1. A married couple applied to the genetic consultation in order to consult about their child with multiple abnormalities (microcephaly, idiocy etc). The woman has had an illnesses during her pregnancy but she didnt take any teratogens or mutagens. The parents and the childs karyotype is normal. Anamnesis study revealed that the family kept a cat. What gravidic disease caused the childs abnormalities?

a. Toxoplasmosis
b. Dysentery
c. Trichomoniasis
d. Balantidiasis
e. Leishmaniasis

2. A patient who takes a blocker of membrane cytoreceptors of efferent conductor synapses of autonomic nervous system complains about dry mouth. What receptors are blocked?

a. Beta-adrenoreceptors
b. Muscarinic cholinoreceptors
c. H2-receptors
d. Nicotinic cholinoreceptors
e. Alpha-adrenoreceptors

3. Examination of a patient revealed enlargement of some body parts (jaw, nose, ears, feet, hands), but body proportions were conserved. It might be caused by intensified secretion of the following hormone:

a. Tetraiodothyronine
b. Somatostatin
c. Somatotropin
d. Triiodothyronine
e. Cortisol

4. A patient complains about attacks of laboured breathing, dizziness. He works at a chemical plant producing hydrocyanic acid. The described symptoms might be associated with dysfunction of the following enzyme:

a. Succinate dehydrogenase
b. Lactate dehydrogenase
c. Cytochrome oxidase
d. Catalase
e. Pyruvate dehydrogenase

5. After sprinting untrained people feel muscular pain as a result of lactate accumulation. It may be connected with intensification of the following biochemical process:

a. Glycogenesis
b. Glycolysis
c. Pentose-phosphate cycle
d. Glyconeogenesis
e. Lipogenesis

6. What vitamin deficiency leads to both disorder of reproductive function and distrophy of skeletal muscles?

a. Vitamin D
b. Vitamin B1
c. Vitamin A
d. Vitamin K
e. Vitamin E

7. Toxic pulmonary edema was reproduced on a laboratory rat by means of ammonium chloride solution. What is the leading pathogenetic factor of this edema?

a. Disorder of neural and humoral regulation
b. Increase of lymph outflow
c. Increase of venous outflow

d. Decrease of colloid osmotic pressure
e. Increased permeability of capillars

8. 15 minutes after a car accident examination of a 35 year old man revealed massive injury of lower extremities without serious external loss of blood. The victim is in excited state. What component of pathogenesis of traumatic shock is basic and requires urgent correction?
a. Pain
b. Intoxication
c. Internal loss of plasma
d. Cardiac function disorder
e. Acute renal insufficience

9. A patient has disorder of airways patency at the level of small and middle bronchs. What changes of acid-base balance may take place?
a. Respiratory akcalosis
b. Metabolic alkalosis
c. Acid-base balance wont change
d. Respiratory acidosis
e. Metabolic acidosis

10. The body temperature of a patient with an infectious disease rises once in two days up to 39,5-40,5 degrees and stays so for about an hour and then drops to the initial level. What type of fever is it?
a. Atypical
b. Intermittent
c. Remittent
d. Continued
e. Hectic

11. A 23 year patient was admitted to the hospital in grave condition with craniocerebral trauma. His respiration is characterized by a spasmodic long inspiration interrupted by a short expiration. What respiration type is it typical for?
a. Biots respiration
b. Apneustic
c. Kussmauls respiration
d. Gasping
e. Cheyne-Stokes respiration

12. Two days after myocardial infarction a patient had a sudden systolic pressure decrease up to 60 mm, tachycardia up to 140/min, dyspnea; the patient lost consciousness. What mechanism is principal for the shock pathogenesis?
a. Decrease of cardiac volume
b. Decrease of circulating blood volume
c. Anaphylactic reaction
d. Paroxysmal tachycardia
e. Intoxication

13. After a psychoemotional stress a 48 year old patient had a sudden attack of acute heart pain with irradiation to the left hand. Nitroglycerine suppressed pain in 10 minutes. What pathogenetic mechanism is principal for the pain development?
a. Increased need of myocardium in oxygen
b. Spasm of coronary vessels
c. Coronary vessel occlusion
d. Dilatation of peripheral vessels
e. Embarrassement of coronary vessels

14. A 40 year old man who took part in disaster-management at a nuclear power plant fell sick with paradontitis. What etiological agent is the most important for the development of this pathology?

a. Emotional stress
b. Malnutrition
c. Streptococcus
d. Increased load of dentoalveolar apparatus
e. Iron deficit

15. A woman after labor lost 20 kg of body weight, her hair and teeth fall out, she has muscle atrophy (hypophysial cachexia). Synthesis of what hypophysis hormone is disturbed?
a. Corticotrophic
b. Gonadotropic
c. Prolactin
d. Somatotropic
e. Thyreotropic

16. Climbing the mountains at a height of 5000 m climbers started complaining of breath shortness, palpitation, vertigo, ring in the ears. What pathogenetic factor determines the development of these occurances?
a. Hypokalemia
b. Lactacidemia
c. Hypernatremia
d. Hypoxemia
e. Decreased oxygen capacity of blood

17. Damage of one of the reactors at a nuclear power plant resulted in runout of radioactive products. People who were present in the high-radiation area got approximately 250-300 R. They were urgently taken to the hospital. What blood changes will be typical for this period?
a. Anemia
b. Leukopenia
c. Lymphopenia
d. Thrombocytopenia
e. Neutropenia

18. A year after subtotal stomach resection on account of ulcer of lesser curvature the following blood changes were revealed: anemia, leukocytopenia and thrombocytopenia, color index - 1,3, megaloblasts and megalocytes. What factor deficiency caused the development of this pathology?
a. Mucin
b. Hydrochloride acid
c. Castles factor
d. Pepsin
e. Gastrin

19. A 45 year old patient was taken to the hospital by an emergency team with serious cranial trauma in shock condition. Objectively: unconscious, skin is pale, body t°- 35,0°C, low muscular tonus, reflexes are absent, pulse is rapid and weak, AP- 50/30 mm Hg. What clinical shock stage is it?
a. Erectile stage
b. Inhibition stage
c. Torpid stage
d. Terminal stage
e. Excitement stage

20. After traumatic tooth extraction a patient complains of a severe dull pain without accurate localization in his gum, body temperature rise up to 37,5 degrees C. He was diagnosed with alveolitis. What type of pain does the patient have?
a. Referred
b. Phantom
c. Epicritic
d. Visceral
e. Protopathic

21. After poisoning with an unknown drug a 37 year old patient has stereotypical face muscle contractions that imitate blinking and squinting. What form of motor function disorder of nervous system is it?

a. Hyperkinesia
b. Akinesia
c. -
d. Ataxy
e. Hypokinesia

22. A 12 year old boy came home from school and started complaining of headache, sickness, chill, periodical muscle pain, appetite loss, flabbiness. What period of illness are these symptoms typical for?

a. End of illness
b. Prodromal
c. Incubative
d. Latent
e. High point of illness

23. Rabbits lived on food with addition of cholesterol. Five months later the atherosclerotic aorta changes were revealed. Name the main cause of atherogenesis in this case:

a. Overeating
b. Endogenous hypercholesterolemia
c. -
d. Exogenous hypercholesterolemia
e. Hypodynamia

24. A patient with primary nephrotic syndrome has the following content of whole protein: 40 g/l. What factor caused hypoproteinemia?

a. Reduced protein synthesis in liver
b. Transition of protein from vessels to tissues
c. Proteinuria
d. Increased proteolysis
e. Disturbance of intestinal protein absorption

25. A man who took part in disaster-management at a nuclear power plant had hemorrhagic syndrome at the same time with acute radiation sickness. What is the most important thing for the pathogenesis of this syndrome?

a. High activity of fibrinolysis factors
b. Destructed structure of vessel walls
c. Thrombocytopenia
d. High activity of anticoagulative blood system
e. Low activity of anticoagulative blood system

26. Four months ago a 43 year old patient had a traumatic amputation of his lower extrimity. Now he complains of sensing the amputated extremity and having constantly grave, sometimes unbearable pain in it. What type of pain does he have?

a. Reflex
b. Phantom
c. Neuralgia
d. Causalgia
e. Thalamic

27. In crisis period a 14 year old child ill with diphtheria has AP- 70/50 mm Hg accompanied by abrupt fall in temperature and tachycardia. What form of vascular tone disturbance is it?

a. Acute hypotension
b. Vegetovascular dystonia
c. -
d. Essential arterial hypotension

e. Chronic hypotension

28. After a long-lasting and grave illness the blood pressure of a patient fell up to 60/40 mm; he has tachicardia, dyspnea, black-out. How can this state be defined?

a. Shock
b. Agony
c. Preagony
d. Apparent death
e. -

29. A patient ill with jaundice has increased content of conjugated bilirubin and bile acids in blood, no stercobilinogen in urine. What jaundice are these symptomps typical for?

a. Hepatocellular
b. Hepatic
c. Obstructive
d. Hemolytic
e. Cythemolytic

30. A newborn child ill with pylorostenosis has frequent vomiting accompanied by apathy, weakness, muscular hypertonia, sometimes convulsions. What form of acid-base balance disorder has developed?

a. Excretory acidosis
b. Nongaseous alkalosis
c. Gaseous acidosis
d. Gaseous alkalosis
e. Metabolic acidosis

31. A 19 year old patient was diagnosed with chronic acquired hemolytic anemia. What is the leading pathogenetic mechanism of this pathologys development?

a. Toxic hemolysis
b. Hyposmolarity of plasm
c. Osmotic hemolysis
d. Autoimmune hemolysis
e. Intracellular hemolysis

32. A 56 year old man was taken to the hospital with complaints of general weakness, pain and burning in the region of tongue, extremity numbness. In the past he had resection of cardiac part of ventricle. Blood test: Hb- 80 g/L; RBC- 2,01012/L; colour index of blood- 1,2; leukocytes - 3,5109/L. What type of anemy is it?

a. Aplastic
b. Iron-deficient
c. Hemolytic
d. Posthemorrhagic
e. B12 folic-deficient

33. After recovering from epidemic parotiditis a patient began to lose weight, he was permanently thirsty, drank a lot of water, had frequent urination, voracious appetite. Now he has complaints of skin itch, weakness, furunculosis. His blood contains: glucose - 16 mmole/L, ketone bodies - 100 mcmole/L; glucosuria. What disease has developed?

a. Insulin-dependent diabetes
b. Steroid diabetes
c. Malnutrition diabetes
d. Diabetes insipidus
e. Insulin-independent diabetes

34. A patient dropped into an ice hole, froze in the wind and fell ill. Body temperature rose up to 39,7oC and varied from 39,0oC to 39,8oC. Name the type of the patients temperature profile?

a. Febris recurrens

b. Febris intermittens
c. Febris remittens
d. Febris continua
e. Febris hectica

35. A patient has the following diagnosis: renal hypertension. What is the initial pathogenetic factor of arterial hypertension development in this case?
a. Renal ischemia
b. Hyperaldosteronism
c. Intensified angiotensin synthesis
d. Intensified renin synthesis
e. Hypernatremia

36. A diver who has been staying at the depth of 40 m for a long time fell ill with caisson disease as a result of decompression. The main pathogenetic factor is the following embolism:
a. Tissue
b. Gaseous
c. Fat
d. Air
e. Paradoxical

37. A 65 year old patient suddenly died. She suffered from thrombophlebitis of deep veins of shin. Autopsy revealed: trunk and bifurcation of pulmonary artery contain red loose masses with dull corrugated surface. What pathological process did the morbid anatomist reveal in pulmonary artery?
a. Thromboembolism
b. Tissue embolism
c. Fat embolism
d. Foreign body embolism
e. Thrombosis

38. Skin samples of a patient with bronchial asthma revealed allergen sensitization of poplar fuzz. What factor of immune system plays the main part in development of this immunopathological state?
a. Sensitized T-lymphocytes
b. -
c. IgD
d. IgM
e. IgE

39. A patient with insulin-dependent diabetes had an insulin injection. Some time later he felt weakness, irritability, excessive sweating. What is the main reason of these disorders?
a. Carbohydrate starvation of brain
b. Intensified ketogenesis
c. Reduced glyconeogenesis
d. Intensified lypogenesis
e. Intensified glycogenolysis

40. For the purpose of disinfection of nonmetallic surgical instruments the formaldehyde solution was used. What group does this anticeptic preparation belong to according to its chemical structure?
a. Aromatics
b. Halogenated compounds
c. Detergents
d. Aliphatics
e. Alcohols

41. A patient with an acute myocarditis has the clinic presentations of cardiogenic shock. What pathogenetic mechanism plays the main part in shock development?
a. Decrease of vascular tone
b. Increase of vascular tone

c. Depositing of blood in veins
d. Decrease of diastolic flow to the heart
e. Disorder of pumping ability of heart

42. A patient with inflammation of trigeminal nerve has been having progressive paradontitis for some years. What factor is the most important for parodontitis development?
a. Low activity of leukocytic elastase
b. Increased tone of vagus nerve
c. Low activity of kallikrein-kinin system
d. Neurodistrophic disorders
e. Poor formation of immunoglobulins

43. A patient with streptococcal infection of gums was prescribed a drug that contained beta-lactam ring in its structure. Which drug relates to this group?
a. Erythromycin
b. Rifampicin
c. Benzylpenicillin
d. Streptomycin sulfate
e. Chloramphenicol

44. Potassium cyanide that is a poison came into a patients organism and caused death a few minutes after it. The most probable cause of its toxic effect was abnormal activity of:
a. NADP-H-dehydrogenase
b. Haemoglobin synthesis
c. Catalase
d. ATP-synthetase
e. Cytochrome oxidase

45. A patient was admitted to a hospital with poisoning with unsound food. His stomach was lavaged with solution of potassium permanganate. What is its mechanism of action?
a. Disturbance of synthesis of respiratory chain enzymes
b. Destruction of bacteria membranes
c. Release of chlorine
d. Release of iodine
e. Release of atomic oxygen

46. Hydrocyanic acid and cyanides are the most violent poisons. According to the dose the death follows after a few seconds or minutes. The death is caused by the inhibited activity of the following enzyme:
a. Catalase
b. Methemoglobin reductase
c. Acetylcholinesterase
d. ATP-synthetase
e. Cytochrome oxidase

47. Treatment of many diseases involves use of cocarboxylase (thiamine pyrophosphate) for supplying cells with energy. What metabolic process is activated in this case?
a. Detoxication of harmful substances in liver
b. Oxidizing decarboxylation of pyruvate
c. Amino acids decarboxylation
d. Glutamate deamination
e. Decarboxylation of biogenic amines

48. A typical symptom of cholera is great loss of water and sodium ions. What mechanism underlies development of diarrhea in this case?
a. Inhibition of vasopressin synthesis in hypothalamus
b. Increased corticotropin synthesis
c. Increased secretion of renin by the cells of renal arterioles

d. Aldosterone oxidation in adrenal cortex

e. Activation of adenylate cyclase of enterocytes

49. A newborn has signs of dyspepsia after milk feeding. Symptoms of dyspepsia disappear when milk is substituted for glucose solution. The newborn has low activity of the following enzyme:

a. Isomaltase

b. Lactase

c. Maltase

d. Invertase

e. Amylase

50. For the preparation of the burned skin surface of a patient a certain medication was applied. Its antiseptic properties are provided by free oxygen released in presence of organic substances. What medication is it?

a. Sodium hydrocarbonate

b. Potassium permanganate

c. Chlorhexidine

d. Furacillin

e. Alcoholic iodine solution

51. A 30 y.o. patient is diagnosed with amebic dysentery. This diagnosis was bacteriologically confirmed. Name the preparation for its treatment:

a. Acyclovir

b. Metronidazole

c. Itrakonazole

d. Mebendazole

e. Furacillin

52. For infection prevention a patient who underwent appendectomy was prescribed a cephalosporin antibiotic. Antimicrobial activity of these antibiotics is called forth by the disturbance of the following process:

a. Nucleic acid synthesis

b. Energy metabolism

c. Cholinesterase block

d. Microbial wall formation

e. Ribosomal protein synthesis

53. It is required to disinfect equipment in a dental room. Choose a preparation without disagreeable odour and colouring power:

a. Formalin

b. Chlorhexidine bigluconate

c. Chloride lime

d. Carbolic acid solution

e. Ethacrydine lactate

54. A group of researchers set an experiment and obtained anucleate mutant cells. In the first place they will have disturbed synthesis of the following compounds:

a. Transfer RNA

b. Monosaccharides

c. Polysaccharides

d. Ribosomal RNA

e. Lipids

55. A patient consulted a dentis about a lesion of his oral mucosa. He was diagnosed with herpetic stomatitis. Which of the following drugs will have an effect on etiotropic factor?

a. Acyclovir

b. Paracetamol

c. Furacilinum

d. Levamisole
e. Dimedrol

56. A patient consulted a dentist about itching and burning in the oral cavity; high temperature. The patient was diagnosed with trichomonal gingivostomatitis. What drug should be chosen for his treatment?
a. Metronidazole
b. Doxycycline hydrochloride
c. Nystatin
d. Gentamicin sulfate
e. Ampicillin

57. A patient is ill with herpetic stomatitis provoked by immunosuppression. What preparation introduced intravenously, internally and locally can provide antiviral and immunopotentiating effect?
a. Methisazonum
b. Amoxicillin
c. Remantadinum
d. Levamisole
e. Acyclovir

58. A patient suffering form stomatitis was prescribed oral rinsing. Which antiseptic from the oxidant group is the most suitable for this purpose?
a. Alcoholic iodine solution
b. Boric acid
c. Potassium permanganate
d. Ethyl alcohol
e. Chloramine

59. In process of the secretory cycle secretion granules come and go in the apical part of cytoplasm of pancreas cells. These granules relate to the following structure elements:
a. Microfilaments
b. Exocytic vacuoles
c. Granular endoplasmic reticulum
d. Inclusions
e. Lysosomes

60. A woman has hyperemic ovary, increased permeability of hematofollicular barrier with the following development of edema, infiltration of follicle wall by segmentonuclear leukocytes. The follicle volume is large, its wall is thinned. What period of sexual cycle do these presentations correspond with?
a. Period of relative rest
b. Preovulatory stage
c. Menstrual period
d. Ovulation
e. Postmenstrual period

61. While a 24 year old woman was waiting for tooth extraction, tonus of sympathetic part of autonomic nervous system rose. What reaction will the patient display?
a. Miotic pupils
b. Increased frequency of heartbeat
c. Hypersecretion of digestive juices
d. Hyperperistalsis
e. Bronchus constriction

62. A man has been holding his breath for 60 seconds. After that the respiratory minute volume has increased up to 12 L. What blood change is the main reason for the increase of respiratory minute volume?
a. Increase of p CO_2

b. Increase of p O2
c. Increase of pH
d. Decrease of p CO2
e. Decrease of p O2

63. An experimentator wants a dog to develop conditioned salivary reflex. What conditioned stimulus will be appropriate to use?
a. Electric current
b. Very loud sound
c. Zwieback
d. Meat
e. Moderately loud sound

64. A man has trauma of greater pectoral muscle. What index decrease will it cause?
a. Residual volume
b. Functional residual lung capacity
c. Expiratory reserve volume
d. Respiratory volume
e. Inspiratory reserve volume

65. A patient with diminished excretory function of kidneys has bad breath. What substance which is excessively excreted by salivary glands is the main cause of this occurence?
a. Urea
b. Lysozyme
c. Mucin
d. Phosphatase
e. Alpha-amylase

66. A patient with kidney disease has high blood pressure, especially the diastolic one. Hypersecretion of what biologically active substance causes blood pressure rise?
a. Noradrenaline
b. Adrenaline
c. Renin
d. Vasopressin
e. Catecholamines

67. A lightly dressed man is standing in a room; air temperature is +14 degrees. Windows and doors are closed. In what way does he loose heat most of all?
a. Heat radiation
b. Convection
c. Perspiration
d. Evaporation
e. Heat conduction

68. ECG of a patient shows that T-waves in the second standard extremity lead are positive, their amplitude and duration are normal. It would be true that the following process is taking its normal course in the cardiac ventricles:
a. Contraction
b. Relaxation
c. Depolarization
d. Excitement
e. Repolarization

69. A month after surgical constriction of rabbits renal artery the considerable increase of systematic arterial pressure was observed. What of the following regulation mechanisms caused the animals pressure change?
a. Serotonin
b. Angiotensin-II

c. Adrenaline
d. Vasopressin
e. Noradrenaline

70. In course of an experiment chorda tympani of an animal was being stimulated by electric current, as a result the parotid duct excreted:
a. A small quantity of fluid saliva
b. A small quantity of viscous saliva
c. A lot of viscous saliva
d. A lot of fluid saliva
e. Saliva was not excreted

71. In the experiment, an animal had its brain stem cut, which caused a rapid increase of extensor muscle tone (decerebrate rigidity). This condition arose because the muscles were no more under the control of the following brain structure:
a. Black substance
b. Blue spot
c. Red nucleus
d. Striatum
e. Gray tuber

72. A student has dry mouth during exam passing. It is caused by realization of the following reflexes:
a. Sympathetic conditioned
b. Parasympathetic conditioned
c. Sympathetic and parasympathetic unconditioned
d. Parasympathetic unconditioned
e. Sympathetic conditioned and unconditioned

73. A student has dry mouth during an exam. This is caused by realization of the following reflexes:
a. Unconditioned parasympathetic
b. Unconditioned sympathetic and parasympathetic
c. Conditioned and unconditioned sympathetic
d. Conditioned parasympathetic
e. Conditioned sympathetic

74. ECG of a patient showed that RR interval equaled 1,5 s, heart rate equaled 40 bpm. What is the cardiac pacemaker?
a. His bundle
b. Sinus node
c. Atrioventricular node
d. Left branch of His bundle
e. Right branch of His bundle

75. A man permanently lives high in the mountains. What changes of blood characteristics can be found in his organism?
a. Erythroblasts in blood
b. Decrease of hemoglobin content
c. Increase of erythrocytes number
d. Decrease of reticulocytes number
e. Decrease of colour index of blood

76. A sportsman was examined after an intensive physical activity. The examination revealed disorder of movement coordination but the force of muscle contractions remained the same. It can be explained by retarded speed of excitement conduction through:
a. Neuromuscular synapses
b. Afferent nerves
c. Conduction tracts
d. Central synapses

e. Efferent nerves

77. A patient has a transverse laceration of spinal cord below the VI thoracal segment. How will it change the character of breathing?

a. It will become more deep
b. It will become more frequent
c. It will stop
d. It will become more rare
e. It wont change esentially

78. Cerebral hemorrhage caused serious disturbance of taste sensibility. What brain structure is most likely to be damged?

a. Substantia nigra
b. Amygdaloid body
c. Hippocampus
d. Hypothalamus
e. Postcentral gyrus

79. A man consumes dry food. What salivary glands secret most of all?

a. Sublingual
b. Palatine
c. Buccal
d. Submandibular
e. Parotides

80. During the preparation of a patient for a heart operation the doctors measured blood pressure in heart chambers. In one of them the pressure was changing from 0 to 120 mm during one cardiac cycle. Name the heart chamber:

a. Right atrium
b. Right ventricle
c. Left ventricle
d. Left atrium
e. -

81. A man lost consciousness in a car with running engine where he had been waiting for a friend for a long time. What hemoglobin compaund can be found in the blood of the patient?

a. Methemoglobin
b. Oxyhemoglobin
c. Deoxyhemoglobin
d. Carbhemoglobin
e. Carboxyhemoglobin

82. After a hemorrhage into the brainstem a patient has lost reflex of myosis as a reaction to increase of illumination. What structure was damaged?

a. Lateral reticular nuclei
b. Red nuclei
c. Black substance
d. Vegetative nuclei of oculomotor nerve
e. Medial reticular nuclei

83. It is required to set an experiment on an isolated excitable cell and to achieve increase of membrane rest potential (hyperpolarization). What ion channels should be activated to achieve such a result?

a. Calcium
b. Sodium and calcium
c. Sodium
d. Potassium and sodium
e. Potassium

84. During phonocardiogram registration it was ascertained that the duration of the first heart sound twice exceeds the norm. It is most likely that patient has the following organ affected:

a. Semilunar valves
b. Cardiomyocytes of ventricles
c. Cardiomyocytes of atriums
d. Atrioventricular valves
e. Cardiomyocytes of heart atriums

85. Glucose concentration in a patients blood is 15 millimole/l (reabsorption threshold is 10 millimole/l). What effect can be expected?

a. Glucosuria
b. Reduced glucose reabsorption
c. Reduced aldosterone secretion
d. Reduced vasopressin secretion
e. Diuresis reduction

86. In course of an experiment a nerve is being stimulated by electric impulses. As a result of it sublingual and submaxillary glands discharge some dense viscous saliva. What nerve is being stimulated?

a. N. vagus
b. N. sympathicus
c. N. facialis
d. N. glossopharyngeus
e. N. trigeminus

87. Human body cools in water much more faster than in the air. Due to what way of heat emission does it happen?

a. -
b. Thermal conduction
c. Heat radiation
d. Convection
e. Sweat evaporation

88. Tissue is being stimulated by electric cathodic impulse with amplitude of 70% of threshold. What changes of membrane potential will be observed?

a. Action potential
b. Hyperpolarization
c. Partial depolarization
d. No changes
e. -

89. A mans energy consumption is measured on an empty stomach, in lying position, under conditions of physical psychical rest, at comfortable temperature. At what time will the energy consuption be the lowest?

a. At 5-6 oclock p.m
b. At 3-4 oclock a.m
c. At 10-12 oclock a.m
d. At 7-8 oclock a.m
e. At 2-4 oclock p.m

90. Following the estimation of a persons energy expenditures it was established that the respiratory quotient was equal to 1,0. This means that the compound that is mainly oxidized in the cells is:

a. Proteins and carbohydrates
b. Carbohydrates and fats
c. Proteins
d. Fats
e. Carbohydrates

91. A man has a diosorder of absorption of fat hydrolysates. What components deficit in the cavity of small intestine may cause this effect?

a. Bile acids
b. Lipolytic enzymes
c. Liposoluble vitamins
d. Sodium ions
e. Bile pigments

92. A man left a conditioned premise and went outside. The outside temperature was +40 degrees, the air moisture - 60%.What way of heat emission will be mostly involved in this case?

a. Convection
b. Conduction
c. -
d. Sweat evaporation
e. Radiation

93. In course of an experiment posterior roots of spinal cord of an animal were cut. What changes will take place in the innervation zone?

a. Raise of muscle tone
b. Loss of sensation and motor functions
c. Loss of motor functions
d. Decline of muscle tone
e. Loss of sensation

94. A patient complains of rapid fatigability. Objectively: he staggers and overbalances in the upright position with closed eyes. Skeleton muscular tonus is decreased. What brain structure is most likely to be damaged?

a. Basal ganglions
b. Cerebellum
c. Hypothalamus
d. Thalamus
e. Precentral gyrus of cerebrum cortex

95. In course of an experiment the peripheral segment of vagus nerve of an animal was stimulated. The following changes of heart activity were observed:

a. Increase of frequency and force of heartbeat
b. Increased conduction of excitement through myocardium
c. Icreased force of heartbeat
d. Reduced heart rate
e. Increased excitability of myocardium

96. A patient has hypocalcemia. What hormone deficiency may be its cause?

a. Thyrocalcitonin
b. Corticotropin
c. Corticoliberin
d. Parathormone
e. Aldosterone

97. A patient with disorder of cerebral circulation has problems with deglutition. What part of cerebrum was damaged?

a. Interbrain
b. Midbrain
c. Servical part of spinal cord
d. Forebrain
e. Brainstem

98. ESR of a patient with pneumonia is 48 mm/h. What caused such changes?

a. Hypoproteinemia

b. Erythrocytosis
c. Hyperalbuminemia
d. Hypogammaglobulinemia
e. Hypergammaglobulinemia

99. A patient with systemic scleroderma has an intensified collagen destruction. Collagen destruction will be reflected by intensified urinary excretion of the following amino acid:
a. Oxyproline
b. Tryptophane
c. Phenylalanine
d. Serine
e. Alanine

100. Poisoning with corrosive sublimate caused acute renal insufficiency. Its progress included four stages: 1) initial, 2) oligoanuria, 4) recovery. Name the third stage of acute renal insufficiency:
a. Hemodynamic
b. Metabolic
c. Polyuric
d. Ischemic
e. Pathochemical

101. After honey consumption a teenager had urticaria accompanied by leukocytosis. What type of leukocytosis is it in this case?
a. Eosinophilic leukocytosis
b. Monocytosis
c. Neutrophilic leukocytosis
d. Basophylic leukocytosis
e. Lymphocytosis

102. Introduction of a local anesthetic to a patient resulted in the development of anaphylactic shock. What is the leading mechanism of blood circulation disturbance?
a. Hypervolemia
b. Activation of sympathoadrenal system
c. Reduction of contractile myocardium function
d. Decrease of vascular tone
e. Pain

103. A 48 year old male patient was admitted to the hospital with acute attack of chronic glomerulonephritis. Examination revealed chronic renal failure. What is the cause of hyperazotemia by chronic renal failure?
a. Disorder of protein metabolism
b. Disorder of water-electrolytic metabolism
c. Reduction of tubular reabsorption
d. Reduction of tubular excreation
e. Reduction of glomerular filtration

104. A chemical industry worker complains about enamel wear. Objectively: generalized destruction of dental crowns along with replacing dentin formation. What is the most likely diagnosis?
a. Median caries
b. Necrosis of hard tooth tissues
c. Wedge-shaped defects
d. Dental erosion
e. Fluorosis

105. During morphological examination of pulp floor three zones can be clearly differentiated: the one of softened dentin, sclerotic dentin, replacing dentin. What stage of caries are these changes typical for?
a. Chronic caries

b. Median caries
c. Superficial caries
d. White spot stage
e. Deep caries

106. A 55 year old man had been suffering from chronic glomerulonephritis. He died from chronic renal failure. Macroscopical examination revealed on the surface of epicardium and pericardium some greyish-white villous depositions. After their removal dilated and plethoric vessels were uncovered. What process took place in the pericardium?
a. Arterial hyperemia
b. Fibrinous inflammation
c. Proliferative inflammation
d. Organization
e. Haemorrhagic inflammation

107. In an excitable cell the ion channells were blocked. It hasnt changed essentially the value of rest potential, but the cell lost its ability to generate AP (action potential). What channels were blocked?
a. Natrium
b. Natrium and potassium
c. Calcium
d. Chloric
e. Potassium

108. In course of an experiment the peripheral fragment of a cut vagus nerve on the dogs neck was being stimulated. There was the following change of cardiac activity:
a. Decrease of beat frequency
b. Increase of myocardium excitability
c. Increase of beat force
d. Increased speed of excitement conduction through myocardium
e. Increase of beat frequency and force

109. In a healthy adult speed of the excitement conduction through the atrioventricular node is 0,02-0,05 m/sec. Atrioventricular delay enables:
a. Sufficient force of atrial contractions
b. Sufficient force of ventricular contractions
c. Simultaneity of both atria contractions
d. Simultaneity of both ventricles contractions
e. Sequence of atrial and ventricular contractions

110. Lung ventilation in a person is increased as a result of physical activity. Which of the following indices of the external respiration is much higher than in a state of rest?
a. Vital capacity of lungs
b. Expiratory reserve volume
c. Total lung capacity
d. Respiratory volume
e. Inspiratory reserve volume

111. As a result of continuous starvation the glomerular filtration rate has increased by 20%. The most probable cause of the glomerular filtration alteration under the mentioned conditions is:
a. Increase in the permeability of the renal filter
b. Increase in the systemic arterial pressure
c. Decrease in the oncotic pressure of blood plasma
d. Increase of the filtartion quotient
e. Increase of the renal blood flow

112. The total number of leukocytes in patients blood is 90*10^9/l. Leukogram: eosinophils - 0%, basophils - 0%, juvenile - 0%, stab neutrophils - 2%, segmentonuclear cells - 20%, lymphoblasts - 1%, prolymphocytes - 2%, lymphocytes - 70%, monocytes - 5%, Botkin-Gumprecht cells. Clinical

examination revealed enlarged cervical and submandibular lymph nodes. Such clinical presentations are typical for the following pathology:

a. Infectious mononucleosis
b. Chronic myeloleukosis
c. Acute lympholeukosis
d. Lymphogranulomatosis
e. Chronic lympholeukosis

113. A 50 years old man abruptly felt palpitation, heart ache, strong weakness, rise of arterial pressure. His pulse is irregular and deficient. ECG shows no P wave and different R-R intervals. What cardiac rate abnormality is it?

a. Sinus extrasystole
b. Ciliary arrhythmia
c. Paroxysmal tachycardia
d. Respiratory arrhythmia
e. Atrioventricular heart block

114. Microscopical examination of exudate obtained from a rat with aseptic peritonitis and mixed with birds erythrocytes revealed macrophages surrounded by foreign erythrocytes. What stage of phagocytosis is it?

a. Intracellular digestion
b. Adherence
c. Approaching
d. Uncomplete phagocytosis
e. Immersion

115. On the 2nd day after myocardium infarction the patients systolic arterial pressure abruptly dropped down to 60 mm Hg. This was accompanied by tachycardia up to 140 bpm, dyspnea, loss of consciousness. What is the leading mechanism in the pathogenesis of this shock?

a. Paroxysmal tachycardia
b. Anaphylactic reaction to myocardial proteins
c. Intoxication by the products of necrotic degeneration
d. Decrease of circulating blood volume
e. Decrease of stroke volume

116. A 42 y.o. patient complains of pain in the epigastral area, vomiting; vomit masses have the colour of "coffee-grounds", the patient has also melena. Anamnesis records gastric ulcer. Blood formula: erythrocytes - 2,8x1012/l, leukocytes – 8x109/l, Hb- 90 g/l. What complication is it?

a. Pyloric stenosis
b. Haemorrhage
c. Perforation
d. Penetration
e. Canceration

117. A female patient suffering from chronic hepatitis complains about an increased susceptibility to barbiturates, which previously induced no syptoms of intoxication. This may be explained through the folllowing liver dysfunction:

a. Cholepoietic
b. Hemopoietic
c. Phagocytal
d. Metabolic
e. Hemodynamic

118. After a surgery a 36-year-old woman was given an intravenous injection of concentrated albumin solution. This has induced intensified water movement in the following direction:

a. From the intercellular fluid to the capillaries
b. From the cells to the intercellular fluid
c. No changes of water movement will be observed

d. From the capillaries to the intercellular fluid
e. From the intercellular fluid to the cells

119. Microscopical examination of coronary artery of a 53 year old dead man revealed luminal narrowing of the vessel because of fibrous plaque mixed with lipides. The most probable form of atherosclerosis is:
a. Liposclerosis
b. Atheromatosis
c. -
d. Ulceration
e. Lipoidosis

120. A blood sample of a pregnant woman was typed. Erythrocyte-agglutination reaction was present with standard sera 0?, ?(I), B?(III), reaction was absent with the serum A?(II). The blood under examination relates to the following group:
a. -
b. A?(II)
c. 0?, ?(I)
d. B?(III)
e. AB(IV)

121. As a result of a trauma apatient has developed traumatic shock. The patient is fussy, talkative, pale. AP- 140/90 mm Hg, Ps- 120 bpm. This condition is consistent with the following shock phase:
a. Terminal
b. Latent
c. Erectile
d. Torpid
e. -

122. During a neuro-surgical operation the occipital areas of cerebral cortex are stimulated. What sensations will the patient have?
a. Visual
b. Auditory
c. Gustatory
d. Olfactory
e. Tactile

123. A patient who has been treated for viral hepatitis B developed symptoms of hepatic insufficiency. What changes indicating disorder in protein metabolism are likely to be observed in this case?
a. Absolute hyperfibrinogenemia
b. Absolute hyperalbuminemia
c. Absolute hypoalbuminemia
d. Protein rate in blood will stay unchanged
e. Absolute hyperglobulinemia

124. Before an operation a 30-year-old male patient had his blood typed. It turned out to be Rh-positive. Erythrocytes were not agglutinated by standard sera of 0(I), A(II), B(III) groups. According to the AB0 blood group system this blood is of the following type:
a. 0(I)
b. B(III)
c. -
d. AB(IV)
e. A(II)

125. A patient consulted a doctor about acute pain in the right subcostal area. During examination the doctor noticed yellowed sclera of the patient. Laboratory analyses revealed high activity of alanine-aminotransferase and negative reaction to stercobilin in feces. What disease are these

symptoms typical for?

a. Chronic gastritis

b. Cholelithiasis

c. Hepatitis

d. Haemolytic jaundice

e. Chronic colitis

126. Curarelike substances (dithylinum) make it impossible for skeletal muscles to contract because they block:

a. Central synapses

b. Membrane conduction of excitement

c. Proprioceptors

d. Neuromuscular synapses

e. Ganglionic synapses

127. It was established that the conduction velocity in the nerve fibers was equal to 120 m/sec. Specify these fibers:

a. Postganglionic parasympathetic

b. Motoneuron axons

c. Preganglionic parasympathetic

d. Preganglionic sympathetic

e. Postganglionic sympathetic

128. A scheme shows an exocrinous gland with an unbranched excretory duct into which only one terminal part in form of a saccule opens. In compliance with the morphological classification of exocrinous glands, such gland is called as follows:

a. Complex unbranched alveolar-tubular

b. Simple unbranched alveolar

c. Simple branched tubular

d. Complex branched alveolar

e. Complex unbranched alveolar

129. Examination of a patient revealed overgrowth of facial bones and soft tissues, tongue enlargement, wide interdental spaces in the enlarged dental arch. What changes of the hormonal secretion are the most likely?

a. Hypersecretion of insulin

b. Hyposecretion of the somatotropic hormone

c. Hypersecretion of the somatotropic hormone

d. Hyposecretion of thyroxin

e. Hyposecretion of insulin

130. During the preventive examination of a miner a doctor revealed changes in cardiovascular fitness being evidence of cardiac insuffisiency at a stage of compensation. What is the main evidence of compensation of cardiac activity?

a. Dyspnea

b. Cyanosis

c. Tachycardia

d. Rise of arterial pressure

e. Myocardium hypertrophy

131. A 37-year-old patient has has lost 5 kg in weight over the past three months, he complains of hand tremor, excessive sweating, exophthalmos, tachycardia. These changes might have been caused by the increased secretion of the following hormone:

a. Insulin

b. Cortisol

c. Thyroxine

d. Glucagon

e. Thyrocalcitonin

132. After a person had drunk 1,5 liters of water, the amount of urine increased significantly, and its relative density decreased to 1,001. These changes are a result of decreased water reabsorption in the distal nephron portion due to reduced secretion of:

a. Vasopressin
b. Angiotensin II
c. Prostaglandins
d. Renin
e. Aldosterone

133. A 32-year-old patient consulted a doctor about the absence of lactation after parturition. Such disorder might be explained by the deficit of the following hormone:

a. Prolactin
b. Vasopressin
c. Glucagon
d. Thyrocalcitonin
e. Somatotropin

134. Examination of a female patient revealed low activity of lipoprotein lipase which hydrolyzes chylomicron triglycerides on the surface of endothelium of adipose tissue capillaries. What biochemical disorders should be expected?

a. Type III hyperlipoproteinemia
b. Type II A hyperlipoproteinemia
c. Type I hyperlipoproteinemia
d. Type IV hyperlipoproteinemia
e. Type II B hyperlipoproteinemia

135. A patient suffering from essential arterial hypertension got hypertensic crisis that caused an attack of cardiac asthma. What is the leading mechanism of cardiac insufficiency in this case?

a. Disturbed blood inflow to the heart
b. Cardiac overload due to increased resistance
c. Absolute coronary insufficiency
d. Cardiac overload due to increased blood volume
e. Myocardium damage

136. A 43 year old female patient was admitted to the hospital with complaints of pain in the right subcostal area, skin itch. Examination revealed hypalgesia and hematolysis, skin icteritiousness, bradycardia, hypotonia. What is the most probable cause of these symptoms?

a. Cholemia
b. Diabetes mellitus
c. Hepatocellular jaundice
d. Parenchymatous jaundice
e. Intensification of erythrocyte haemolysis

137. Examination of a patient with chronic renal insufficiency revealed an increase in residual nitrogen concentration in blood up to 35 millimole/l, more than half of which is urea. What type of hyperazotemia is it?

a. Retentional
b. Productional
c. Combined
d. Residual
e. Hepatic

138. A patient has been prescribed the salt-free diet. What changes to the salt taste sensitivity threshold should be expected?

a. Increase
b. Increase followed by a decrease
c. No changes
d. Little change

e. Decrease

139. Blood analysis of a patient suffering from jaundice revealed increase of total bilirubin by its indirect fraction. Urine and feces have intense colouring. What is the most probable mechanism of these abnormalities?

a. Increased haemolysis of erythrocytes
b. Damage of liver parenchyma
c. Impaired transformation of urobilinogen in the liver
d. Impaired generation of direct bilirubin
e. Obstruction of bile outflow from the liver

140. A patient consulted a doctor about loss of taste at the root of tongue. The doctor established that this was due to a nerve damage. What nerve was damaged?

a. Glossopharyngeal
b. Facial
c. Trigeminal
d. Superlaryngeal
e. Vagus

141. A male patient has stenosis of the mitral orifice. What is the leading mechanism of cardiac failure?

a. Volume overload
b. Myocardial damage
c. -
d. Resistance-induced overload
e. Tension-induced overload

142. A patient consulted a doctor about difficulties with urinary excretion. Examination revealed hypertrophy of an organ that encloses proximal part of urethra. What organ is it?

a. Prostate
b. Bulb of penis
c. Seminal vesicles
d. Epididymis
e. Bulbourethral gland

143. Examination of a tissue sample of enlarged cervical lymph nodes taken from a young woman revealed proliferation of lymphocytes, reticular cells, macrophages, big and small Hodgkins cells, multinuclear Sternberg-Reed cells. There were also multiple eosinophils, single foci of caseous necrosis of the node tissue. What is the most probable diagnosis?

a. Lymphosarcoma
b. Metastasis of lung cancer
c. Tuberculosis
d. Acute leukosis
e. Lymphogranulomatosis

144. A 40 year old male patient died from cerebral edema. In anamnesis the face carbuncle was registered. Autopsy revealed hyperemia and edema of cerebral tissue. White matter of the left hemisphere had two cavities 6 to 5,5 and 5 to 4,5 cm large filled with yellowish-green cream-like fluid. Walls of the cavities were built up by nerve tissue with irregular rands. What complication of carbuncle was it?

a. Chronic abscesses
b. Colliquative necroses
c. Cysts
d. Acute abscesses
e. Empyema

145. A patient who had been suffering from a renal disease for many years died from uremia. Autopsy revealed that the kidneys were abnormally small, dense, fine-grained, light grey. What are the

kidneys with such changes called?

a. -

b. Arteriolosclerotic

c. Mottled

d. Contracted

e. Sebaceous

146. Liver puncture biopsy in a patient with hepatocellular insufficiency revealed vacuolar, balooning degeneration of hepatocytes, necrosis of single cells, Councilmans bodies, infiltartion of portal and lobular stroma mainly by lymphocytes and macrophages with a small number of polymorphonuclear leukocytes. What is the most likely diagnosis?

a. Acute viral hepatitis

b. Chronic active hepatitis

c. Alcoholic hepatitis

d. Autoimmune hepatitis

e. Chronic persisting hepatitis

147. In course of an experiment thalamocortical tracts of an experimental animal were cut through. The animal didnt lose the following sensations:

a. Auditory

b. Visual

c. Nociceptive

d. Olfactory

e. Exteroceptive

148. Examination of a tooth revealed a large cavity in its crown. The floor of this cavity is formed by a thin layer of softened dentin that separates this cavity from the pulp. What is the most probable diagnosis?

a. Median caries

b. Pulpitis

c. Periodontitis

d. Deep caries

e. Superficial caries

149. During an experiment the myotatic reflex has been studied in frogs. After extension in a skeletal muscle its reflectory contraction was absent. The reason for it might be a dysfunction of the following receptors:

a. Tactile

b. Muscle spindles

c. Articular

d. Nociceptors

e. Golgi tendon organs

150. Analysis of a dentists urine obtained at the end of his working day revealed protein concentration at the rate of 0,7 g/l. His morning urine hadnt such changes. What is this phenomenon called?

a. Organic proteinuria

b. Extrarenal proteinuria

c. Hematuria

d. Functional proteinuria

e. Nonselective proteinuria

151. Microscopical examination of an infiltrate removed from the submandibular skin area of a 30 y.o. man revealed foci of purulent fluxing surrounded by maturing granulations and mature connective tissue, the pus contains druses consisting of multiple short rod-like elements with one end attached to the homogenous centre. What disease is it?

a. Tuberculosis

b. Candidosis

c. -
d. Actinomycosis
e. Syphilis

152. Microscopic examination of periodontium revealed plethoric vessels, edema of connective tissue along with infiltration by single neutrophils. What type of exudative inflammation in the periodontium is it?
a. Fibrinous
b. Catarrhal
c. Purulent
d. Putrid
e. Serous

153. Autopsy of a 35 y.o. woman revealed not only enlargement of many lymph nodes but also enlarged spleen weighting 600,0. Its incision showed that it was heterogeneous, dark red, dense with greyish-yellow necrotic areas up to 1 cm in diameter (porphyritic spleen). What disease can be assumed?
a. Cancer metastases
b. Lymphosarcoma
c. Chronic lymphoid leukosis
d. Chronic myeloid leukosis
e. Lymphogranulomatosis

154. A 9 y.o. child has been taking antibiotics on account of bronchopneumonia for a long time. There appeared pain and burning in the area of mucous mebrane of his lips and tongue. Objectively: mucous membrane of lips and tongue has caseous and grey plaques that can be easily removed by a spatula leaving hyperemia foci on their spot. Microscopical examination of the plaques revealed mycelium. What is the most probable diagnosis?
a. Leukoplakia
b. Exfoliative cheilitis
c. Candidous cheilitis
d. Contactant allergic cheilitis
e. Manganottis cheilitis

155. In response to a change in body position from horizontal to vertical blood circulation system develops reflectory pressor reaction. Which of the following is its compulsory component?
a. Weakening of the pumbing ability of heart
b. Systemic constriction of the venous vessels
c. Decrease in the circulating blood volume
d. Systemic dilatation of the arterial resistive vessels
e. Increase in the heart rate

156. In a hot weather, the microclimate in hot rooms is often normalized by fans. At the same time heat radiation from the human body increases through:
a. Convection
b. Conduction
c. Evaporation
d. Radiation
e. Heat conduction

157. After examining the patient the doctor recommended him to eliminate rich meat and vegetable broth, spices, smoked products from the diet, since the patient was found to have:
a. Biliary dyskinesia
b. Increased secretion of hydrochloric acid by the stomach glands
c. Reduced motility of the gastrointestinal tract
d. Reduced secretion of hydrochloric acid by the stomach glands
e. Reduced salivation

158. A 60-year-old patient presents with weakened peristaltic activity of the bowels. Which of the following foodstuffs would stimulate peristalsis most of all?

a. Brown bread
b. Meat
c. Tea
d. Lard
e. White bread

159. In the dental practice, the vitality of tooth tissues is estimated by electric pulp test. What parameter is assessed?

a. Accommodation
b. Lability
c. Chronaxie
d. Productive time
e. Threshold stimulus intensity

160. Before an exam a student complained of acute dental pain which grew less during the exam. What inhibition caused the pain abatement?

a. Declining
b. Protective
c. External
d. Differentiating
e. Delayed

161. An experimental animal, a dog, received a weak solution of hydrochloric acid through a tube inserted into the duodenum. Primarily it will result in increased secretion of the following hormone:

a. Histamine
b. Gastrin
c. Secretin
d. Cholecystokinin
e. Neurotensin

162. An athlete before a sports contest presents with elevated blood pressure and heart rate. What part of the CNS induces these changes?

a. Mesencephalon
b. Hypothalamus
c. Diencephalon
d. Medulla oblongata
e. Cerebral cortex

163. A patient complains that even small traumas lead to persistent hemorrhages. Laboratory analysis shows disturbed blood composition, namely a low count of the following blood corpuscles:

a. Erythrocytes
b. Lymphocytes
c. Monocytes
d. Platelets
e. Neutrophils

164. A 19-year-old young man has been examined in a nephrological hospital. Increased potassium content was detected in secondary urine of the patient. Such changes are the most likely to be caused by increased secretion of the following hormone:

a. Glucagon
b. Testosterone
c. Oxytocin
d. Adrenaline
e. Aldosterone

165. In an experiment a peripheral segment of the sympathetic nerve that innervates the sublingual

gland is being stimulated. In this case this gland will produce:
a. A small amount of non-viscous saliva
b. No saliva
c. A small amount of viscous saliva
d. A large amount of non-viscous saliva
e. A large amount of viscous saliva

166. An athlete overexerted himself during a training and developed a muscle contracture. In such cases the muscle loses its flexibility and gradually becomes rigid due to its inability to relax. What is the likely cause of the contracture in this case?
a. Increased blood levels of K+
b. ATP deficiency
c. Increased blood levels of lactic acid
d. Decreased blood levels of Ca++
e. Tropomyosin structural changes

167. Condition of a patient with thoracic trauma deteriorates quickly: he develops increasing asphyxiation, facial pallor, tachycardia. What is the likely cause of these developments?
a. Rib fracture
b. Thoracic contusion
c. Pneumothorax
d. Response to pain stimulus
e. Fright

168. A man was submerged into the ice-cold water and soon died of abrupt exposure to cold. In such cases an organism loses heat most intensively by the way of:
a. Heat conduction and radiation
b. -
c. Radiation
d. Convection
e. Heat conduction

169. In hot weather the bus passengers asked to open the roof hatches. What way of heat transfer is activated in this situation?
a. Radiation
b. Conduction
c. Convection
d. Conduction and radiation
e. Sweat evaporation

170. People with diseases of internal organs often assume forced positions (e.g. with lower limbs flexed and pressed to the abdomen) due to the following reflex response:
a. Viscerodermal
b. Viscero-visceral
c. Motor-visceral
d. Dermatovisceral
e. Visceromotor

171. A 30-year-old woman has developed signs of virilism (body hair growth, balding temples, disturbed menstrual cycle). This condition can be caused by hyperproduction of the following hormone:
a. Estriol
b. Oxytocin
c. Prolactin
d. Testosterone
e. Relaxin

172. A dentist has to spend much of his time on his feet when working, which can result in a venous

congestion in the legs and varicose veins. Leading mechanism of congestion in this case is the decrease of:

a. Cardiac residual pumping force
b. Diaphragmatic piston effect on the abdominal organs
c. Blood pressure gradient in the veins
d. Thoracic pump effect
e. Skeletal muscle contraction in the lower limbs

173. A car accident victim presents with a spinal hematoma accompanied by retrosternal pain, tachycardia, and elevated blood pressure. The patient's condition results from the damage to the following segments of the spinal cord:

a. S1-S3
b. -
c. C6-C8
d. L1- L3
e. Th1-Th5

174. In an experiment the vagus is being stimulated, which results in increased acetylcholine entry to the synaptic cleft, and that in turn results in the decresed heart rate due to the following mechanism:

a. Increase in AV nodal conduction velocity
b. Depolarization of cardiomyocyte membrane
c. Hyperpolarization of cardiomyocyte membrane
d. Increase of action potential duration
e. Decrease of action potential duration

175. A person in a hot weather for a long time had no water, which resulted in a severe thirst. What indicator of blood homeostasis was affected, leading to the development of this sensation?

a. Glucose level
b. pH
c. Plasma oncotic pressure
d. Hematocrit
e. Plasma osmotic pressure

176. During a brain surgery stimulation of the cerebral cortex resulted in tactile and thermal sensations in the patient. What gyrus was stimulated?

a. Parahippocampal gyrus
b. Cingulate convolution
c. Postcentral gyrus
d. Superior temporal gyrus
e. Precentral gyrus

177. Curariform drugs are used to immobilize the patient during a surgery. Their mechanism of action is based on the blockade of:

a. Nicotinic acetylcholine receptors of skeletal muscles
b. Noradrenaline release into the synaptic cleft
c. Muscarinic acetylcholine receptors of smooth muscles
d. Conduction of excitation in the nerve fibers
e. Acetylcholine release into the synaptic cleft