\text{C}_2\text{H}_5\text{OH}$

d. $\text{CH}_3\text{COOCH}_3$

e. $\text{CH}_3\text{-O-C}_2\text{H}_5$

3450. Which of the following reactions is required in order to obtain an azo dye out of an aromatic amine?

a. Alkylation and nitrosation

b. Diazotization and azo compound

c. Reduction and diazotization

d. Salt formation and nitration

e. Diazotization and interaction with potassium cyanide

3451. Which of the following reactions is required in order to obtain an azo dye out of an aromatic amine?

a. Alkylation and nitrosation

b. Reduction and diazotization

c. Salt formation and nitration

d. Diazotization and interaction with potassium cyanide

e. Diazotization and azo compound

3452. Which of the following reactions is required in order to obtain an azo dye out of an aromatic amine?

a. Salt formation and nitration

b. Alkylation and nitrosation

c. Reduction and diazotization

d. Diazotization and interaction with potassium cyanide

e. Diazotization and azo compound

3453. Which of the given reactions produces ethane as a result?

a. $[\text{CH}_2=\text{CH}_2 \xrightarrow[\text{H}_2, \text{кат.}]{\text{t}^\circ}]$

b. $[\text{C}_2\text{H}_5\text{OH} \xrightarrow[\text{t}^\circ]{\text{k.H}_2\text{SO}_4}]$

c. $[\text{Al}_4\text{C}_3 \xrightarrow{]\text{H}_2\text{O}}]$

d. $[\text{CO} + 2\text{H}_2 \xrightarrow{]\text{Fe}, \text{t}^\circ}]$

e. -

3454. Which of the given reactions produces ethane as a result?

a. $[\text{CO} + 2\text{H}_2 \xrightarrow{]\text{Fe}, \text{t}^\circ}]$

b. $[\text{CH}_2=\text{CH}_2 \xrightarrow[\text{H}_2, \text{кат.}]{\text{t}^\circ}]$

c. $[\text{C}_2\text{H}_5\text{OH} \xrightarrow[\text{t}^\circ]{\text{k.H}_2\text{SO}_4}]$

d. -

e. $[\text{Al}_4\text{C}_3 \xrightarrow{]\text{H}_2\text{O}}]$

3455. Which of the given reactions produces ethane as a result?

a. $[\text{C}_2\text{H}_5\text{OH} \xrightarrow[\text{t}^\circ]{\text{k.H}_2\text{SO}_4}]$

b. -

c. $[Al_4C_3 \rightarrow H_2O]$

d. $[CH_2=CH \rightarrow t^o, p]H_2$, кат.]

e. $[CO + 2H_2 \rightarrow Fe, t^o]$

3456. Which one of the listed drugs can be used to treat candidiasis?

a. Nystatin

b. Azithromycin

c. Ceftriaxone

d. Clindamycin

e. Doxycycline

3457. Which one of the listed drugs can be used to treat candidiasis?

a. Ceftriaxone

b. Azithromycin

c. Nystatin

d. Clindamycin

e. Doxycycline

3458. Which one of the listed drugs can be used to treat candidiasis?

a. Doxycycline

b. Clindamycin

c. Ceftriaxone

d. Nystatin

e. Azithromycin

3459. Which one of the listed ions has the greatest mobility?

a. H_3O^+

b. CN^-

c. K^+

d. Cl^-

e. Na^+

3460. Which one of the listed ions has the greatest mobility?

a. Cl^-

b. H_3O^+

c. CN^-

d. Na^+

e. K^+

3461. Which one of the substances listed below is not a surfactant?

a. 1-Pentanol

b. Sodium palmitate

c. Sodium chloride

d. Sodium oleate

e. Sodium stearate

3462. Which one of the substances listed below is not a surfactant?

a. Sodium palmitate

b. 1-Pentanol

c. Sodium chloride

d. Sodium stearate

e. Sodium oleate

3463. Which one of the substances listed below is not a surfactant?

a. Sodium palmitate

b. 1-Pentanol

c. Sodium oleate

d. Sodium chloride

e. Sodium stearate

3464. Which pair of substances can produce an emulsion when mixed together?

a. Soybean oil and water

b. Urea and water

- c. Silicon dioxide and water
- d. Silver nitrate and water
- e. Menthol and camphor

3465. Which pair of substances can produce an emulsion when mixed together?

- a. Silver nitrate and water
- b. Urea and water
- c. Silicon dioxide and water

d. Soybean oil and water

- e. Menthol and camphor

3466. Which pair of substances can produce an emulsion when mixed together?

- a. Urea and water
- b. Silicon dioxide and water

c. Soybean oil and water

- d. Menthol and camphor
- e. Silver nitrate and water

3467. Which phenomenon is uncharacteristic of aerosols?

- a. Coagulation
- b. Thermophoresis
- c. Photophoresis
- d. Thermoprecipitation

e. Dissociation

3468. Which phenomenon is uncharacteristic of aerosols?

- a. Thermophoresis
- b. Thermoprecipitation
- c. Coagulation
- d. Photophoresis

e. Dissociation

3469. Which phenomenon is uncharacteristic of aerosols?

- a. Thermoprecipitation

b. Dissociation

- c. Coagulation
- d. Photophoresis
- e. Thermophoresis

3470. While on a tour, the students have been collecting summer shoots of *Equiseti arvensis* that were hard to the touch. What type of the outer shell is characteristic of the epidermal cells of this plant?

- a. Lignified
- b. Cutinized

c. Mineralized

- d. Slimified
- e. Suberinized

3471. While on a tour, the students have been collecting summer shoots of *Equiseti arvensis* that were hard to the touch. What type of the outer shell is characteristic of the epidermal cells of this plant?

- a. Slimified

b. Mineralized

- c. Cutinized
- d. Lignified
- e. Suberinized

3472. While on a tour, the students have been collecting summer shoots of *Equiseti arvensis* that were hard to the touch. What type of the outer shell is characteristic of the epidermal cells of this plant?

- a. Slimified

b. Mineralized

- c. Lignified

- d. Cutinized
- e. Suberized

3473. Why do alcohols have higher boiling points as compared to their isomeric ethers?

- a. Ability to participate in electrophilic substitution reactions
- b. Dehydration ability of alcohols
- c. Ether ability to form associates

d. Formation of intermolecular hydrogen bonds

- e. Increased molecular weight

3474. Why do alcohols have higher boiling points as compared to their isomeric ethers?

- a. Dehydration ability of alcohols

b. Formation of intermolecular hydrogen bonds

- c. Ether ability to form associates
- d. Increased molecular weight
- e. Ability to participate in electrophilic substitution reactions

3475. Why do alcohols have higher boiling points as compared to their isomeric ethers?

- a. Ether ability to form associates
- b. Increased molecular weight
- c. Ability to participate in electrophilic substitution reactions
- d. Dehydration ability of alcohols

e. Formation of intermolecular hydrogen bonds

3476. With which of the following compounds does propane react under the given conditions?

- a. AlCl_3
- b. Br_2 , in the dark, 20°C
- c. Br_2 , in the light, 20°C**
- d. Diluted H_2SO_4 , 20°C
- e. $\text{SO}_2 + \text{Cl}_2$, in the dark

3477. With which of the following compounds does propane react under the given conditions?

- a. AlCl_3
- b. $\text{SO}_2 + \text{Cl}_2$, in the dark
- c. Br_2 , in the dark, 20°C
- d. Diluted H_2SO_4 , 20°C

e. Br_2 , in the light, 20°C

3478. With which of the following compounds does propane react under the given conditions?

- a. $\text{SO}_2 + \text{Cl}_2$, in the dark
- b. Br_2 , in the dark, 20°C
- c. Diluted H_2SO_4 , 20°C

d. Br_2 , in the light, 20°C

- e. AlCl_3

3479. You are a hospital pharmacist. Consult the pediatrician, what group of antibiotics is contraindicated for children due to their effect on formation of the bone tissue:

a. Tetracyclines

- b. Glucocorticoids
- c. Macrolides
- d. Penicillins
- e. Aminoglycosides

3480. You are a hospital pharmacist. Consult the pediatrician, what group of antibiotics is contraindicated for children due to their effect on formation of the bone tissue:

a. Tetracyclines

- b. Penicillins
- c. Aminoglycosides
- d. Glucocorticoids
- e. Macrolides

3481. You are a hospital pharmacist. Consult the pediatrician, what group of antibiotics is contraindicated for children due to their effect on formation of the bone tissue:

a. Tetracyclines

- b. Penicillins
- c. Macrolides
- d. Aminoglycosides
- e. Glucocorticoids