Biological Chemistry. Main base tests Krok-1. Pharmacy 2014-2019

1) Insulin production in β-cells involves many substances. What substance gives the main signal for insulin synthesis when its concentration changes? (2018)
+Glucose
Urea
Hemoglobin
Carbon dioxide
Heparin

2) A patient presents with persistent tachycardia, exophthalmos, high excitability, increased basal metabolic rate. What disorder can lead to the development of this syndrome? (2018)
+Hyperthyroidism
Adrenal hypofunction
Hyperparathyroidism
Hypoparathyroidism
Hypothyroidism

3) A 10-year-old child has height of 178 cm and body mass of 67 kg. These presentations are caused by the functional disturbance of the: (2018)
+Pituitary gland
Parathyroid glands
Gonads
Thyroid gland
Adrenal glands

4) Protein structure includes proteinogenic amino acids. What is the position of the amino group in the structure of these amino acids? (2018)
+α-position
γ-position
~β-position
δ-position
ε-position

5) A 12-year-old boy is of short stature, but his mental development corresponds with that of his age group. What hormone deficiency is the most likely to cause this pathology? (2018)
+Somatotropin
Oxytocin
Insulin
Vasopressin
Adrenaline

6) Gout develops when purine nucleotide metabolism is disturbed. The doctor prescribed the patient allopurinol that is a competitive inhibitor of: (2018)

+Xanthine oxidase
Hexokinase
Lactate dehydrogenase
Succinate dehydrogenase
Alcohol dehydrogenase

7) During ultrasound investigation a patient was diagnosed with bilateral renal artery stenosis of atherosclerotic genesis. Specify the bioactive substance that due to its excessive secretion in the key component of arterial hypertension pathogenesis in the given case: (2018)
+Renin
Thyroxin
Cortisol
Vasopressin
Noradrenaline

8) Hormones regulate numerous metabolic processes. What hormone activates glycogen synthesis? (2018)
+Insulin
Oxytocin
Adrenalin
Vasopressin
Thyroxine

9) Human body assimilates fats only as emulsions. Vegetable oils and animal fats contained in food are emulsified when exposed to bile (an emulsifier). How does interface tension change in this case? (2018)
+Decreases
First increases, than decreases
Increases
Remains unchanged
First decreases, than increases

10) An ophthalmologist has detected increased time of dark adaptation in a patient. What vitamin deficiency can result in such symptom? (2018)
+A
B1
B6
K
C

11) To stimulate birth activity, a certain neurohypophyseal hormone is used. Name this hormone: (2018)
+Oxytocin
Glucagon

Testosterone
Insulin
Thyroxine

12) During regular check-up a patient presents with enlarged thyroid gland, exophthalmos, increased body temperature, heart rate up to 110/min. What hormone should be measured in the patient`s blood in this case? (2018)
+Thyroxin
Glucagon
Insulin
Testosterone
Cortisol

13) Coumarins, vitamin K antagonists, suppress the processes of blood coagulation. What protein synthesis is blocked by coumarins? (2018)
+Prothrombin
Albumin
Transferrin
Ceruloplasmin
Gamma globulin

14) An enzyme transports structure fragments from one substrate into another. Name this class of enzymes:
+Transferases
Isomerases
Hydrolases
Ligases
Oxidoreductases

15) To treat the patients with purulent wounds, a dressing with a certain immobilized enzyme is used. Name this enzyme: (2018)
+Tripsin
Arginase
Acid phosphatase
Catalase
Alkaline phosphatase

16) A patient has a gallstone lodged in the common bile duct, which blocks bile supply to the intestine. What digestive process will be disturbed in this case? (2018)
+Fat digestion
Protein digestion
Carbohydrate absorption
Protein absorption
Carbohydrate digestion

17) On examination the patient`s sclera and oral mucosa are icteric. What biochemical blood value can be expected to be increased? (2018)
+Bilirubin
Cholesterol
Albumin
Amylase
Glucose

18) A 46-year-old patient precents with hyperactivity of creatine kinase in his blood serum. What pathology can be suspected? (2018)
+Myocardial infarction
Hemolytic anemia
Chronic hepatitis
Renal failure
Acute pancreatitis

19) A patient with high risk of hemorrhages is recommended to take vicasol (menadione) by his physician. This drug is the structural analog of: (2018)
+Vitamin K
Vitamin A
Vitamin B12
Vitamin B5
Vitamin B6

20) Inheritable genetic disorders can result in disturbed enzyme synthesis in the human body. What enzyme deficiency results in disturbed break-up of lactose (2018)
+Lactase
Peptidase
Maltase
Invertase
Lipase

21) An oncological patient was prescribed fluorouracil that is a competitive inhibitor of thymidine synthase. It inhibits the process of: (2018)
+Pyrimidine nucleotides synthesis
Purine nucleotides synthesis
Carbohydrate disintegration
Purine nucleotides disintegration
Lipids synthesis

22) A patient suffers from hyperchromic B12-deficiency anemia. What vitamin preparation should be prescribed in this case? (2018)
+Cyanocobalamin

Retinol acetate
Vicasol (Menadione)
Thiamine chloride
Riboflavin

23) A patient with acute myocardial infarction received anticoagulation therapy. What compound will have anticoagulation effect? (2018)
+Heparin
Chondroitin sulfate
Hyaluronic acid
Dermatan sulfate

24) Increased concentration of active oxygen forms is a mechanism of pathogenesis in a number of diseases. To prevent this process, antioxidants are prescribed. Select an antioxidant from the list below: (2018)
+Alpha-tocopherol
Cobalamine
Cligerol
Glucose
Calciferol

25) A patient with gout was prescribed allopurinol – a competitive inhibitor of xanthine oxidase. Xanthine oxidase is a terminal enzyme of catabolism of: (2018)
+Purine nucleotides
Higher fatty acids
Heteropolysaccharides
Phospholipids
Glycoproteins

26) A 55-year-old man came to a doctor with complaints of acute pain in his big toes. Meat and wine are a permanent fixture in his diet. The doctor suspects gout. What substance must be measured in the patient`s blood to confirm this diagnosis? (2018)
+Uric acid
Lactate
Ketone bodies
Bilirubin
Urea

27) Natural peptides can carry out various functions. What bioactive peptide is a major antioxidant and functions as a coenzyme? (2018)
+Glutatione
Anserine
Bradykinin
Oxytocin

Liberin

28) A patient, who lives in the area with specific geochemical conditions, was diagnosed with endemic goiter. What microelement deficiency results in development of this pathology? (2018)
+I
Cl
Br
F
Na

29) Enzymes are widely used as drugs in pharmacy. What is the main feature that separates enzymes from non-biological catalysts? (2018)
+High specificity and selectivity
High universality
Low universality
High dispersion
High homogeneity

30) Examination of a 45-year-old man, who for a long time kept to a vegetarian plantbased diet, revealed him to have negative nitrogen balance. What peculiarity of his diet has caused such developments? (2018)
+Insufficient protein content
Insufficient fat content
Insufficient vitamin content
Excessive water content
Excessive carbohydrate content

31) Many organic compounds break up in the cell into simple products. What compounds break up into ammonia, carbon dioxide, and water in the human body? (2018)
+Amino acids
Monosaccharides
Monohydric alcohols
Fatty acids
Keto acids

32) A structural analog of vitamin PP (nicotinic acid) is used as an antituberculous medicine. Name this medicine: (2018)
+Isoniazid
Streptocide
Riboflavin
Tetracycline
Aspirin

33) Purine ring biosynthesis occurs in ribose-5-phosphate by gradual accumulation of nitrogen and carbon atoms and closing the rings. The source of ribose phosphate is the process of: (2017)
+Pentose phophate cycle
Glycolysis
Glyconeogenesis
Gluconeogenesis
Glycogenolysis

34) Nicotinic acid amide fulfills important metabolic function. What disorder develops, when it is deficient in the organism? (2017)
+Pellagra
Rickets
Anemia
Xerophthalmia
Beriberi

35) Tricarboxylic acid cycle is a general way of carbohydrates, amino acids, and fatty acids oxidation. Specify the acid with which acetyl-CoA reacts first in tricarboxylic acid cycle: (2017)
+Oxaloacetic
Citric
Isocitric
Fumaric
Malic

36) Proteins are of great importance for vital functions. What value of pH results in zero electrophoretic mobility of gelatin (gelatin isoelectric pont equals 4,7)? (2017)
+4,7
7, 0
14,0
5,5
9,4

37) Goat develops when purine nucleotide metabolism is disturbed. A doctor prescribed the patient allopurinol that is a competitive inhibitor of: (2017)
+Xanthine oxidase
Succinate dehydrogenase
Alcohol dehydrogenase
Lactate dehydrogenase
Hexokinase

38) A number of hereditary diseases is caused by mutations in gene areas that determine begenning or end of an intron. What process results in removal of introns and joining of exons? (2017)
+Splicing
Transcription
Recombination
Replication
Translation

Hyperlipemia can be observed in 2-3 hours arter eating fatty food. 9 hours later lipid content normalizes again. How can this condition be characterized? (2017)
+limentary hyperlipemia
Transport hyperlipemia
Hyperplastic obesity
Retention hyperlipemia
Hypertrophic obesity

39) Cataract (lenticular opacity) has developed in a 52-year-old woman with diabetes mellitus. Lenticular opacity was caused by intensification of the following processes: (2017)
+Protein glycosylation
Lipolysis
Ketogenesis
Protein proteolysis
Gluconeogenesis

40) A patient consulted an ophthalmologist about deterioration of twilight vision and xerophthalmus. What drug should the doctor prescribe? (2017)
+Retinol
Pyridoxine
Tocopherol
Ascorbic acid
Cocarboxylase

41) A patient complaining of dry mouth, photophobia, and visual impairment has been delivered into an admission room. The skinis hyperemic and dry; pupils are dilated; tachycardia is observed. The patient was diagnosed with belladonna alkaloids intoxication. What drug would be advisable? (2017)
+Proserin
Aceclidine
Pilocarpine
Armin
Dipiroxim

42) The second stage of detoxification involves joining certain chemical compounds with functional groups of toxines. Select one such compound: (2017)
+Glucuronic acid
Higher fatty acids
Cholesterol
Glucose
Pyruvate

43) A 5-year-old child presents with abdominal distension, abdominal cramps, and diarrhea occurring 1-4 hours after drinking milk. Described symptoms are caused by the lack of enzymes that break up: (2017)
+Lactose
Glucose
Maltose
Saccharose
Fructose

44) A patient presents with icteric sclera and mucous tunics; urine is dark; feces are light-colored. Blood content of direct and indirect bilirubin is increased, urine content of direct bilirubin is increased. What pathology can be characterized by these signs? (2017)
+Obstructive jaundice
Hemolytic jaundice
Hepatocellular jaundice
Jaundice of the newborn
Atherosclerosis

45) A sanitary-epidemic station employee has been poisoned when the premices were processed with an organophosphorous insecticide. What enzyme is inhibited by organophosphorous compounds? (2017)
+Acetylcholinesterase
Lactate dehydrogenase
Xanthine oxidase
Catalase
Pepsin

46) Indican excretion is a diagnostic criterion of intencified protein putrefaction in the intestine. Name the end product of tryptophan «decay» occurring in the large intestine: (2017)
+Indole
Putrescine
Benzoic acid
Mercaptan
Hydrogen sulfide
}

47) Eicosanoids synthesis begins with freeing polyene acids from membrane phospholipids by means of a specific phospholipase. Name this enzyme: (2017)
+Phospholipase A2
Cyclooxygenase
Phospholipase C
Protein kinase
Arginase

48) A patient has been receiving Theophylline (inhibitor of cyclic adenosine monophosphate phosphodiesterase) for a week. What hormone can increase its action due to such treatment and cause hyperglycemia? (2017)
+Glucagon
Testosterone
Aldosterone
Insulin
Estradiol

49) A patient presents with hypoxia. What metabolic process activates when oxygen supply is insufficient? (2017)
+Anaerobic glycolysis
Urea cycle
Pentose-phosphate pathway
Oxidative decarboxylation of keto acids
Tricarboxylic acid cycle

50) Proteins are if great importance for vital functions. What value of pH results in zero electrophoretic mobility of gelatin (gelatin isoelectric point equals 4,7)? (2016)
+4,7
7,0
14,0
5,5
9,4

51) Parents of a 10-year-old child have made an appointment with endocrinologist due to complaints of the child's low height. The child's appearance is corresponding with that of a 5-year-old. What hormone causes such changes in physical development, if its secretion is disrupted? (2016)
+Somatotropic hormone
Adrenocorticotropic hormone
Thyroxin
Testosterone
Insulin

52) What enzyme allows for synthesis of various genes from template-RNA to DNA in genetic engineering (this enzyme catalyzes the process discovered in RNA-viruses)? (2016)
+Reverse transcriptase
Exonuclease
DNA-ligase
Helicase
Endonuclease

53) Accidental ingestion of death cap mushrooms containing α-amanitin causes intoxication. What enzyme is inhibited with this toxine? (2016)
+RNA polymerase II
DNA polymerase
DNA synthetase
Peptidyl transferase
Translocase

54) A 70-year-old patient presents with cardiac and cerebral atherosclerosis. Examination revealed changes of blood lipid spectre. Increase of the following lipoproteins plays a significant role in atherosclerosis pathogenesis: (2016)
+Low-density lipoproteins
Very low-density lipoproteins
Intermediate density lipoproteins
High-density lipoproteins
Chylomicrons

55) A patient demonstrates milkywhite color of blood plasma due to high content of chylomicrons. Disintegration of triacylglycerol is disrupted. Deficiency of the following enzyme activity is observed: (2016)
+Lipoprotein lipase
Amylase
Tripsin
Cholesterol esterase
Lactase

56) A woman noticed that a cut on her skin was still bleeding even after 20 minutes had passed. What vitamin deficiency causes such condition? (2016)
+Vitamin K
Vitamin A
Vitamin D
Vitamin E
Vitamin B12

57) An elderly man exhibits low levels of red blood cells and hemoglobin in blood; however, his color index is 1,3. Blood smear analysis revealed megaloblasts. What type of anemia is observed in this case? (2016)
+B12-folic acid deficiency
Iron-deficiency
Acquired hemolytic
Hereditary hemolytic
Chronic posthemorrhagic

58) Patients with severe depression demonstrate decreased serotonin levels in brain and cerebrospinal fluid. What aminoacid is a serotonin precursor? (2016)
+Tryptophan
Threonine
Tyrosine
Glutamic acid
Aspartic acid

59) Fatty acids synthesis occurs in human body. What compound is initial in this process? (2016)
+Acetyl coenzyme A
Vitamin C
Glycine
Succinate
Cholesterol

60) A patient has icteric skin; unconjugated bilirubin content in blood is high; conjugated bilirubin in urine is not detected. There is significant amount of urobilin in urine and stercobilin in feces. Name the pathology characterized by given symptoms: (2016)
+Hemolytic jaundice
Obstructive jaundice
Jaundice of the newborn
Hepatocellular jaundice
Atherosclerosis

61) Interferons are natural antiviral and antitumor agents. What is their mechanism of action? (2016)
+Protein synthesis depression
Protein synthesis increase
Replication activation
Transcription activation
Repair activation

62) A patient demonstrates symmetrical dermatitis on the palms. A doctor made a diagnosis of pellagra. What vitamin deficiency can result in such symptoms? (2016)
+Nicotinic acid
Cobalamin
Ascorbic acid
Folic acid
Cholecalciferol

63) Disintegration of adenosine nucleotides result in release of ammonia. What enzyme plays the key role in ammonia synthesis from these compounds? (2016)
+Adenosine deaminase
Alcohol dehydrogenase
Lactate dehydrogenase
Alanine transaminase
Amylase

64) In snake venom there is a substance that causes erythrocyte hemolysis when it is introduced into a human organism. Blood test revealed a large amount of lysolecithin (lysophosphatidylcholine). What enzyme leads to accumulating lysolecithin in blood? (2015)
+Phospholipase A2
Phospholipase A1
Phospholipase C
Phospholipase D
Neuraminidase

65) Structure of proteins includes proteinogenic amino acids. What is the position of the amino group in the structure of these amino acids? (2015)
+α-position
β-position
γ-position
δ-position
ε-position

66) Chromatin contains positively charged histone proteins. What amino acid is contained in histone proteins in large amounts? (2015)
+Lysine
Alanine
Valine
Threonine
Serine

67) Diet of a human must contain vitamins. What vitamin is usually prescribed for treatment and prevention of pellagra? (2015)
+Vitamin PP
Vitamin C
Vitamin A
Vitamin B1
Vitamin D

68) A patient has obstruction of common bile duct. Which of these substances is usually found in urine in such cases? (2015)
Glucose
+Bilirubin
Uric acid
Ketone bodies
Creatinine

69) The end product of starch hydrolysis is: (2015)
+D-glucose
D-fructose
Saccharose
Maltose
D-galactose

70) Primary structure of nucleic acids is a polynucleotide chain that has a certain composition and order of the nucleotides. What bonds stabilize this structure? (2015)
+3,5 –phosphodiester
Peptide
Glycosidic
Disulfide
Amide

71) After drinking milk a 1-year-old child developed diarrhea, flatulence. The baby is likely to have deficiency of the following enzyme: (2015)
+Lactase
Maltase
Aldolase
Hexokinase
Glycosidase

72) A man presents with signs of albinism: blonde hair, extreme photosensitivity, impaired vision. What amino acid metabolism is disrupted in the patient? (2015)

+Tyrosine
Methionine
Proline
Histidine
Valine

73) Substrate-linked phosphorylation occurs in the cycle of tricarboxylic acids. What compound takes part in this reaction? (2015)
+Succinyl coenzyme A
α-ketoglutarate
Acetyl coenzyme A
Succinate
Malate

74) Inhibition of the synthesis of bile acids from cholesterol in liver of an experimental animals has caused maldigestion of lipids. What is the role of these acids in the enteral lipidic metabolism? (2015)
+They emulsify dietary lipids
They keep balance of alkaline environment in the intestines
They participate in the synthesis of lipids
They are part of LDL
They activate the formation of chylomicrons

75) A patient with atherosclerosis has been prescribed Linaetholum containing essential fatty acids. Which of the following acids is an essential part of the preparation? (2015)
+Linolenic
Palmitic
Crotonic
Stearic
Oleic

76) In response to the administration of protein drugs, a patient developed an allergic reaction. The development of the allergic reaction is caused by the increased synthesis of the following compound: (2015)
+Histamine
Choline
Adrenaline
Histidine
Serotonin

77) A patient complains of pain in the small joints. High concentration of uric acid is detected in his blood plasma. What pathology causes such changes? (2015)
+Gout

Diabetes mellitus
Phenylketonuria
Lesch-Nyhan syndrome
Diabetes insipidus

78) A patient with hyperproduction of thyroid hormones has been prescribed Merkazolilum. This drug inhibits the following enzyme participating in iodothyronine synthesis: (2015)
+Iodide peroxidase
Aromatase
Reductase
Decarboxylase
Aminotransferase

79) Hemoglobin catabolism results in release of iron which is transported to the bone marrow by a certain transfer protein and is used again for the synthesis of hemoglobin. Specify this transfer protein: (2015)
+Transferrin (siderophilin)
Transcobalamin
Haptoglobin
Ceruloplasmin
Albumin

80) A patient has a mental disorder due to the insufficient synthesis of gammaaminobutyric acid in the brain. Such pathological changes might be caused by the deficiency of the following vitamin: (2015)
+Pyridoxine
Tocopherol
Cyanocobalamin
Folic acid
Riboflavin

81) The method consisting in removal of low-molecular impurities from colloidal systems and high-molecular compound solutions by semipermeable membrane diffusion is called: (2015)
+Dialysis
Electrodialysis
Ultrafiltration
Decantation
Compensatory dialysis

82) The patient has mucosal dryness and mesopic vision disorder. What vitamin deficiency causes these symptons? (2015)
+A
P

E
C
D

83) Fatty acids arrive into mitochondria, and there their oxidation occurs. Name the vitamin-like substance that takes part in transportation of fatty acids through mitochondrial membrane: (2015)
+Carnitine
Choline
Biotin
Pantothenic acid
Folic acid

84) Albumine, blood serum proteins, and gastric juice pepsin consist of macromolecules of polypeptide chains that are joined with hydrogen bonds into hydrophilic spheres. These proteins are named: (2015)
+Globular
Fibrillar
Structural
Synthetic
Artificial

85) In large intenstine microorganisms synthesize vitamins that participate in organism's biochemical processes. What vitamins are mainly synthesized by microflora? (2014)
+K, B_{12}
A, C
E, PP
B_1, B_2
B_6, E

86) During gastric secretory function research decrease of hydrochloric acid concentration in gastric juice was detected. What enzyme will be less active in such a condition? (2014)
+Pepsin
Amylase
Lipase
Dipeptidase
Hexokinase

87) Information transfer from peptide hormones to intracellular second messengers occures involving adenylate cyclase. What reaction is catalyzed by adenylate cyclase? (2014)

+Cyclic adenosine monophosphate production
ATP breakdown into ADP and inorganic phosphate
ATP synthesis from adenosine monophosphate and pyrophosphate
ADP breakdown with adenosine monophosphate and inorganic phosphate production
ATP breakdown into adenosine monophosphate and pyrophosphate

88) When hydrogen peroxide solution is administered to bleeding wounds, it is broken up by one of the blood enzymes. Point out this enzyme. (2014)
+Catalase
Monoamine oxidase
Cytochrome oxidase
Aspartate aminotransferase
Lactate dehydrogenase

89) Catabolism of body's own tissue proteins is intensified during such diseases as thyrotoxicosis and tuberculosis. This process is attended by intensive synthesis in liver and subsequent excretion with urine of the following: (2014)
+Urea
Glucose
Acetone bodies
Fatty acids
Nucliotides

90) Eicosanoids, - hormone-like compounds, - are used to stimulate labor and for contraception. What substances have such an effect? (2014)
+Prostaglandines
Interleukines
Endorphines
Angiotensines
Enkephalines

91) A newborn infant has hemolytic jaundice caused by rhesus incompatibility. What bile pigment will be concentrated highest in the blood of this infant? (2014)
+Unconjugated bilirubin
Conjugated bilirubin
Urobilinogen
Stercobilinogen
Bile acids

92) The 49-year-old female patient suffering long-term from pancreatic diabetes has developed the following symptoms after administering insulin: weakness, facial pallor, palpitation, anxiety, double vision, numbness of lips and tongue apex.

Glucose molar concentration in blood was 2,5 mmol/l. What complication has developed in the patient? (2014)
+Hypoglycemic coma
Hyperosmolar coma
Hyperglycemic coma
Hyperketonemic coma
Uremic coma

93) L-DOPA and its derivatives are used in treatment of Parkinson's disease. What aminoacid is this substance made of? (2014)
+Tyrosine
Asparagine
Glutamate
Tryptophan
Arginine

94) Milk intake has resulted in the one-year-old child having diarrhea and abdominal distension. What enzyme deficiency does the child have? (2014)
+Lactase
Maltase
Aldolase
Hexokinase
Glycosidase

95) The 56-year-old patient has developed megaloblastic anemia in the course of alcoholic cirrhosis. What vitamin deficiency is the main cause of anemia in this patient? (2014)
+Folic acid
Lipoic acid
Biotin
Thiamine
Pantothenic acid

96) Ketoacidosis occurs during starvation. What metabolite blood concentration increase is symptomatic of this medical condition? (2014)
+Acetoacetate
Oxaloacetate
alonate
~Beta-hydroxy-beta-methylglutarylCoA
Acetyl-CoA

97) The patient with myocardial infarction has been prescribed statines, cholesterol synthesis inhibitors, to prevent complications. What enzyme activity is suppressed by these medicines? (2014)

+Beta-GHB-reductase
Hydroxylase
Lecitin-cholesterol acyltransferase
Esterase
Oxygenase

98) Streptomycin and other aminoglycosides by binding with 30Ssubunit of ribosome prevents formylmethionyl-tRNA joining. What process is disrupted due to this effect? (2014)
+Translation initiation
Translation termination
Transcription initiation
Transcription termination
Replication initiation

99) The patient has hypovitaminosis PP. What amino acid taken with meals partially compensates patient's need for vitamin PP? (2014)
+Tryptophan
Phenylalanine
Valine
Arginine
Methionine

100) The 13-year-old female patient having suffered from measles complains of dry mouth, thirst, body weight loss, polyuria, her glucose concentration in blood is 16 mmol/l. What disease can be suspected? (2014)
+Type I pancreatic diabetes
Type II pancreatic diabetes
Diabetes insipidus
Steroidogenic diabetes
Glycogenos

101) The patient with mushroom poisoning has developed the following symptoms: yellow coloring of skin and sclera, dark-colored urine. Hemolytic jaundice was diagnosed. What pigment causes such coloring of the patient's urine? (2014)
+Stercobilin
Conjugated bilirubin
Biliverdin
Unconjugated bilirubin
Verdohemoglobin

102) During long-term carbon tetrachloride poisoning of animals significant activity drop of aminoacyl tRNA synthetase in hepatocytes was detected. What metabolic process is disrupted in this case? (2014)

+Protein biosynthesis
DNA replication
RNA transcription
Post-translational modification of peptides
Post-transcriptional modification of RNA

103) Nucleoproteins contain significant amount of alkaline proteins. What propteins carry out structural function in chromatin? (2014)
+Protamines and histones
Albumines and globulines
Prolamines and glutenins
Hemoglobin and myoglobin
Interferones and mucin

104) The poultry factory worker, who has been consuming 5 or more raw eggs daily, complains of weakness, drowsiness, muscle pain, loss of hair, seborrhea. What vitamin deficiency causes such condition? (2014)
+H (biotin)
C (ascorbic acid)
A (retinol)
B_1 (thiamine)
B_2 (riboflavin

105) The patient has icteritous skin; unconjugated bilirubin content in blood is high; conjugated bilirubin in urine is not detected. There is significant amount of urobilin in urine and stercobilin in feces. Name the pathology characterized by given symptoms (2014)
+Hemolytic jaundice
Obstructive jaundice
Jaundice of the newborn
Hepatocellular jaundice
Atherosclerosis

106) Oligomycin antibiotic is prescribed to the patient with tuberculosis. What mitochondrial process is slowed down by this medicine? (2014)
+Oxidative phosphorylation
Substrate-linked phosphorylation
Microsomal oxidation
Lipid peroxidation
Oxidative decarboxylation

107) The patient has been prescribed drug with antibacterial effect on tuberculosis mycobacteria. What drug is used in tuberculosis treatment and is pyridoxine antivitamin? (2014)
+Isoniazid

Heparin
Trimethoprim/sulfamethoxazole (Co-trimoxazole)
Streptomycin
Sulfanilamide

108) Detoxication rate is 4 times lower in children than in adults. What enzyme necessary for toxic compounds conjugation has low activity in children? (2014)
+Glucuronosyltransferase
ALAT
AspAT
Creatine phosphokinase
LDH1

109) Certain drugs can stimulate liver to synthesize enzyme systems taking part in drugs and toxines metabolism. What compound stimulates drug metabolism in liver microsomes? (2014)
+Phenobarbital
Heparin
Menadione sodium bisulfite
Sulfanilamide
Aspirin

110) Barbiturates are used as soporifics. These substances, similarly to rotenone, are tissue respiration inhibitors. What complex level do these compounds suppress respiratory chain at? (2014)
+NADH-coenzyme Q reductase
Cytochrome oxidase
Cytochrome C reductase
Adenosine triphosphate synthetase
Succinate dehydrogenase

111) Inhibitors of one of the amides metabolism enzymes are used to treat depression. What enzyme inhibition has such an effect? (2014)
+Flavin adenine dinucleotide (FAD)- containing monoamine oxidase (MAO)
Acetylcholinesterase
Formylkynureninase (Arylformamidase)
Kynurenine 3-hydroxylase
Lactate dehydrogenase

112) Pathogenic microorganisms produce various enzymes in order to penetrate body tissues and spread there. Point out these enzymes among those named below. (2014)
+Hyaluronidase, lecithinase
Lyase, ligase

Transferase, nuclease
Oxydase, catalase
Esterase, protease

113) Due to prolonged taking of phenobarbital the epileptic patient has developed tolerance for this drug. What is this phenomenon based on? (2014)
+Biotransformation acceleration
Absorption process weakening
Increase of receptor sensitivity
Biotransformation suppression
Sunstance accumulation in body