

1. During local anaesthetization novocaine solution is usually compounded with solution of adrenaline hydrochloride. What is the purpose of this action?

a. Vasoconstriction

- b. Increase in smooth muscle tone
- c. Algesthesia reduction
- d. Decrease in smooth muscle tone
- e. Vasodilatation

2. A 32-year-old patient takes antituberculous drugs. Some time later he has noticed that his urine turned orange. What preparation is the most likely cause of this phenomenon?

a. Pyrazinamide

b. Isoniazid

c. Rifampicin

d. Ethambutol

e. Streptomycin sulfate

3. On the 4th day of treatment with indometacin a 55-year-old patient developed gastrorrhagia as a result of gastric mucosa ulcer. Ulcerogenic effect of this drug is explained by the lowered activity of the following enzyme:

a. Thromboxanetin sintetaza

b. Prostacyclin sintetaza

c. Cyclooxygenase-2 (COX -2)

d. Lipoxygenase (LOG)

e. Cyclooxygenase-1 (COX -1)

4. A patient suffering from peptic ulcer was administered ranitidine. Gastric juice acidity has reduced considerably. What mechanism underlies the action of this drug?

a. H,K-ATPase activity inhibition

b. Autonomic ganglion H-cholinergic receptors blockade

c. N1-histamine receptors blockade

d. M-cholinergic receptors blockade

e. N2-histamine receptors blockade

5. A 52-year-old patient was diagnosed with systemic amebiasis accompanied by bowels, liver and lungs affection. What preparation should be administered?

a. Phthalazol

b. Metronidazole

c. Tetracycline

d. Chiniofon

e. Chingamin

6. A 33-year-old woman who has been treated for chronic polyarthritis for a long time complains about arterial pressure rise, change of adipose tissue distribution, menstrual cycle disorder. What preparation has she taken?

a. Synaflan

b. Diclofenac sodium

c. Indometacin

d. Butadiol

e. Prednisolone

7. A gravida in her 20th week of gestation fell ill with pneumonia. What chemotherapeutical drug may be administered with no risk for the fetus development?

a. Benzylpenicillinum

b. Sulfalenum

c. Ofloxacinum

d. Laevomycetinum

e. Gentamycin

8. During a surgical operation the muscle relaxant tubocurarine chloride was used. What antagonist drug should be injected in order to allow the patient to bref independently?

- a. Cytitonum
- b. Dithylinum
- c. Proserinum**
- d. Aethimizolum
- e. Benzohexonium

9. A child has accidentally drunk a solution that was used by his grandmother for glaucoma treatment. The solution turned out to be pilocarpine hydrochloride. What drug can be used as an antidote?

- a. Pentaminum
- b. Atropinum**
- c. Aceclidinum
- d. Carbacholinum
- e. Benzohexonium

10. Choose an antiseptic from the group of halogen containing drugs that can be included into the first-aid kit for a child going to a summer camp:

- a. Brilliant green solution
- b. Methylene blue solution
- c. Formaldehyde solution
- d. Alcoholic iodine solution**
- e. Copper sulfate solution

11. A pharmacy received a new-generation nonsteroid anti-inflammatory drug "meloxicam" that mainly blocks cyclooxygenase-2. What advantages does this preparation have in comparison with other nonsteroid anti-inflammatory drugs?

- a. Minimal side effect on hematogenesis
- b. Significant inhibition of protease activity
- c. Evident myospasmolytic action
- d. Interferonogenic properties
- e. Minimal side effect on alimentary tract**

12. When fenoterolum for inhalations is not available in a pharmacy, it can be substituted by the following drug from the group of bronchoselective beta-2-adrenomimetics:

- a. Metacinum
- b. Isadrinum
- c. Salbutamolum**
- d. Ephedrinum
- e. Euphyllinum

13. A patient consulted an ophthalmologist about scotopic vision impairment, cornea dryness. What drug was prescribed?

- a. Tocopherol
- b. Pyridoxine
- c. Retinol**
- d. Ascorbic acid
- e. Cocarboxylasum

14. A patient suffering from essential hypertension has increased concentration of renin in blood plasma. Which pharmacological group should be preferred for this patient treatment?

- a. Diuretics
- b. β -adrenoblockers
- c. ACE inhibitors**
- d. Blockers of calcium channels
- e. Sympatholytics

15. A patient suffering from stomach ulcer was prescribed almagel. Which of its pharmacological properties is intended for treatment of this pathology?

- a. HCl neutralization
- b. Blocking the H₂-histamine receptors
- c. Anti-inflammatory action
- d. Blocking the muscarinic cholinoreceptors
- e. Local anaesthetization

16. A patient suffering from hypertension consulted a doctor about dry cough that was presumably provoked by antihypertensive therapy. What antihypertensive drug had she been taking?

- a. Nifedipine
- b. Atenolol
- c. Lisinopril
- d. Furosemidum
- e. Hydrochlorthiazide

17. A patient suffering from ulcer disease was prescribed famotidine. What is the mechanism of its action?

- a. Inhibition of adenosine triphosphatase activity
- b. Block of cholinoreceptors of sympathetic ganglia
- c. Block of H₁-histamine receptors
- d. Block of muscarinic cholinoreceptors
- e. Block of H₂-histamine receptors

18. Which antiseptic preparation has bactericidal effect due to the formation of atomic oxygen?

- a. Aethonium
- b. Silver nitrate
- c. Chloraminum
- d. Furacilinum
- e. Potassium permanganate

19. During digitoxin therapy for chronic cardiac insufficiency, a patient developed signs of intoxication with this preparation. The patient was prescribed unithiol. What is the mechanism of unithiol action in case of intoxication with cardiac glycosides?

- a. Reduction of K⁺-Na⁺-adenosine triphosphatase
- b. Increase of sodium concentration in the cardiomyocytes
- c. Binding of glycoside into the complex compound
- d. Increased potassium permeability in the cardiomyocytes
- e. Binding of calcium ions

20. A 67-year-old patient with chronic heart failure takes digoxin. In order to reduce its side effects the patients doctor recommended to combine it with the followig drug:

- a. Calcium gluconate
- b. Hydrochlorthiazide
- c. Calcium chloride
- d. Panangin
- e. Euphyllinum

21. A patient suffering from neurosis accompanied by anxiety and fear development was prescribed diazepam. What pharmacological effect makes it possible to apply the drug for this disease treatment?

- a. Antianginal
- b. Anxiolytic
- c. Anti-inflammatory
- d. Antiarrhythmic
- e. Hypotensive

22. After a craniocerebral trauma a patient was administered pyracetam. This drug relates to the

following pharmacological group:

- a. Anesthetic agent
- b. Neuroleptic
- c. Nonnarcotic (nonopioid) analgetic
- d. Tranquilizers
- e. Nootropic agent**

23. In order to arrest stenocardia attacks a patient takes nitroglycerin capsules. What is the rational way of the drug introduction?

- a. Rectal
- b. Peroral
- c. Sublingual**
- d. Inhalation
- e. Hypodermic

24. A hospital admitted a child with signs of poisoning with belladonna alkaloids. What drug should be applied as an antidote?

- a. Sodium caffeine benzoate
- b. Magnesium sulfate
- c. Proserin**
- d. Paracetamol
- e. Sodium valproate

25. You are employed in a pharmaceutical storehouse. When adding newly received preparations to the computerized database, specify the pharmacological group of paracetamol:

- a. Nonnarcotic analgetic**
- b. Diuretic
- c. Antianginal drug
- d. Hypotensive drug
- e. Hypnotic

26. A patient after bees stings has angioedema (Quinckes edema). Which drug should be immediately inject to eliminate this condition?

- a. Anaprilinum
- b. Epinephrine hydrochloride**
- c. Platiphyllini hydrotartras
- d. Sodium chloride
- e. Atropine sulfate

27. A patient with hypertension was administered metoprolol for the arterial pressure reduction. What is its mechanism of action?

- a. Antispasmodic
- b. Angiotensin receptors blockade
- c. Alpha adrenoceptor blockade
- d. Indirect adrenomimetic action
- e. Beta adrenoreceptor blockade**

28. A 34-year-old patient suffering from bronchitis was prescribed an antitussive drug of central action. What drug is it?

- a. Enalapril
- b. Corglycon
- c. Glaucine**
- d. Furosemide
- e. Fercoven

29. Continuous taking of a drug results in reduction of its efficiency. This phenomenon is called:

- a. Tachyphylaxis
- b. Habituation**

- c. Cumulation
- d. Sensibilization
- e. Dependence

30. A patient was warned that taking the prescribed preparation might cause cough. What drug is it?

- a. Phenihidine
- b. Clonidine
- c. Lisinopril**
- d. Dichlothiazide
- e. Metoprolol

31. A patient with acute cardiac insufficiency and cardiac glycoside intolerance got an injection of dobutamine. What is the mechanism of its action?

- a. Stimulation of alpha₁-adrenoreceptors
- b. Inhibition of phosphodiesterase activity
- c. Stimulation of muscarinic cholinoreceptors
- d. Stimulation of beta₁-adrenoreceptors**
- e. Block of K⁺, Na⁺-adenosine triphosphatase

32. For thrombosis treatment a patient was prescribed a drug from the group of direct anticoagulants. What drug is it?

- a. Syncumar
- b. Fenilin (phenylinum)
- c. Heparin**
- d. Neodicumarin
- e. Vikasol

33. A patient suffering from chronic cardiac insufficiency was prescribed a cardiac glycoside from the foxglove (Digitalis) group. What drug is it?

- a. Corvalol
- b. Strophanthine
- c. Digoxin**
- d. Corglycon
- e. Cordiamin

34. In course of pharmacotherapy of bronchitis a patient was found to have dyspeptic disorders, photodermatitis, liver dysfunction. Which of the prescribed drugs might have caused these manifestations?

- a. Codeine phosphate
- b. Doxycyclin**
- c. Ascorbic acid
- d. Paracetamolum
- e. Acetylcysteignum

35. A patient who has been suffering from gastric diseases for a long time is found to have hyperchromic anemia. Which of the following drugs is applied for this pathology treatment?

- a. Oxyferriscorbone
- b. Cyanocobalamin**
- c. Unitiol
- d. Ascorbic acid
- e. Ferrum Lek

36. A 25-year-old woman presenting with acute morphine intoxication was given an injection of naloxone that caused rapid improvement of her condition. The mechanism of action of this preparation is based on the block of the following receptors:

- a. Dopamine
- b. Benzodiazepine receptors
- c. GABA-receptors

d. Serotonin receptors

e. Opioid receptors

37. A man came to a pharmacy and asked to recommend him a drug for treatment of allergic rhinitis that occurs in the period of linden flowering. What drug may be applied?

a. Adrenaline

b. Ambroxol

c. Losartan

d. Loratadine

e. Anapriline

38. It is necessary to prescribe non-steroid anti-inflammatory drug for patient with rheumatoid arthritis and concomitant duodenal ulcer. Which drug is the drug of choice in this case?

a. Celecoxib

b. Paracetamol

c. Diclofenac sodium

d. Analgin

e. Acetylsalicylic acid

39. During the sensitivity test for benzylpenicillin a patient developed anaphylactic shock. The following preparation must be injected around the spot of antibiotic injection:

a. Ceftriaxon

b. Adrenaline hydrochloride

c. Atropine sulfate

d. Noradrenaline hydrotartrate

e. Propranolol

40. A patient with bronchial asthma was prescribed salbutamol that has led to relief of bronchospasm symptoms. This is associated with stimulation of:

a. Alpha-1-adrenoreceptors

b. Acetylcholine synthesis

c. Beta-1-adrenoreceptors

d. Beta-2-adrenoreceptors

e. Muscarinic cholinoreceptors

41. Benzylpenicillin sodium is not used per os, because this drug:

a. Reduces formation of gastric HCl

b. Is destroyed by penicillinase

c. Poorly absorbed in the intestine

d. Irritates gastric mucosa

e. Destroys gastric HCl

42. A 48-year-old patient was given an intravenous injection of prednisolone in order to arrest a severe attack of bronchial asthma. Prednisolone relates to the following group of hormonal drugs:

a. Mineral corticoids

b. Anabolic steroids

c. Gestagenic drugs

d. Estrogens

e. Glucocorticoids

43. A patient who has been taking phenazepam for a month came to a pharmacy. He insisted on buying another two packs of this drug. According to the patient, he feels unwell without phenazepam. What is the mechanism of the developed side effect?

a. Drug dependence

b. Aftereffect syndrome

c. Addiction

d. Cumulation

e. Idiosyncrasy

44. A patient suffering from allergic rhinitis was prescribed ephedrine in form of nasal drops. The patient has significantly benefited from nasal instillation, and this stimulated him to use the drug every 2 hours. But under these conditions the drug appeared to be ineffective. What is the most likely cause of this phenomenon?

- a. Tachyphylaxis
- b. Idiosyncrasy
- c. Cumulation
- d. Allergy
- e. Drug dependence

45. Which anaesthetic, anti-inflammatory, the least harmful for the stomach preparation can be recommended to a patient with exacerbation of rheumatoid arthritis?

- a. Diclofenac sodium
- b. Ibuprofenum
- c. Indometacinum
- d. Celecoxib
- e. Acetylsalicylic acid

46. A patient suffering from epilepsy has taken Phenobarbital for a long time and developed drug tolerance. What is the mechanism of this phenomenon development?

- a. Substances accumulation in the body
- b. Acceleration of biotransformation
- c. Receptors sensitivity enhancement
- d. Absorption process reduction
- e. Inhibition of biotransformation

47. Absorption of tetracycline preparations will be reduced when they are administered simultaneously with antacids. This is an example for:

- a. Drugs synergism
- b. Functional drugs antagonism
- c. Pharmaceutical incompatibility
- d. Pharmacodynamic incompatibility
- e. Pharmacokinetic incompatibility

48. A patient being treated in the infectious disease ward for dysentery is administered phthalazol. What is the reason for phthalazol being used only for treatment of enteric infections?

- a. Rapidly excreted in unchanged form
- b. The drug is not absorbed from the gastrointestinal tract
- c. Slowly eliminated from the body
- d. The high degree of reabsorption in the kidneys
- e. Rapidly absorbed in the gastrointestinal tract

49. During an operation a dentist needs to reduce salivation in a patient. The dentist has to use a drug of the following pharmacological group:

- a. Muscarinic receptor blockers
- b. Adrenomimetics
- c. Muscarinic and nicotinic cholinomimetics
- d. Adrenoceptor blocker
- e. Muscarinic cholinomimetics

50. A consulting pharmacist informed a patient about possible side effect of metronidazole that is normally provoked by alcohol intake. What is the mechanism of this phenomenon?

- a. Enzyme alcohol dehydrogenase blocking
- b. Enzyme acetylcholinesterase blocking
- c. Enzyme glucose 6-phosphate dehydrogenase activation
- d. Enzyme acetylcholinesterase activation
- e. Enzyme alcohol dehydrogenase activation

51. A 40-year-old patient suffers from bronchial asthma and cardiac rhythm disturbance in form of bradyarrhythmia. Drugs of which pharmacological group should be administered for bronchospasm suppression?

a. M-cholinergic antagonists

b. M-cholinomimetics

c. Muscle relaxant

d. Cholinesterase inhibitors

e. Beta-blockers

52. An interhospital pharmacy got an order from a surgical department for a depolarizing muscle relaxant for surgical interventions. What drug was ordered?

a. Methacin

b. Hygronium

c. Nicotine

d. Atropine sulfate

e. Dithylinum

53. A patient who has taken phenobarbital for a long time was prescribed diclofenac sodium. However the anti-inflammatory effect of diclofenac appeared to be less than expected due to the pharmacokinetic interaction of these drugs. Such interaction might be the result of the following processes:

a. Increased drug dosage

b. Accelerated drug metabolism in liver

c. Reduced protein concentration in plasma

d. Decelerated drug metabolism in liver

e. Change of receptor sensibility

54. During local anaesthetization novocaine solution is usually compounded with solution of adrenaline hydrochloride. What is the purpose of this action?

a. Vasodilatation

b. Decrease in smooth muscle tone

c. Algesthesia reduction

d. Vasoconstriction

e. Increase in smooth muscle tone

55. A 32-year-old patient takes antituberculous drugs. Some time later he has noticed that his urine turned orange. What preparation is the most likely cause of this phenomenon?

a. Rifampicin

b. Pyrazinamide

c. Streptomycin sulfate

d. Ethambutol

e. Isoniazid

56. On the 4th day of treatment with indometacin a 55-year-old patient developed gastrorrhagia as a result of gastric mucosa ulcer. Ulcerogenic effect of this drug is explained by the lowered activity of the following enzyme:

a. Lipoxygenase (LOG)

b. Cyclooxygenase-2 (COX-2)

c. Cyclooxygenase-1 (COX-1)

d. Prostacyclin synthetase

e. -

57. A 45-year-old patient has been taking neodicumarinum for thrombophlebitis for two weeks. The regular blood test revealed a decrease in prothrombin concentration, microhematuria. Which drug should be used as neodicumarinum antagonist?

a. Vicasol

b. Sodium citrate

c. Aminocaproic acid

- d. Heparin
- e. Protamine sulfate

58. A patient complaining of dry mouth, photophobia and blurred vision has been delivered to the admission ward. Objectively: the skin is hyperemic, dry, mydriatic pupils and tachycardia are present. He has been diagnosed with belladonna alkaloids intoxication. Which of the drugs should be given as an antidote?

- a. Dipiroxim
- b. Neostigmine**
- c. Pylocarpine
- d. Aceclidine
- e. Armin

59. A patient suffering from peptic ulcer was administered ranitidine. Gastric juice acidity has reduced considerably. What mechanism underlies the action of this drug?

- a. M-cholinergic receptors blockade
- b. N1-histamine receptors blockade
- c. N2-histamine receptors blockade**
- d. H,K-ATPase activity inhibition
- e. Autonomic ganglion H-cholinergic receptors blockade

60. A 52-year-old patient was diagnosed with systemic amebiasis accompanied by bowels, liver and lungs affection. What preparation should be administered?

- a. Tetracycline
- b. Chiniofon
- c. Metronidazole**
- d. Chingamin
- e. Phthalazol

61. A 33-year-old woman who has been treated for chronic polyarthritis for a long time complains about arterial pressure rise, change of adipose tissue distribution, menstrual cycle disorder. What preparation has she taken?

- a. Butadien
- b. Indometacin
- c. Prednisolone**
- d. Synaflan
- e. Diclofenac sodium

62. A gravida in her 20th week of gestation got ill with pneumonia. What chemotherapeutical drug may be administered with no risk for the fetus development?

- a. Sulfalenum
- b. Gentamycin
- c. Benzylpenicillinum**
- d. Laevomycetinum
- e. Ofloxacinum

63. During a surgical operation the muscle relaxant tubocurarine chloride was used. What antagonist drug should be injected in order to allow the patient to breath independently?

- a. Cytitonum
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- d. Aethimizolum
- e. Benzohexonium

64. Choose an antiseptic from the group of halogen containing drugs that can be included into the first-aid kit for a child going to a summer camp:

- a. Methylene blue solution
- b. Formaldehyde solution

- c. Brilliant green solution
- d. Copper sulfate solution
- e. Alcoholic iodine solution

65. A pharmacy received a new-generation nonsteroid anti-inflammatory drug "meloxicam" that mainly blocks cyclooxygenase-2. What advantages does this preparation have in comparison with other nonsteroid anti-inflammatory drugs?

- a. Evident myospasmolytic action
- b. Minimal side effect on hematogenesis
- c. Significant inhibition of protease activity
- d. Minimal side effect on alimentary tract
- e. Interferonogenic properties

66. When fenoterol for inhalations is not available in a pharmacy, it can be substituted by the following drug from the group of bronchoselective beta-2-adrenomimetics:

- a. Isadrinum
- b. Ephedrinum
- c. Euphyllinum
- d. Salbutamolum
- e. Metacinum

67. A patient suffering from stomach ulcer was prescribed almagel. Which of its pharmacological properties is intended for treatment of this pathology?

- a. Blocking the muscarinic cholinoreceptors
- b. Anti-inflammatory action
- c. Local anaesthetization
- d. Blocking the H₂-histamine receptors
- e. HCl neutralization

68. A patient with depression has been administered a drug from the group of tricyclic antidepressants. Specify this drug:

- a. Caffeine
- b. Amitriptyline
- c. Droperidol
- d. Phenazepam
- e. Aminalonum

69. A patient suffering from hypertension consulted a doctor about dry cough that was presumably provoked by antihypertensive therapy. What antihypertensive drug had she been taking?

- a. Hydrochlorthiazide
- b. Lisinopril
- c. Nifedipine
- d. Atenolol
- e. Furosemidum

70. Which antiseptic preparation has bactericidal effect due to the formation of atomic oxygen?

- a. Potassium permanganate
- b. Furacilinum
- c. Silver nitrate
- d. Aethonium
- e. Chloraminum

71. A 67-year-old patient with chronic heart failure takes digoxin. In order to reduce its side effects the patients doctor recommended to combine it with the followig drug:

- a. Hydrochlorthiazide
- b. Calcium chloride
- c. Calcium gluconate
- d. Euphyllinum

e. Panangin

72. A patient suffering from neurosis accompanied by anxiety and fear development was prescribed diazepam. What pharmacological effect makes it possible to apply the drug for this disease treatment?

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

e. Anxiolytic

73. After a craniocerebral trauma a patient was administered pyracetam. This drug relates to the following pharmacological group:

- a. Nonnarcotic (nonopioid) analgetic
- b. Anesthetic agent
- c. Neuroleptic
- d. Nootropic agent**
- e. Tranquilizers

74. In order to arrest stenocardia attacks a patient takes nitroglycerin capsules. What is the rational way of the drug introduction?

- a. Sublingual**
- b. Rectal
- c. Hypodermic
- d. Inhalation
- e. Peroral

75. Which mucolytic drug can you recommend a patient with acute bronchitis that ease difficulty in expectoration:

- a. Glaucine
- b. Diclofenac sodium
- c. Drotaverine hydrochloride
- d. Acetylcysteine**
- e. Loratadine

76. You are employed in a pharmaceutical storehouse. When adding newly received preparations to the computerized database, specify the pharmacological group of paracetamol:

- a. Hypotensive drug
- b. Antianginal drug
- c. Hypnotic
- d. Diuretic
- e. Nonnarcotic analgetic**

77. A patient with atherosclerosis has been administered an anti-atherosclerotic agent. Specify this drug:

- a. Pyracetam
- b. Ascorbic acid
- c. Phenofibrate**
- d. Dexamethasone
- e. Phenylbutazone

78. A patient after bees stings has angioedema (Quinckes edema). Which drug should be immediately inject to eliminate this condition?

- a. Epinephrine hydrochloride**
- b. Platiphyllini hydrotartras
- c. Anaprilinum
- d. Atropine sulfate
- e. Sodium chloride

79. A patient with hypertension was administered metoprolol for the arterial pressure reduction. What is its mechanism of action?

- a. Indirect adrenomimetic action
- b. Alpha adrenoceptor blockade
- c. Beta adrenoreceptor blockade**
- d. Antispasmodic
- e. Angiotensin receptors blockade

80. A 34-year-old patient suffering from bronchitis was prescribed an antitussive drug of central action. What drug is it?

- a. Corglycon
- b. Furosemide
- c. Fercoven
- d. Glaucine**
- e. Enalapril

81. A patient was warned that taking the prescribed preparation might cause cough. What drug is it?

- a. Dichlothiazide
- b. Metoprolol
- c. Clonidine
- d. Phenihidine
- e. Lisinopril**

82. A patient with acute cardiac insufficiency and cardiac glycoside intolerance got an injection of dobutamine. What is the mechanism of its action?

- a. Inhibition of phosphodiesterase activity
- b. Stimulation of muscarinic cholinoreceptors
- c. Stimulation of alpha₁-adrenoreceptors
- d. Block of K⁺, Na⁺-adenosine triphosphatase
- e. Stimulation of beta₁-adrenoreceptors**

83. For thrombosis treatment a patient was prescribed a drug from the group of direct anticoagulants. What drug is it?

- a. Vikasol
- b. Heparin**
- c. Syncumar
- d. Fenilin (phenylinum)
- e. Neodicumarin

84. A patient presents with morphine intoxication. Which drug should be injected as an antidote?

- a. Naloxone**
- b. Bemegride
- c. Unithiol
- d. Atropine sulphate
- e. Lobeline hydrochloride

85. In course of pharmacotherapy of bronchitis a patient was found to have dyspeptic disorders, photodermatitis, liver dysfunction. Which of the prescribed drugs might have caused these manifestations?

- a. Acetylcysteatum
- b. Codeine phosphate
- c. Paracetamolum
- d. Ascorbic acid
- e. Doxycyclin**

86. It is necessary to prescribe non-steroid anti-inflammatory drug for patient with rheumatoid arthritis and concomitant duodenal ulcer. Which drug is the drug of choice in this case?

- a. Diclofenac sodium

b. Celecoxib

c. Paracetamol

d. Acetylsalicylic acid

e. Analgin

87. During the sensitivity test for benzylpenicillin a patient developed anaphylactic shock. The following preparation must be injected around the spot of antibiotic injection:

a. Atropine sulfate

b. Noradrenaline hydrotartrate

c. Adrenaline hydrochloride

d. Propranolol

e. Ceftriaxon

88. A patient with bronchial asthma has been administered a drug from the group of beta-adrenergic agonists. Specify this drug:

a. Digoxin

b. Salbutamol

c. Doxycycline hydrochloride

d. Diazepam

e. Nitroglycerine

89. A patient has been administered a spasmolytic from the group of muscarinic receptor antagonists as a part of the complex treatment for renal colic. Specify this drug:

a. Neostigmine

b. Dithylinum

c. Benzohexonium

d. Atropine

e. Galantamine

90. A patient with bronchial asthma was prescribed salbutamol that has led to relief of bronchospasm symptoms. This is associated with stimulation of:

a. beta1-adrenoreceptors

b. beta2-adrenoreceptors

c. Muscarinic cholinoreceptors

d. alpha1-adrenoreceptors

e. Acetylcholine synthesis

91. A patient has been taking isosorbide for stenocardia prevention for quite a long time. Now he notes a significant decrease in the effect of the drug. What is this phenomenon called?

a. Cumulation

b. Allergy

c. Potentiation

d. Tolerance

e. Physical dependence

92. A patient with chronic bronchitis wants to buy glaucine hydrochloride at a pharmacy. What typical side effect of the drug should the patient be warned against?

a. Allergic skin rash

b. Drop of arterial pressure

c. Irregular heartbeat

d. Excitation of the central nervous system

e. Rise of intraocular pressure

93. A 30-year-old patient with a sleep disorder and psychoemotional disbalance has been administered diazepam. What is the mechanism of its psychosedative action?

a. Inhibition of the limbic system

b. Reduction of noradrenaline amount in the CNS

c. Inhibition of opioid receptors

d. Activation of GABAergic system

e. Inhibition of the reticular formation

94. A female has prolonged labour. Select a drug that stimulates labour activity due to its physiological effect from the listed below:

a. Pachycarpine

b. Neostigmine

c. Oxytocin

d. Progesterone

e. Estrone

95. A 48-year-old patient was given an intravenous injection of prednisolone in order to arrest a severe attack of bronchial asthma. Prednisolone relates to the following group of hormonal drugs:

a. Gestagenic drugs

b. Mineral corticoids

c. Anabolic steroids

d. Glucocorticoids

e. Estrogens

96. A patient who has been taking phenazepam for a month came to a pharmacy. He insisted on buying another two packs of this drug. According to the patient, he feels unwell without phenazepam. What is the mechanism of the developed side effect?

a. Cumulation

b. Addiction

c. Idiosyncrasy

d. Aftereffect syndrome

e. Drug dependence

97. A patient suffering from allergic rhinitis was prescribed ephedrine in form of nasal drops. The patient has significantly benefited from nasal instillation, and this stimulated him to use the drug every 2 hours. But under these conditions the drug appeared to be ineffective. What is the most likely cause of this phenomenon?

a. Allergy

b. Cumulation

c. Drug dependence

d. Idiosyncrasy

e. Tachyphylaxis

98. Which anaesthetic, anti-inflammatory, the least harmful for the stomach preparation can be recommended to a patient with exacerbation of rheumatoid arthritis?

a. Indometacinum

b. Celecoxib

c. Acetylsalicylic acid

d. Diclofenac sodium

e. Ibuprofenum

99. Select a loop diuretic of strong, emergency and short-term action from the listed below:

a. Spironolactone

b. Triamterene

c. Clopamide

d. Acetazolamide

e. Furosemide

100. Absorption of tetracycline preparations will be reduced when they are administered simultaneously with antacids. This is an example for:

a. Pharmacokinetic incompatibility

b. Pharmacodynamic incompatibility

c. Functional drugs antagonism

- d. Drugs synergism
- e. Pharmaceutical incompatibility

101. During an operation a dentist needs to reduce salivation in a patient. The dentist has to use a drug of the following pharmacological group:

- a. Muscarinic and nicotinic cholinomimetics
- b. Muscarinic receptor blockers**
- c. Adrenomimetics
- d. Muscarinic cholinomimetics
- e. Adrenoceptor blocker

102. An anaesthesiologist has to perform an operation under neuroleptanalgesia. Which of the following drug combinations should be used in this case?

- a. Diazepam with aminazine
- b. Promedol with amitriptyllin
- c. Droperidol with prednisolone
- d. Fentanyl with diazepam
- e. Fentanyl with droperidol**

103. A 40-year-old patient suffers from bronchial asthma and cardiac rhythm disturbance in form of bradycardia. Drugs of which pharmacological group should be administered for bronchospasm suppression?

- a. M-cholinomimetics
- b. Beta-blockers
- c. M-cholinergic antagonists**
- d. Cholinesterase inhibitors
- e. Muscle relaxant

104. An interhospital pharmacy got an order from a surgical department for a depolarizing muscle relaxant for surgical interventions. What drug was ordered?

- a. Dithylinum**
- b. Atropine sulfate
- c. Hygronium
- d. Methacain
- e. Nicotine

105. A patient who has taken phenobarbital for a long time was prescribed diclofenac sodium. However the anti-inflammatory effect of diclofenac appeared to be less than expected due to the pharmacokinetic interaction of these drugs. Such interaction might be the result of the following processes:

- a. Accelerated drug metabolism in liver**
- b. Reduced protein concentration in plasma
- c. Increased drug dosage
- d. Change of receptor sensibility
- e. Decelerated drug metabolism in liver

106. A 32-year-old patient takes antituberculous drugs. Some time later he has noticed that his urine turned orange. What preparation is the most likely cause of this phenomenon?

- a. Streptomycin sulfate
- b. Rifampicin**
- c. Pyrazinamide
- d. Isoniazid
- e. Ethambutol

107. On the 4th day of treatment with indomethacin a 55-year-old patient developed gastric bleeding as a result of ulceration of the gastric mucosa. Ulcerogenic effect of this drug is due to a decrease in activity of the following enzyme:

- a. Prostacyclin synthetase

b. Cyclooxygenase-1 (COX-1)

c. Lipoxygenase (LOX)

d. Cyclooxygenase-2 (COX-2)

e. Thromboxane synthetase

108. A 45-year-old patient has been taking neodicumarinum for thrombophlebitis for two weeks. The regular blood test revealed a decrease in prothrombin concentration, microhematuria. Which drug should be used as neodicumarinum antagonist?

a. Sodium citrate

b. Protamine sulfate

c. Vicasol

d. Heparin

e. Aminocaproic acid

109. A patient complaining of dry mouth, photophobia and blurred vision has been delivered to the admission ward. Objectively: the skin is hyperaemic, dry; mydriatic pupils and tachycardia are present. He has been diagnosed with belladonna alkaloids intoxication. Which of the drugs should be given as an antidote?

a. Aceclidine

b. Arminum

c. Dipiroximum

d. Neostigmine

e. Pylocarpine

110. A patient suffering from peptic ulcer was administered ranitidine. Gastric juice acidity has reduced considerably. What mechanism underlies the action of this drug?

a. Autonomic ganglion N-cholinergic receptors blockade

b. H2-histamine receptors blockade

c. M-cholinergic receptors blockade

d. H1-histamine receptors blockade

e. H,K-ATPase activity inhibition

111. To stop the delusions and hallucinations in a schizophrenic patient a doctor administered aminazine. What is the mechanism of antihypoxic action of this drug?

a. Inhibition of adrenergic processes in the CNS

b. Inhibition of dopaminergic processes in the CNS

c. Stimulation of cholinergic processes in the CNS

d. Stimulation of adrenergic and dopaminergic processes in the CNS

e. Inhibition of cholinergic processes in the CNS

112. A 52-year-old patient was diagnosed with systemic amebiasis accompanied by bowels, liver and lungs affection. What preparation should be administered?

a. Chingamin

b. Phthalazol

c. Chiniofon

d. Tetracycline

e. Metronidazole

113. A gravida in her 20th week of gestation got ill with pneumonia. What chemotherapeutical drug may be administered with no risk for the fetus development?

a. Benzylpenicillinum

b. Sulfalenum

c. Ofloxacinum

d. Laevomycetinum

e. Gentamycin

114. During a surgical operation the muscle relaxant tubocurarine chloride was used. What antagonist drug should be injected in order to allow the patient to breathe independently?

a. Benzohexonium

b. Neostigmine

c. Cytitonum

d. Dithylinum

e. Aethimizolum

115. A child has accidentally drunk a solution that was used by his grandmother for glaucoma treatment. The solution turned out to be pilocarpine hydrochloride. What drug can be used as an antidote?

a. Aceclidinum

b. Carbacholinum

c. Atropinum

d. Benzohexonium

e. Pentaminum

116. Choose an antiseptic from the group of halogen containing drugs that can be included into the first-aid kit for a child going to a summer camp:

a. Copper sulfate solution

b. Brilliant green solution

c. Alcoholic iodine solution

d. Methylene blue solution

e. Formaldehyde solution

117. A patient suffering from essential hypertension has increased concentration of renin in blood plasma. Which pharmacological group should be preferred for this patient treatment?

a. Blockers of calcium channels

b. Sympatholytics

c. β -adrenoblockers

d. Diuretics

e. ACE inhibitors

118. A patient suffering from stomach ulcer was prescribed almagel. Which of its pharmacological properties is intended for treatment of this pathology?

a. Local anaesthetization

b. Blocking the muscarinic cholinoreceptors

c. Anti-inflammatory action

d. HCl neutralization

e. Blocking the H₂-histamine receptors

119. A patient with depression has been administered a drug from the group of tricyclic antidepressants. Specify this drug:

a. Amitriptyline

b. Droperidol

c. Caffeine

d. Aminalonum

e. Phenazepam

120. A patient suffering from hypertension consulted a doctor about dry cough that was presumably provoked by antihypertensive therapy. What antihypertensive drug had she been taking?

a. Atenolol

b. Furosemidum

c. Hydrochlorthiazide

d. Lisinopril

e. Nifedipine

121. A patient suffering from ulcer disease was prescribed famotidine. What is the mechanism of its action?

a. Block of H₂-histamine receptors

- b. Block of muscarinic cholinoreceptors
- c. Block of cholinoreceptors of sympathetic ganglia
- d. Inhibition of adenosine triphosphatase activity
- e. Block of H1-histamine receptors

122. A patient with gastric ulcer has been administered omeprazole. What is its mechanism of action?

- a. Blockade of M-cholinergic receptors
- b. Blockade of histamine H2 receptors
- c. Inhibition of H+K+-ATPase**
- d. HCl neutralization
- e. Stimulation of mucus production

123. Which antiseptic preparation has bactericidal effect due to the formation of atomic oxygen?

- a. Silver nitrate
- b. Potassium permanganate**
- c. Furacilinum
- d. Chloraminum
- e. Aethonium

124. During digitoxin therapy for chronic cardiac insufficiency, a patient developed signs of intoxication with this preparation. The patient was prescribed unithiol. What is the mechanism of unithiol action in case of intoxication with cardiac glycosides?

- a. Binding of glycoside into the complex compound
- b. Reduction of K+-Na+-adenosine triphosphatase**
- c. Increase of sodium concentration in the cardiomyocytes
- d. Binding of calcium ions
- e. Increased potassium permeability in the cardiomyocytes

125. A 67-year-old patient with chronic heart failure takes digoxin. In order to reduce its side effects the patients doctor recommended to combine it with the followig drug:

- a. Euphyllinum
- b. Calcium gluconate
- c. Panangin**
- d. Hydrochlorthiazide
- e. Calcium chloride

126. After a craniocerebral trauma a patient was administered pyracetam. This drug relates to the following pharmacological group:

- a. Nootropic agent**
- b. Tranquilizers
- c. Neuroleptic
- d. Anesthetic agent
- e. Nonnarcotic (nonopioid) analgetic

127. In order to arrest stenocardia attacks a patient takes nitroglycerin capsules. What is the rational way of the drug introduction?

- a. Peroral
- b. Inhalation
- c. Hypodermic
- d. Sublingual**
- e. Rectal

128. A hospital admitted a child with signs of poisoning with belladonna alkaloids. What drug should be applied as an antidote?

- a. Magnesium sulfate
- b. Paracetamol
- c. Sodium valproate
- d. Proserin**

e. Sodium caffeine benzoate

129. Recommend a patient with acute bronchitis a mucolytic drug that facilitates expectoration:

- a. Diclofenac sodium
- b. Drotaverine hydrochloride
- c. Glaucine
- d. Loratadine

e. Acetylcysteine

130. You are employed in a pharmaceutical storehouse. When adding newly received preparations to the computerized database, specify the pharmacological group of paracetamol:

- a. Hypnotic
- b. Hypotensive drug
- c. Antianginal drug
- d. Nonnarcotic analgetic**
- e. Diuretic

131. A patient with atopic dermatitis presented at the hospital. Which drug with anti-inflammatory and antiallergic effect should be administered to this patient?

- a. Aethamidum
- b. Insulin
- c. Retabolil
- d. Prednisolone**
- e. Oxytocin

132. A patient with atherosclerosis has been administered an anti-atherosclerotic agent. Specify this drug:

- a. Dexamethasone
- b. Phenylbutazone
- c. Ascorbic acid
- d. Pyracetam
- e. Phenofibrate**

133. A patient after bees stings has angioedema (Quinckes edema). Which drug should be immediately inject to eliminate this condition?

- a. Platyphyllini hydrotartras
- b. Sodium chloride
- c. Epinephrine hydrochloride**
- d. Atropine sulfate
- e. Anaprilinum

134. A 34-year-old patient suffering from bronchitis was prescribed an antitussive drug of central action. What drug is it?

- a. Glaucine**
- b. Enalapril
- c. Fercoven
- d. Furosemide
- e. Corglycon

135. Continuous taking of a drug results in reduction of its efficiency. This phenomenon is called:

- a. Sensibilization
- b. Dependence
- c. Tachyphylaxis
- d. Habituation**
- e. Cumulation

136. A patient with acute heart failure and intolerance of cardiac glycosides has been given an injection of dobutamine. What is the mechanism of its action?

- a. Stimulation of M-cholinergic receptors

b. Stimulation of beta1-adrenoceptors

c. Blockade of K⁺, Na⁺-ATPase

d. Stimulation of alpha1- adrenoceptors

e. Inhibition of phosphodiesterase

137. For thrombosis treatment a patient was prescribed a drug from the group of direct anticoagulants. What drug is it?

a. Heparin

b. Syncumar

c. Vikasol

d. Neodicumarin

e. Fenilin (phenylinum)

138. A patient suffering from chronic cardiac insufficiency was prescribed a cardiac glycoside from the foxglove (Digitalis) group. What drug is it?

a. Corglycon

b. Cordiamin

c. Strophanthine

d. Corvalol

e. Digoxin

139. An elderly patient has constipation caused by hypotonia of colon. What drug should be administered to this patient?

a. Atropine sulfate

b. Novocaine amide

c. Sodium sulfate

d. Castor oil

e. Bisacodyl

140. A patient presents with morphine intoxication. Which drug should be injected as an antidote?

a. Lobeline hydrochloride

b. Atropine sulphate

c. Unithiol

d. Naloxone

e. Bemegride

141. In course of pharmacotherapy of bronchitis a patient was found to have dyspeptic disorders, photodermatitis, liver dysfunction. Which of the prescribed drugs might have caused these manifestations?

a. Paracetamolum

b. Acetylcysteignum

c. Codeine phosphate

d. Doxycyclin

e. Ascorbic acid

142. From the pharmaceutical stock select an anticholinesterase drug to be administered to the patients with atony of the intestine and urinary bladder in the postoperative period:

a. Proserin

b. Benzohexonium

c. Dithylinum

d. Atropine sulfate

e. Phosphacolum

143. A patient who has been suffering from gastric diseases for a long time is found to have hyperchromic anemia. Which of the following drugs is applied for this pathology treatment?

a. Cyanocobalamine

b. Unitiol

c. Oxyferriscorbone

- d. Ferrum Lek
- e. Ascorbic acid

144. A 25-year-old woman presenting with acute morphine intoxication was given an injection of naloxone that caused rapid improvement of her condition. The mechanism of action of this preparation is based on the block of the following receptors:

- a. Opioid receptors
- b. Serotonin receptors
- c. Benzodiazepine receptors
- d. Dopamine
- e. GABA-receptors

145. A patient with schizophrenia has been administered a neuroleptic. Which of the listed drugs falls into this group?

- a. Propranolol
- b. Celecoxib
- c. Aminazine
- d. Morphine
- e. Pyracetam

146. A man came to a pharmacy and asked to recommend him a drug for treatment of allergic rhinitis that occurs in the period of linden flowering. What drug may be applied?

- a. Loratadine
- b. Anapriline
- c. Losartan
- d. Ambroxol
- e. Adrenaline

147. It is necessary to prescribe non-steroid anti-inflammatory drug for patient with rheumatoid arthritis and concomitant duodenal ulcer. Which drug is the drug of choice in this case?

- a. Acetylsalicylic acid
- b. Analgin
- c. Diclofenac sodium
- d. Celecoxib
- e. Paracetamol

148. When a certain drug reduces the effect of another drug, such phenomenon is called:

- a. Sensibilization
- b. Habituation
- c. Antagonism
- d. Potentiation
- e. Tachyphylaxis

149. A patient with bronchial asthma has been administered a drug from the group of beta-adrenergic agonists. Specify this drug:

- a. Doxycycline hydrochloride
- b. Diazepam
- c. Salbutamol
- d. Nitroglycerine
- e. Digoxin

150. The ability of drugs to accumulate in the patients body is called:

- a. Synergism
- b. Antagonism
- c. Cumulation
- d. Habituation
- e. Allergy

151. A patient has been administered a spasmolytic from the group of muscarinic receptor

antagonists as a part of the complex treatment for renal colic. Specify this drug:

- a. Dithylinum
- b. Benzohexonium
- c. Neostigmine
- d. Galantamine
- e. Atropine**

152. A patient with bronchial asthma was prescribed salbutamol that has led to relief of bronchospasm symptoms. This is associated with stimulation of:

- a. betal-adrenoreceptors
- b. Acetylcholine synthesis
- c. alpha1-adrenoreceptors
- d. beta2-adrenoreceptors**
- e. Muscarinic cholinoreceptors

153. A patient has been taking isosorbide for stenocardia prevention for quite a long time. Now he notes a significant decrease in the effect of the drug. What is this phenomenon called?

- a. Tolerance**
- b. Physical dependence
- c. Potentiation
- d. Allergy
- e. Cumulation

154. A patient with myocardial infarction has been given an intravenous injection of a direct-acting anticoagulant. Select it among the listed drugs:

- a. Calcium gluconate
- b. Heparin**
- c. Vikasolum
- d. Neodicumarinum
- e. Thrombin

155. A patient with chronic bronchitis gets glaucine hydrochloride at a pharmacy. The patient must be warned about the following typical side effect of this drug:

- a. Increased intraocular pressure
- b. Allergic skin rash
- c. Excitation of the central nervous system
- d. Irregular heartbeat
- e. Arterial pressure drop**

156. Benzylpenicillin sodium is not used per os, because this drug:

- a. Poorly absorbed in the intestine
- b. Reduces formation of gastric HCl
- c. Is destroyed by penicillinase
- d. Destroys gastric HCl**
- e. Irritates gastric mucosa

157. Which drug with antagonistic effect can be used to stop bleeding caused by prolonged use of neodicumarinum?

- a. Etamsylate
- b. Aminocapronic acid
- c. Vikasolum**
- d. Fibrinogen
- e. Ascorbic acid

158. A patient suffering from allergic rhinitis was prescribed ephedrine in form of nasal drops. The patient has significantly benefited from nasal instillation, and this stimulated him to use the drug every 2 hours. But under these conditions the drug appeared to be ineffective. What is the most likely cause of this phenomenon?

- a. Cumulation
- b. Tachyphylaxis**
- c. Idiosyncrasy
- d. Drug dependence
- e. Allergy

159. Select a loop diuretic of strong, emergency and short-term action from the listed below:

- a. Triamterene
- b. Furosemide**
- c. Acetazolamide
- d. Clopamide
- e. Spironolactone

160. A patient suffering from epilepsy has taken Phenobarbital for a long time and developed drug tolerance. What is the mechanism of this phenomenon development?

- a. Receptors sensitivity enhancement
- b. Absorption process reduction
- c. Acceleration of biotransformation**
- d. Inhibition of biotransformation
- e. Substances accumulation in the body

161. A patient being treated in the infectious disease ward for dysentery is administered phthalazol.

What is the reason for phthalazol being used only for treatment of enteric infections?

- a. Slowly eliminated from the body
- b. The high degree of reabsorption in the kidneys
- c. The drug is not absorbed from the gastrointestinal tract**
- d. Rapidly absorbed in the gastrointestinal tract
- e. Rapidly excreted in unchanged form

162. A consulting pharmacist informed a patient about possible side effect of metronidazole that is normally provoked by alcohol intake. What is the mechanism of this phenomenon?

- a. Enzyme acetylcholinesterase activation
- b. Enzyme glucose 6-phosphate dehydrogenase activation
- c. Enzyme alcohol dehydrogenase activation
- d. Enzyme acetylcholinesterase blocking
- e. Enzyme alcohol dehydrogenase blocking**

163. An anaesthesiologist has to perform an operation under neuroleptanalgesia. Which of the following drug combinations should be used in this case?

- a. Droperidol with prednisolone
- b. Diazepam with aminazine
- c. Promedol with amitriptyllin
- d. Fentanyl with droperidol**
- e. Fentanyl with diazepam

164. A 40-year-old patient suffers from bronchial asthma and cardiac rhythm disturbance in form of bradyarrhythmia. Drugs of which pharmacological group should be administered for bronchospasm suppression?

- a. Cholinesterase inhibitors
- b. Muscle relaxant
- c. Beta-blockers
- d. M-cholinomimetics
- e. M-cholinergic antagonists**

165. During local anaesthetization novocaine solution is usually compounded with solution of adrenaline hydrochloride. What is the purpose of this action?

- a. Increase in smooth muscle tone
- b. Vasodilatation

c. Vasoconstriction

- d. Decrease in smooth muscle tone
- e. Algesthesia reduction

166. On the 4th day of treatment with indomethacin a 55-year-old patient developed gastric bleeding as a result of ulceration of the gastric mucosa. Ulcerogenic effect of this drug is due to a decrease in activity of the following enzyme:

a. Cyclooxygenase-1 (COX-1)

- b. Lipoxygenase (LOX)
- c. Prostacyclin synthetase
- d. Thromboxane synthetase
- e. Cyclooxygenase-2 (COX-2)

167. A 45-year-old patient has been taking neodicumarinum for thrombophlebitis for two weeks. The regular blood test revealed a decrease in prothrombin concentration, microhematuria. Which drug should be used as neodicumarinum antagonist?

- a. Protamine sulfate
- b. Heparin
- c. Aminocaproic acid

d. Vicasol

- e. Sodium citrate

168. A patient complaining of dry mouth, photophobia and blurred vision has been delivered to the admission ward. Objectively: the skin is hyperaemic, dry; mydriatic pupils and tachycardia are present. He has been diagnosed with belladonna alkaloids intoxication. Which of the drugs should be given as an antidote?

- a. Dipiroximum
- b. Neostigmine**
- c. Pylocarpine
- d. Aceclidine
- e. Arminum

169. A patient suffering from peptic ulcer was administered ranitidine. Gastric juice acidity has reduced considerably. What mechanism underlies the action of this drug?

- a. H,K-ATPase activity inhibition
- b. Autonomic ganglion H-cholinergic receptors blockade
- c. H1-histamine receptors blockade
- d. M-cholinergic receptors blockade
- e. H2-histamine receptors blockade**

170. To stop the delusions and hallucinations in a schizophrenic patient a doctor administered aminazine. What is the mechanism of antihypoxic action of this drug?

- a. Stimulation of cholinergic processes in the CNS
- b. Stimulation of adrenergic and dopaminergic processes in the CNS
- c. Inhibition of dopaminergic processes in the CNS**
- d. Inhibition of cholinergic processes in the CNS
- e. Inhibition of adrenergic processes in the CNS

171. A 33-year-old woman who has been treated for chronic polyarthritis for a long time complains about arterial pressure rise, change of adipose tissue distribution, menstrual cycle disorder. What preparation has she taken?

- a. Prednisolone**
- b. Butadiol
- c. Diclofenac sodium
- d. Synaflan
- e. Indometacin

172. A gravida in her 20th week of gestation got ill with pneumonia. What chemotherapeutical drug

may be administered with no risk for the fetus development?

- a. Gentamycin
- b. Laevomycetinum
- c. Ofloxacinum
- d. ??nzylpenicillimum**
- e. Sulfalenum

173. During a surgical operation the muscle relaxant tubocurarine chloride was used. What antagonist drug should be injected in order to allow the patient to breathe independently?

- a. Neostigmine**
- b. Cytitonum
- c. ??nzohexonium
- d. Aethimizolum
- e. Dithylinum

174. A child has accidentally drunk a solution that was used by his grandmother for glaucoma treatment. The solution turned out to be pilocarpine hydrochloride. What drug can be used as an antidote?

- a. ?tropinum**
- b. Aceclidinum
- c. ??ntaminum
- d. ??nzohexonium
- e. Carbacholinum

175. At the end of the drug action drug addicts develop severe mental, neurological and somatic disorders. This complex of symptoms is called:

- a. Tachyphylaxis
- b. Cumulation
- c. Tolerance
- d. Withdrawal syndrome**
- e. Sensibilization

176. What antiprotozoal agent can be recommended to a female patient with trichomoniasis?

- a. Chloridinum
- b. Primaquine
- c. Metronidazole**
- d. Solusurminum
- e. Chiniofonum

177. A patient has a history of chronic bronchitis. Recommend him an expectorant which can be purchased at a pharmacy to facilitate the expectoration of thick and viscous mucus:

- a. Glauent
- b. Falimint
- c. Ambroxol**
- d. Libexin
- e. Salbutamol

178. When fenoterolum for inhalations is not available in a pharmacy, it can be substituted by the following drug from the group of bronchoselective beta-2-adrenomimetics:

- a. Metacinum
- b. Isadrinum
- c. Salbutamolum**
- d. Ephedrinum
- e. ?uphyllinum

179. What drug from the group of cardiac glycosides can be used as an alternative for strophanthine if it is not available at a pharmacy?

- a. Celanidum

b. Corglycon

c. Digitoxin

d. Isolanidum

e. Adonisidum

180. What is the most common symptom of atropine intoxication?

a. Bradycardia

b. Reduction of intraocular pressure

c. Myotic pupils with no light response

d. Hyperhidrosis

e. Mydriatic pupils with no light response

181. A patient consulted an ophthalmologist about scotopic vision impairment, cornea dryness. What drug was prescribed?

a. ?????rboxylasum

b. Retinol

c. ?????phorol

d. Pyridoxine

e. Ascorbic acid

182. A patient suffering from essential hypertension has increased concentration of renin in blood plasma. Which pharmacological group should be preferred for this patient treatment?

a. Diuretics

b. Beta-adrenoblockers

c. ACE inhibitors

d. Blockers of calcium channels

e. Sympatholytics

183. A patient suffering from stomach ulcer was prescribed almagel. Which of its pharmacological properties is intended for treatment of this pathology?

a. Blocking the H₂-histamine receptors

b. Local anaesthetization

c. HCl neutralization

d. Blocking the muscarinic cholinoreceptors

e. Anti-inflammatory action

184. A patient with depression has been administered a drug from the group of tricyclic antidepressants. Specify this drug:

a. Phenazepam

b. Aminalonum

c. Caffeine

d. Amitriptyline

e. Droperidol

185. A patient suffering from hypertension consulted a doctor about dry cough that was presumably provoked by antihypertensive therapy. What antihypertensive drug had she been taking?

a. Hydrochlorthiazide

b. Lisinopril

c. Nifedipin

d. Atenolol

e. Furosemidum

186. A patient suffering from ulcer disease was prescribed famotidine. What is the mechanism of its action?

a. Inhibition of adenosine triphosphatase activity

b. Block of cholinoreceptors of sympathetic ganglia

c. Block of ?1-histamine receptors

d. Block of muscarinic cholinoreceptors

e. Block of β_2 -histamine receptors

187. Help a medical student to select an adrenergic drug for the treatment of anaphylactic shock:

- a. Clonidine
- b. Fenoterolum
- c. Isadrinum

d. Epinephrine hydrochloride

- e. Galazolin

188. A patient with gastric ulcer has been administered omeprazole. What is its mechanism of action?

- a. Stimulation of mucus production
- b. Inhibition of $H+K+-ATPase$
- c. Blockade of M-cholinergic receptors
- d. Blockade of histamine H₂ receptors
- e. HCl neutralization

189. Which antiseptic preparation has bactericidal effect due to the formation of atomic oxygen?

- a. Chloraminum
- b. Aethonium
- c. Silver nitrate

d. Potassium permanganate

- e. Furacilinum

190. During digitoxin therapy for chronic cardiac insufficiency, a patient developed signs of intoxication with this preparation. The patient was prescribed unithiol. What is the mechanism of unithiol action in case of intoxication with cardiac glycosides?

- a. Binding of glycoside into the complex compound
- b. Reduction of $K+-Na+-adenosine\ triphosphatase$
- c. Increase of sodium concentration in the cardiomyocytes
- d. Binding of calcium ions
- e. Increased potassium permeability in the cardiomyocytes

191. A 67-year-old patient with chronic heart failure takes digoxin. In order to reduce its side effects the patients doctor recommended to combine it with the followig drug:

- a. Calcium chloride
- b. β nangin
- c. β uphyllinum
- d. Calcium gluconate
- e. Hydrochlorthiazide

192. What is the main mechanism of action that underlies the bactericidal effect of penicillin on the coccal flora?

- a. Disruption of synthesis of the microbial cell wall
- b. Damage to the cytoplasmic membrane permeability
- c. Phagocytic activity of leukocytes
- d. Activation of the immune system of the macroorganism
- e. Inhibition of protein synthesis

193. After a craniocerebral trauma a patient was administered pyracetam. This drug relates to the following pharmacological group:

- a. Neuroleptic
- b. Nootropic agent
- c. Tranquilizers
- d. Nonnarcotic (nonopioid) analgetic
- e. Anesthetic agent

194. A patient with a history of essential hypertension has been administered lisinopril. What is the mechanism of action of this drug?

- a. It inhibits beta-adrenergic receptors

b. It inhibits alpha-adrenergic receptors

c. **It inhibits ACE**

d. It stimulates beta-adrenergic receptors

e. It inhibits M-cholinergic receptors

195. Recommend a patient with acute bronchitis a mucolytic drug that facilitates expectoration:

a. Acetylcysteine

b. Loratadine

c. Drotaverine hydrochloride

d. Diclofenac sodium

e. Glaucine

196. A male patient has been administered an antiulcerant that blocks histamine receptors of the gastric mucosa. What drug is it?

a. Pirenzepine

b. **Famotidine**

c. Almagelum

d. Omeprazole

e. Atropine sulfate

197. Stimulation of beta-cells of the pancreas causes the hypoglycemic effect of the following drug:

a. Heparin

b. **Glibenclamide**

c. Adrenaline hydrochloride

d. Prednisolone

e. Retabolilum

198. A patient with atopic dermatitis presented at the hospital. Which drug with anti-inflammatory and antiallergic effect should be administered to this patient?

a. **Prednisolone**

b. Oxytocin

c. Retabolil

d. Insulin

e. Aethamidum

199. A patient with atherosclerosis has been administered an anti-atherosclerotic agent. Specify this drug:

a. Phenylbutazone

b. **Phenofibrate**

c. Pyracetam

d. Ascorbic acid

e. Dexamethasone

200. A patient after bees stings has angioedema (Quinckes edema). Which drug should be immediately inject to eliminate this condition?

a. Platiphyllini hydrotartras

b. Sodium chloride

c. **Epinephrine hydrochloride**

d. Atropine sulfate

e. Anaprilinum

201. A patient with hypertension was administered metoprolol for the arterial pressure reduction.

What is its mechanism of action?

a. **Beta adrenoreceptor blockade**

b. Indirect adrenomimetic action

c. Angiotensin receptors blockade

d. Antispasmodic

e. Alpha adrenoceptor blockade

202. A 34-year-old patient suffering from bronchitis was prescribed an antitussive drug of central action. What drug is it?

- a. Fercoven
- b. Glaucine**
- c. Enalapril
- d. Corglycon
- e. Furosemide

203. Continuous taking of a drug results in reduction of its efficiency. This phenomenon is called:

- a. Cumulation
- b. Sensibilization
- c. Habituation**
- d. Dependence
- e. Tachyphylaxis

204. A patient has glaucoma. Recommend him a drug of the M-cholinomimetic group:

- a. Sulfacyl sodium
- b. Ephedrine hydrochloride
- c. Pylocarpine hydrochloride**
- d. Atropine sulfate
- e. Laevomycetin

205. Advise an internship doctor on why iron preparations should not be administered together with antacids:

- a. This causes increased binding to blood proteins
- b. This increases intoxication with iron preparations
- c. This accelerates elimination of iron preparations
- d. This causes malabsorption of iron**
- e. This prevents deposition of iron in the body

206. A patient with acute heart failure and cardiac glycoside intolerance was given an injection of dobutamine. What is the mechanism of its action?

- a. Block of K⁺, Na⁺-ATPase
- b. Stimulation of alpha1-adrenoceptors
- c. Stimulation of beta1-adrenoceptors**
- d. Inhibition of phosphodiesterase
- e. Stimulation of M-cholinergic receptors

207. A patient suffering from chronic cardiac insufficiency was prescribed a cardiac glycoside from the foxglove (Digitalis) group. What drug is it?

- a. Digoxin**
- b. Corvalol
- c. Cordiamin
- d. Corglycon
- e. Strophanthine

208. An elderly patient has constipation caused by hypotonia of colon. What drug should be administered to this patient?

- a. Bisacodyl**
- b. Castor oil
- c. Novocaine amide
- d. Atropine sulfate
- e. Sodium sulfate

209. In course of pharmacotherapy of bronchitis a patient was found to have dyspeptic disorders, photodermatitis, liver dysfunction. Which of the prescribed drugs might have caused these manifestations?

- a. Ascorbic acid

b. Paracetamolum

c. Doxycyclin

d. Ferrum Lek

e. Codeine phosphate

210. A patient who has been suffering from gastric diseases for a long time is found to have hyperchromic anemia. Which of the following drugs is applied for this pathology treatment?

a. Oxyferriscorbone

b. Cyanocobalamine

c. Unitiol

d. Ascorbic acid

e. Ferrum Lek

211. A man came to a pharmacy and asked to recommend him a drug for treatment of allergic rhinitis that occurs in the period of linden flowering. What drug may be applied?

a. Losartan

b. Loratadine

c. Anapriline

d. Adrenaline

e. Ambroxol

212. During the sensitivity test for benzylpenicillin a patient developed anaphylactic shock. The following preparation must be injected around the spot of antibiotic injection:

a. Propranolol

b. Ceftriaxon

c. Noradrenaline hydrotartrate

d. Atropine sulfate

e. Adrenaline hydrochloride

213. When a certain drug reduces the effect of another drug, such phenomenon is called:

a. Tachyphylaxis

b. Antagonism

c. Sensibilization

d. Habituation

e. Potentiation

214. A patient with bronchial asthma has been administered a drug from the group of beta-adrenergic agonists. Specify this drug:

a. Salbutamol

b. Doxycycline hydrochloride

c. Digoxin

d. Nitroglycerine

e. Diazepam

215. The ability of drugs to accumulate in the patients body is called:

a. Allergy

b. Cumulation

c. Synergism

d. Antagonism

e. Habituation

216. A patient with bronchial asthma was prescribed salbutamol that has led to relief of bronchospasm symptoms. This is associated with stimulation of:

a. Muscarinic cholinoreceptors

b. Beta1-adrenoreceptors

c. Beta2-adrenoreceptors

d. Acetylcholine synthesis

e. Alpha1-adrenoreceptors

217. A patient has been taking isosorbide for stenocardia prevention for quite a long time. Now he notes a significant decrease in the effect of the drug. What is this phenomenon called?

a. Potentiation

b. Tolerance

c. Physical dependence

d. Cumulation

e. Allergy

218. A patient with myocardial infarction has been given an intravenous injection of a direct-acting anticoagulant. Select it among the listed drugs:

a. Vikasolum

b. Neodicumarinum

c. Heparin

d. Thrombin

e. Calcium gluconate

219. A patient with chronic bronchitis wants to buy glaucine hydrochloride at a pharmacy. What typical side effect of the drug should the patient be warned against?

a. Irregular heartbeat

b. Excitation of the central nervous system

c. Drop of arterial pressure

d. Rise of intraocular pressure

e. Allergic skin rash

220. A patient with chronic bronchitis gets glaucine hydrochloride at a pharmacy. The patient must be warned about the following typical side effect of this drug:

a. Arterial pressure drop

b. Irregular heartbeat

c. Allergic skin rash

d. Increased intraocular pressure

e. Excitation of the central nervous system

221. A 30-year-old patient with a sleep disorder and psychoemotional disbalance has been administered diazepam. What is the mechanism of its psychosedative action?

a. Inhibition of opioid receptors

b. Activation of GABAergic system

c. Inhibition of the reticular formation

d. Inhibition of the limbic system

e. Reduction of noradrenaline amount in the CNS

222. Which drug with antagonistic effect can be used to stop bleeding caused by prolonged use of neodicumarinum?

a. Aminocapronic acid

b. Fibrinogen

c. Ascorbic acid

d. Vikasolum

e. Etamsylate

223. A 48-year-old patient was given an intravenous injection of prednisolone in order to arrest a severe attack of bronchial asthma. Prednisolone relates to the following group of hormonal drugs:

a. Glucocorticoids

b. Estrogens

c. Anabolic steroids

d. Mineral corticoids

e. Gestagenic drugs

224. A patient who has been taking phenazepam for a month came to a pharmacy. He insisted on buying another two packs of this drug. According to the patient, he feels unwell without phenazepam.

What is the mechanism of the developed side effect?

a. Aftereffect syndrome

b. Idiosyncrasy

c. Drug dependence

d. Cumulation

e. Addiction

225. A patient suffering from allergic rhinitis was prescribed ephedrine in form of nasal drops. The patient has significantly benefited from nasal instillation, and this stimulated him to use the drug every 2 hours. But under these conditions the drug appeared to be ineffective. What is the most likely cause of this phenomenon?

a. Idiosyncrasy

b. Drug dependence

c. Tachyphylaxis

d. Allergy

e. Cumulation

226. Which anaesthetic, anti-inflammatory, the least harmful for the stomach preparation can be recommended to a patient with exacerbation of rheumatoid arthritis?

a. Acetylsalicylic acid

b. Diclofenac sodium

c. Celecoxib

d. Ibuprofenum

e. Indometacinum

227. Select a loop diuretic of strong, emergency and short-term action from the listed below:

a. Clopamide

b. Spironolactone

c. Triamterene

d. Furosemide

e. Acetazolamide

228. A patient suffering from epilepsy has taken phenobarbital for a long time and developed drug tolerance. What is the mechanism of this phenomenon development?

a. Absorption process reduction

b. Inhibition of biotransformation

c. Accumulation of substances in the body

d. Acceleration of biotransformation

e. Receptors sensitivity enhancement

229. A consulting pharmacist informed a patient about possible side effect of metronidazole that is normally provoked by alcohol intake. What is the mechanism of this phenomenon?

a. Enzyme alcohol dehydrogenase activation

b. Enzyme acetylcholinesterase activation

c. Enzyme glucose 6-phosphate dehydrogenase activation

d. Enzyme alcohol dehydrogenase blocking

e. Enzyme acetylcholinesterase blocking

230. A 40-year-old patient has a history of bronchial asthma and heart rhythm disorders in form of bradyarrhythmia. Bronchospasm can be eliminated by the drugs of the following pharmacological group:

a. Muscle relaxants

b. M-cholinergic antagonists

c. M-cholinomimetics

d. Beta-blockers

e. Cholinesterase inhibitors

231. A patient who has taken phenobarbital for a long time was prescribed diclofenac sodium.

However the anti-inflammatory effect of diclofenac appeared to be less than expected due to the pharmacokinetic interaction of these drugs. Such interaction might be the result of the following processes:

- a. Decelerated drug metabolism in liver
- b. Change of receptor sensibility
- c. Increased drug dosage
- d. Accelerated drug metabolism in liver**
- e. Reduced protein concentration in plasma