

№	krok 2023
Тема	PATHOPHYSIOLOGY of liver
Текст завдання	A 50-year-old man, who has been suffering from chronic hepatic failure for several years, has developed ascites. What is the main mechanism of this disorder development?
Правильна відповідь	Increased pressure in portal vein system
B	Decrease of albumin and globulin synthesis in liver
C	Increased content of low-density and very low-density lipoproteins in blood
D	Neurotoxins appearing in blood
E	Increase of blood oncotic pressure
№	krok 2023
Тема	respiratory PATHOPHYSIOLOGY
Текст завдання	A 30-year-old man has sustained an injury to his thorax in a traffic incident, which caused disruption of his external respiration. What type of ventilatory difficulty can be observed in the given case?
Правильна відповідь	Restrictive extrapulmonary ventilatory impairment
B	Restrictive pulmonary ventilatory impairment
C	Obstructive ventilatory impairment
D	Impaired ventilation regulation dysfunction
E	Cardiovascular collapse
№	krok 2023
Тема	blood PATHOPHYSIOLOGY
Текст завдання	Biochemical analysis of an infant's erythrocytes revealed evident glutathione peroxidase deficiency and low concentration of reduced glutathione. What pathological condition can develop in this infant?
Правильна відповідь	Hemolytic anemia
B	Pernicious anemia
C	Megaloblastic anemia
D	Sickleemia
E	Iron-deficiency anemia

№	krok 2023
Тема	PATHOPHYSIOLOGY of cns
Текст завдання	Parkinson's disease is caused by disruption of dopamine synthesis. What brain structure synthesizes this neurotransmitter?
Правильна відповідь	Substantia nigra
B	Globus pallidus
C	Corpora quadrigemina
D	Red nucleus
E	Hypothalamus
№	krok 2023
Тема	PATHOPHYSIOLOGY of vessels
Текст завдання	A 27-year-old patient with injury to the neck has lost approximately 30% of the blood volume. The patient's condition is severe: blood pressure is 60/40 mm Hg, heart rate is 140/min., respiratory rate is 30/min., conscious. Characterize the condition of the patient's circulatory system:
Правильна відповідь	Hypovolemic shock
B	Cardiogenic shock
C	Collapse
D	Coma
E	Arterial hypertension
№	krok 2023
Тема	PATHOPHYSIOLOGY of digestion
Текст завдання	Feces of a patient contain high amount of undissociated fats and have grayish-white color. Specify the cause of this phenomenon:
Правильна відповідь	Obturation of bile duct
B	Hypoactivation of pepsin by hydrochloric acid
C	Hypovitaminosis
D	Enteritis
E	Irritation of intestinal epithelium
№	krok 2023

Тема	respiratory PATHOPHYSIOLOGY
Текст завдання	A patient has increased thickness of alveolarcapillary membrane caused by a pathologic process. The direct consequence will be reduction of the following value:
Правильна відповідь	Diffusing lung capacity
B	Oxygen capacity of blood
C	Respiratory minute volume
D	Alveolar ventilation of lungs
E	Expiratory reserve volume
№	krok 2023
Тема	blood PATHOPHYSIOLOGY
Текст завдання	Examination of a 52-year-old female patient has revealed a decrease in the amount of red blood cells and an increase in free hemoglobin in the blood plasma (hemoglobinemia). Color index is 0,85. What type of anemia is being observed in the patient?
Правильна відповідь	Acquired hemolytic
B	Hereditary hemolytic
C	Acute hemorrhagic
D	Chronic hemorrhagic
E	Anemia due to diminished erythropoiesis
№	krok 2023
Тема	PATHOPHYSIOLOGY of vessels
Текст завдання	A 43-year-old-patient has arterial hypertension caused by an increase in cardiac output and general peripheral resistance. Specify the variant of hemodynamic development of arterial hypertension in the given case:
Правильна відповідь	Eukinetic
B	Hyperkinetic
C	Hypokinetic
D	Combined
E	–
№	krok 2023

Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	A pregnant woman underwent AB0 blood typing. Red blood cells were agglutinated with standard sera of the I and II blood groups, and were not agglutinated with the III group serum. What is the patient's blood group?
Правильна відповідь	B(III)
B	0(I)
C	A(II)
D	AB(IV)
E	–
№	krok 2023
Тема	PATHOPHYSIOLOGY OF KIDNEYS
Текст завдання	A male patient has been diagnosed with acute poststreptococcal glomerulonephritis. It is most likely that the lesion of the basement membrane of renal corpuscles was caused by the following allergic reaction:
Правильна відповідь	Immune complex
B	Anaphylactic
C	Cytotoxic
D	Delayed
E	Stimulating
№	krok 2023
Тема	INFLAMMATION
Текст завдання	The cellular composition of exudate largely depends on the etiological factor of inflammation. What leukocytes are the first to get into the focus of inflammation caused by pyogenic bacteria?
Правильна відповідь	Neutrophil granulocytes
B	Monocytes
C	Myelocytes
D	Eosinophilic granulocytes
E	Basophils
№	krok 2023

Тема	CARDIAC PATHOPHYSIOLOGY
Текст завдання	A 35-year-old male developed acute heart failure while running for a long time. What changes in the ionic composition can be observed in the cardiac muscle?
Правильна відповідь	Accumulation of Na^+ and Ca^{2+} ions in the myocardium cells
B	Accumulation of K^+ and Mg^{2+} ions in the myocardium cells
C	Reduction of Na^+ and Ca^{2+} ions in the myocardium cells
D	Reduction of K^+ and Mg^{2+} ions in the extracellular space
E	Reduction of Na^+ and Ca^{2+} ions in the extracellular space
№	krok 2023
Тема	PATHOPHYSIOLOGY OF LIVER
Текст завдання	Enzymatic jaundices are accompanied by abnormal activity of UDP-glucuronyl transferase. What compound is accumulated in blood serum in case of these pathologies?
Правильна відповідь	Unconjugated bilirubin
B	Conjugated bilirubin
C	Dehydrobilirubin
D	Hydrobilirubin
E	Choleglobin
№	krok 2023
Тема	RESPIRATORY PATHOPHYSIOLOGY
Текст завдання	Diseases of the respiratory system and circulatory disorders impair the transport of oxygen, thus leading to hypoxia. Under these conditions the energy metabolism is carried out by anaerobic glycolysis. As a result, the following substance is generated and accumulated in blood:
Правильна відповідь	Lactic acid
B	Pyruvic acid
C	Glutamic acid
D	Citric acid
E	Fumaric acid

№	krok 2023
Тема	ENDOCRINE PATHOPHYSIOLOGY
Текст завдання	A 19-year-old male was found to have an elevated level of potassium in the secondary urine. These changes might have been caused by the increase in the following hormone level:
Правильна відповідь	Aldosterone
B	Oxytocin
C	Adrenaline
D	Glucagon
E	Testosterone
№	krok 2023
Тема	CARDIAC PATHOPHYSIOLOGY
Текст завдання	Analysis of the ECG revealed the missing of several PQRST cycles. The remaining waves and complexes are not changed. Specify the type of arrhythmia:
Правильна відповідь	Sinoatrial block
B	Atrial fibrillation
C	Atrioventricular block
D	Atrial premature beat
E	Intraatrial block
№	krok 2023
Тема	ALLERGY
Текст завдання	During surgical manipulations a patient has been given novocaine injection for anesthesia. 10 minutes later the patient developed paleness, dyspnea, hypotension. What type of allergic reaction is it?
Правильна відповідь	Anaphylactic immune reaction
B	Cellulotoxic immune reaction
C	Aggregate immune reaction
D	Stimulating immune reaction
E	Cell-mediated immune reaction

№	krok 2023
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	Blood count of an athlete is as follows: erythrocytes - $5,5 \cdot 10^{12}/l$, Hb- 112 g/l, leukocytes - $7 \cdot 10^9/l$, neutrophils - 64%, basophils - 0,5%, eosinophils - 0,5%, monocytes - 8%, lymphocytes - 27%. First of all, such results indicate the stimulation of:
Правильна відповідь	Erythropoiesis
B	Leukopoiesis
C	Lymphopoiesis
D	Granulocytopoiesis
E	Immunogenesis
№	krok 2023
Тема	PATHOPHYSIOLOGY OF VESSELS
Текст завдання	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?
Правильна відповідь	Systemic constriction of the venous vessels
B	Systemic dilatation of the arterial resistive vessels
C	Decrease in the circulating blood volume
D	Increase in the heart rate
E	Weakening of the pumping ability of heart
№	krok 2023
Тема	PATHOPHYSIOLOGY OF IMMUNITY
Текст завдання	After an immunoassay a child was diagnosed with immunodeficiency of humoral immunity. What is the reason for the primary immunodeficiency development in the child?
Правильна відповідь	Hereditary abnormality of immune system
B	Embryonal development abnormalities
C	Pathometabolism in mother's organism
D	Immune responsiveness and resistance disorders
E	Toxic damage of B-lymphocytes

№	krok 2023
Тема	PATHOPHYSIOLOGY OF KIDNEYS
Текст завдання	A patient with massive burns developed acute renal insufficiency characterized by a significant and rapid deceleration of glomerular filtration. What is the mechanism of its development?
Правильна відповідь	Reduction of renal blood flow
B	Damage of glomerular filter
C	Reduction of functioning nephron number
D	Rise of pressure of tubular fluid
E	Renal artery embolism
№	krok 2023
Тема	PATHOPHYSIOLOGY OF WATER-ELECTROLITE BALANCE
Текст завдання	A patient with enteritis accompanied by massive diarrhea has low water rate in the extracellular space, high water rate inside the cells and low blood osmolarity. What is such disturbance of water-electrolytic metabolism called?
Правильна відповідь	Hypoosmolar hypohydration
B	Hyperosmolar hypohydration
C	Osmolar hypohydration
D	Hypoosmolar hyperhydration
E	Hyperosmolar hyperhydration
№	krok 2023
Тема	PATHOPHYSIOLOGY OF TEMPERATURE
Текст завдання	A 25-year-old man has spent a long time in the sun under high air humidity. As a result of it his body temperature rose up to 39° C . What pathological process is it?
Правильна відповідь	Hyperthermia
B	Infectious fever
C	Hypothermia
D	Noninfectious fever
E	Burn disease

№	krok 2017
Тема	FEVER
Текст завдання	An accident had resulted in a 65-year-old man drowning in a lake. Resuscitation measures allowed to restore his respiration and cardiac function. What factor prolongs the period of apparent death?
Правильний ответ	Hypothermia
B	Hyperthermia
C	Prolonged preagony and agony
D	Elderly age
E	-
№	krok 2016, 2015
Тема	FEVER. INFLAMMATION
Текст завдання	A woman has scalded her hand with boiling water. The affected area of her skin became red, swollen and painful. This effect is caused by accumulation of the following substance:
Правильний ответ	Histamine
B	Lysine
C	Thiamine
D	Glutamine
E	Asparagine
№	krok 2016
Тема	inflammation
Текст завдання	A 38-year-old woman complains of bleeding gums, halitosis, exposure of tooth necks. Objectively: the patient has gingivitis, plaque and tartar. Inflammation involves the alveolar part of gingiva with dental pockets. The bone tissue exhibits signs of bone resorption. What pathology does the patient have?
Правильний ответ	Parodontitis
B	Periostitis
C	Periodontitis
D	Gingivitis
E	-
№	krok 2016
Тема	allergy

Текст завдання	A patient has been administered conduction anesthesia with novocaine in preparation for tooth extraction. After the anesthesia administration the patient developed swelling and hyperemy around the injection site, skin itch, general fatigue, motor agitation. Name the developed complication:
Правильний ответ	Allergy
B	Idiosyncrasy
C	Tachyphylaxis
D	Drug dependence
E	Inflammation
№	krok 2015
Тема	cell injury
Текст завдання	A 32-year-old patient has purulent wound in the lower third of forearm. Smear of purulent wound content has been made. What cells will be generally detected, if it is stained using RomanovskyGiemsa stain?
Правильний ответ	Neutrophil
B	Eosinophil
C	Lymphocyte
D	Erythrocyte
E	Basophil
№	krok 2015
Тема	FEVER
Текст завдання	Pyrogenal administered to a rabbit, in the course of an experiment, resulted in increase of its body temperature. What substance of those named below acts as a secondary pyrogen that is a part of fever-inducing mechanism?
Правильний ответ	Interleukin 1
B	Pseudomonas polysaccharide (Piromen)
C	Histamine
D	Bradykinin
E	Immunoglobulin
№	krok 2015
Тема	INFLAMMATION
Текст завдання	An inflammatory process in tissues is characterised by hyperemia and edema. What leukocytes situated in connective tissue provide for vasodilatation and increased blood vessel capacity under these conditions?

Правильный ответ	Basophils
B	Neutrophils
C	Eosinophils
D	T-lymphocytes
E	B-lymphocytes
№	krok 2017
Тема	TUMOR
Текст завдання	After anaesthetic application during tooth extraction the patient developed marked soft tissue edema of the upper and lower jaw, skin rash on the face, reddening, and itching. What pathological process results in such reaction to the anaesthetic?
Правильный ответ	Allergy
B	Toxic action of a drug
C	Inflammation
D	Circulatory deficiency
E	Disturbed lymph drainage
№	krok 2017, 2016
Тема	TUMOR
Текст завдання	A patient complains of toothache. On examination he has been diagnosed with pulpitis. Which factor played the main pathogenic role in the development of pain syndrome in this case?
Правильный ответ	Increased intratissular pressure in the dental pulp
B	Vasospasm
C	Inadequate stimulation of the mandibular nerve branch
D	Activation of one of the complement system components
E	Interleukin action
№	krok 2017
Тема	ALLERGY
Текст завдання	A patient with acute bronchitis has been prescribed sulfanilamide drugs for treatment. In an hour after administration the patient developed itching and vesicles filled with light transparent liquid on the face, palms and soles. Name the mechanism of immune response:
Правильный ответ	Reaginic reaction
B	Antibodymediated cytolysis

С	Cell cytotoxicity
D	Immune complexmediated hypersensitivity
E	-
№	krok 2017
Тема	iMMUNE RESPONSE
Текст завдання	A patient presents with lymphocyticmonocytic leukogram pattern. It is characteristic of:
Правильний ответ	Chronic inflammatory process
B	Acute inflammatory process
С	Allergies
D	Chronic radiation sickness
E	-
№	krok 2016
Тема	IMMUNOPATHOLOGY. TUMOR
Текст завдання	The total number of leukocytes in the patient's blood is $90 \cdot 10^9/l$. Leukogram: eosinophils - 0%, basophils - 0%, juvenile - 0%, stab neutrophils - 2%, segmented neutrophils - 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 of the following pathology:
Правильний ответ	Chronic lympholeukosis
B	Acute lympholeukosis
С	Lymphogranulomatosis
D	Infectious mononucleosis
E	Chronic myeloleukosis
№	krok 2016
Тема	IMMUNOPATHOLOGY. ALLERGY. TUMOR
Текст завдання	After the exposure to ionizing radiation a person was found to have a decreased blood granulocyte level. What mechanism underlies these changes?
Правильний ответ	Leikopoiesis inhibition
B	Increased passage of granulocytes into the tissues
С	Autoimmune process development
D	Increased disintegration of leucocytes

Е	Disrupted release of mature leukocytes from the bone marrow
№	krok 2016
Тема	INFLAMMATION. ALLERGY. TUMOR
Текст завдання	What factor results in maximal dilation of the gemomicrocirculatory pahtway vessels and their increased permeability?
Правильний ответ	Histamine
В	Endothelin
С	Vasopressin
Д	Noradrenaline
Е	Serotonin
№	krok 2016
Тема	INFLAMMATION. ALLERGY. TUMOR
Текст завдання	A 50-year-old patient has been referred for treatment of neck lymphadenitis. His individual penicillin sensitivity was tested. In 30 seconds fullbody fever raised in the patient and his arterial blood pressure dropped to 0 mm Hg followed by cardiac arrest. Resuscitation was unsuccessful. Autopsy revealed acute venous hyperemia of viscera. Histological study revealed mast cells (tissue basocytes) degranulation in the skin (at the area of injections), myocardium and lungs. What kind of hypersensitivity reaction occurred in the patient?
Правильний ответ	Anaphylactic
В	Delayed-type hypersensitivity
С	Complement-mediated cytotoxic
Д	Immune complex-mediated
Е	-
№	krok 2015
Тема	IMMUNE SYSTEM
Текст завдання	A patient presented to a hospital with complaints about quick fatigability and significant muscle weakness. Examination revealed an autoimmune disease that causes functional disorder of receptors in the neuromuscular synapses. This will result in the disturbed activity of the following mediator:
Правильний ответ	Acetylcholine
В	Noradrenaline
С	Dopamine
Д	Serotonin

Е	Glycine
№	krok 2015
Тема	ALLERGY
Текст завдання	A 50-year-old patient has been referred for treatment of neck lymphadenitis. His individual penicillin sensitivity was tested. In 30 seconds fullbody fever raised in the patient and his arterial blood pressure dropped to 0 mm Hg, followed by cardiac arrest. Resuscitation was unsuccessful. Autopsy revealed acute venous hyperemia of viscera. Histological study revealed mast cells (tissue basocytes) degranulation in the skin (at the area of injections), myocardium and lungs. What kind of hypersensitivity reaction occurred in patient?
Правильний ответ	Anaphylactic
В	Delayed-type hypersensitivity
С	Complement-mediated cytotoxic
Д	Immune complex-mediated
Е	-
№	krok 2015
Тема	IMMUNE SYSTEM
Текст завдання	Throughout a year a 37-year-old woman periodically got infectious diseases of bacterial origin, their course was extremely lingering, remissions were short. Examination revealed low level of major classes of immunoglobulins. The direct cause of this phenomenon may be the following cell dysfunction:
Правильний ответ	Plasmocytes
В	Phagocytes
С	Neutrophils
Д	Macrophages
Е	Lymphocytes
№	krok 2015
Тема	ALLERGY
Текст завдання	The patient's condition after blood transfusion has been aggravated by posttransfusion shock. Name the type of allergic reaction causing this pathology.
Правильний ответ	Cytotoxic
В	Anaphylactic
С	Immune complex

D	Delayed-type hypersensitivity
E	Receptor-mediated
№	krok 2017
Тема	Metabolic disorders
Текст завдання	An oculist has detected increased time of darkness adaptation of a patient's eye. What vitamin deficiency can cause such symptom?
Правильний ответ	A
B	E
C	C
D	K
E	D
№	krok 2017
Тема	METABOLIC DISORDERS
Текст завдання	Due to trauma the patient's parathyroid glands have been removed, which resulted in inertness, thirst, sharp increase of neuromuscular excitability. Metabolism of the following substance is disturbed:
Правильний ответ	Calcium
B	Manganese
C	Chlorine
D	Molybdenum
E	Zinc
№	krok 2017
Тема	METABOLIC DISORDERS
Текст завдання	A patient during fasting developed ketoacidosis as a result of increased fatty acids decomposition. This decomposition can be inhibited with:
Правильний ответ	Insulin
B	Glucagon
C	Adrenaline
D	Thyroxin
E	Cortisol
№	krok 2017
Тема	METABOLIC DISORDERS

Текст завдання	In what organ biotransformation (metabolic transformation) of most medicinal agents occurs upon their introduction into an organism?
Правильний ответ	Liver
B	Kidneys
C	Intestine
D	Skin
E	Lungs
№	krok 2017, 2016
Тема	METABOLIC DISORDERS
Текст завдання	A victim of an earthquake has been remaining under debris for 7 days without food or water. What type of starvation is it?
Правильний ответ	Complete
B	Complete with continued hydration
C	Quantitative
D	Qualitative
E	Incomplete
№	krok 2017
Тема	METABOLIC DISORDERS
Текст завдання	There is increased activity of AST, LDH ₁ , LDH ₂ , and CPK in the patient's blood. Pathological process most likely occurs in the:
Правильний ответ	Heart
B	Skeletal muscles
C	Kidneys
D	Liver
E	Adrenal glands
№	krok 2017
Тема	METABOLIC DISORDERS
Текст завдання	A 42-year-old woman, who has been keeping to a vegetarian diet for a long period of time, consulted a doctor. Examination revealed negative nitrogen balance in the patient. What factor is the most likely cause of such a condition?
Правильний ответ	Insufficient amount of proteins in the diet
B	Insufficient amount of dietary fiber
C	Excessive amount of fats in the diet

D	Insufficient amount of fats in the diet
E	Decreased rate of metabolic processes
№	krok 2016
Тема	METABOLIC DISORDERS
Текст завдання	A pregnant woman developed severe toxemia with exhausting recurrent vomiting throughout a day. By the end of the day she developed tetanic convulsions and bodily dehydration. The described changes were caused by the following type of acid-base disbalance:
Правильний ответ	Nongaseous excretory alkalosis
B	Gaseous alkalosis
C	Gaseous acidosis
D	Nongaseous metabolic acidosis
E	Nongaseous excretory acidosis
№	krok 2016
Тема	METABOLIC DISORDERS
Текст завдання	Due to recurring vomiting a patient has lost significant amount of gastric juice, which led to development of acid-base dysbalance. What type of acid-base dysbalance has developed?
Правильний ответ	Nongaseous alkalosis
B	Gaseous acidosis
C	Nongaseous acidosis
D	Gaseous alkalosis
E	Metabolic acidosis
№	krok 2016
Тема	metabolic
Текст завдання	Ketoacidosis that develops due to accumulation of ketone bodies in blood serum is a primary complication of diabetes mellitus. What acid-base disbalance develops during this condition?
Правильний ответ	Metabolic acidosis
B	Metabolic alkalosis
C	Respiratory acidosis
D	Respiratory alkalosis
E	-

№	krok 2016
Тема	metabolic d.
Текст завдання	During perfusion of an isolated heart of a mammal with a high ion content solution the cardiac arrest in diastole occurred. The cardiac arrest was caused by the following ions present excessively in the solution:
Правильний відповідь	Potassium
B	Sodium
C	Chlorine
D	Magnesium
E	Calcium
№	krok 2016
Тема	metabolic d.
Текст завдання	Corticosteroid analogues induce breakdown of muscle proteins into free amino acids. Under such conditions these amino acids become involved with the following processes:
Правильний відповідь	Gluconeogenesis in liver
B	Glycolysis in muscles
C	Synthesis of higher fatty acids
D	Glycogenolysis
E	Decarboxylation
№	krok 2015
Тема	meTABOLIC DISORDERS
Текст завдання	A patient at the early stage of diabetes mellitus was found to have polyuria. What is its cause?
Правильний відповідь	Hyperglycemia
B	Ketonemia
C	Hypocholesterolemia
D	Hypercholesterolemia
E	Hyperkaliemia
№	krok 2015
Тема	METABOLIC D.
Текст завдання	Activation of certain hemostasis system factors is done through calcium ions attachment. What structural component allows this attachment?

Правильный ответ	Gamma-carboxyglutamic acid
B	Gamma-aminobutyric acid
C	Gamma-oxybutyric acid
D	Hydroxyproline
E	Mono amino dicarboxylic acids
№	krok 2017
Тема	bLOOD
Текст завдання	Along with normal hemoglobin types there can be pathological ones in the body of an adult. Specify one of them:
Правильный ответ	HbS
B	HbF
C	HbA1
D	HbA2
E	HbO2
№	krok 2017
Тема	bLOOD
Текст завдання	A patient with glossitis presents with disappearance of lingual papillae, reddening and burning pain in the tongue. Blood test: erythrocytes - $2 \cdot 10^{12}/l$, hemoglobin - 103 g/l, color index - 1,4. What type of anemia is it?
Правильный ответ	B_{12} folate-deficient
B	Iron deficiency
C	α -thalassemia
D	β -thalassemia
E	Iron refractory
№	krok 2017
Тема	BLOOD
Текст завдання	A 20-year-old young man, who started to train systematically in athletics, has the following restingstate blood values: erythrocytes - $5 \cdot 10^{12}/l$, reti-culocytes - 12%, hemoglobin - 160 g/l, color index - 1,03. Such blood values indicate erythropoiesis stimulation due to the following occurring in the process of his training:
Правильный ответ	Hypoxemia
B	Hypercapnia
C	Physical activity

D	Hyperventilation
E	Hyperglycemia
№	krok 2017
Тема	BLOOD
Текст завдання	Red bone marrow has been damaged under radioactive emission of 5 Gy. What determines the red bone marrow sensitivity towards ionizing radiation?
Правильний ответ	Intensive cell division
B	High content of free radicals in the cells
C	High content of peroxides in the cells
D	Radiosensitizers in the cells
E	Destructive effect of radiotoxins on DNA synthesis
№	krok 2017, 2016
Тема	BLOOD
Текст завдання	A patient has been diagnosed with severe B_{12} -deficient anemia with hemopoiesis disturbance. Anamnesis states total gastrectomy. What cells allow to confirm this diagnosis, if they are absent in the peripheral blood?
Правильний ответ	Megalocytes
B	Microcytes
C	Ovalocytes
D	Normocytes
E	Anulocytes
№	krok 2017
Тема	BLOOD
Текст завдання	High-altitude dwellers typically demonstrate chronically intensified respiration and decreased $pC O_2$ value of blood. What mechanism is leading in the compensation of their asid-base imbalance?
Правильний ответ	Decreased renal reabsorption of bicarbonate
B	Increased ammonia excretion with urine
C	Decreased pulmonary ventilation
D	Increased pulmonary ventilation
E	-
№	krok 2016

Тема	BLOOD
Текст завдання	A patient has petechial hemorrhages on the gums, hard and soft palate, buccal mucosa. This is caused by the dysfunction of the following blood corpuscles:
Правильний відповідь	Platelets
B	Eosinophils
C	Monocytes
D	Lymphocytes
E	Erythrocytes
№	krok 2016
Тема	BLOOD
Текст завдання	A patient suffers from mutation of a gene that corresponds with hemoglobin synthesis. This condition led to development of sickle-cell disease. Name the pathological hemoglobin characteristic of this disease:
Правильний відповідь	HbS
B	HbA
C	HbF
D	HbA1
E	Bart-Hb
№	krok 2016
Тема	BLOOD
Текст завдання	A patient, who had suffered severe blood loss three days ago, underwent blood test. The following data was obtained in leukogram: leukocytes - $12 \cdot 10^9/l$, basophils - 0, eosinophils - 3, myelocytes - 0, juvenile - 3, stab neutrophils - 12, segmented neutrophils - 62, lymphocytes - 16, monocytes - What change of leukocyte content occurred in this case?
Правильний відповідь	Neutrophilia with regenerative left-shift
B	Neutrophilia with degenerative left-shift
C	Neutrophilia with right-shift
D	Absolute lymphopenia
E	Absolute monocytopenia
№	krok 2016
Тема	BLOOD

Текст завдання	A 49-year-old man with myocardial infarction has been admitted to a cardiology department. What changes in the peripheral blood cells are induced by the necrotic changes in the myocardium?
Правильний ответ	Neutrophilic leukocytosis
B	Monocytosis
C	Eosinophilia
D	Thrombocytopenia
E	Lymphopenia
№	krok 2016
Тема	blood
Текст завдання	During ascent into mountains at the altitude of 5000 meters the group of climbers has developed the following complaints: dyspnea, increased heart rate, headache, vertigo, tinnitus. What is the cause of such symptoms?
Правильний ответ	Hypoxemia
B	Hypokalemia
C	Hypothermia
D	Erythropenia
E	Leucopenia
№	krok 2016
Тема	blood
Текст завдання	A 28-year-old patient complains of frequent gingival hemorrhages. Blood test revealed the clotting factor II (prothrombin) deficiency. What phase of blood coagulation is impaired in this patient?
Правильний ответ	Thrombin generation
B	Vascular-platelet haemostasis
C	-
D	Fibrinolysis
E	Clot retraction
№	krok 2016
Тема	blood
Текст завдання	Which of the named below is the substrate of activated Christmas factor that takes part in blood coagulation?
Правильний ответ	Factor X
B	Vitamin K

С	Fibrinogen
D	Fibrin
E	Thrombin
№	krok 2016
Тема	blood
Текст завдання	Specify the type of jaundice, during which there is no direct bilirubin in blood, and urine urobilinogen level is high:
Правильний ответ	Suprarenal
B	Hepatic
C	Subhepatic
D	Mechanical
E	-
№	krok 2016
Тема	blood
Текст завдання	Indigenous population of Pamir has the following characteristic features: high rate of base metabolism, elongated tubular bones, wide rib cage, high blood oxygen capacity due to increased number of erythrocytes, high hemoglobin content. What type of ecological adaptation is it?
Правильний ответ	Mountain
B	Temperate
C	Arctic
D	Tropical
E	Subtropical
№	krok 2015
Тема	blood
Текст завдання	A 38-year-old female patient has been brought into admission room with uterine bleeding. What will be revealed by blood test?
Правильний ответ	Decrease of packed cell volume
B	Eosinophilia
C	Decreased erythrocyte sedimentatio rate
D	Leukocytosis
E	Increased color index of blood
№	krok 2015

Тема	blood
Текст завдання	A nuclear power plant disaster fighter had absorbed radiation dose of 5 Gy; in a week he was diagnosed with blood agranulocytosis. What pathogenetic mechanism is principal in its origination?
Правильний відповідь	Leukopoiesis suppression
B	Increased granulocytes transfer into tissues
C	Increased leucocytes disintegration
D	Disruption of mature leucocytes emerging from bone marrow
E	Autoimmune process development
№	krok 2015
Тема	BLOOD
Текст завдання	The total number of leukocytes in patient's blood is $90 \cdot 10^9/l$. 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:
Правильний відповідь	Chronic lympholeukosis
B	Acute lympholeukosis
C	Lymphogranulomatosis
D	Infectious mononucleosis
E	Chronic myeloleukosis
№	krok 2015
Тема	BLOOD
Текст завдання	A 67-year-old patient has atherosclerosis of cardiac and cerebral vessels. Examination revealed hyperlipidemia. What class of blood plasma lipoproteids is most important in atherosclerosis pathogenesis?
Правильний відповідь	Low-density lipoproteids
B	Chylomicrons
C	α -lipoproteids
D	High-density lipoproteids
E	-
№	krok 2015
Тема	BLOOD

Текст завдання	A histologic study of a red bone marrow puncture sample had been conducted in the course of examination of a 35-year-old patient, and significant megakaryocyte number depletion was detected. What peripheral blood changes will result from that?
Правильний ответ	Thrombocytopenia
B	Leukocytosis
C	Thrombocytosis
D	Agranulocytosis
E	Leukopenia
№	krok 2015
Тема	BLOOD
Текст завдання	As a result of dysfunction of protein synthesis in liver a patient with hepatic insufficiency has disturbed synthesis of procoagulants, prothrombin, fibrinogen. Which of the listed syndromes can be expected in this patient?
Правильний ответ	Haemorrhagic
B	Portal haemorrhagic syndrome
C	Hepatolienal syndrome
D	Acholia syndrome
E	Cholaemia syndrome
№	krok 2015
Тема	BLOOD
Текст завдання	A 49-year-old male patient with myocardial infarction has been admitted to the cardiology department. What changes in the peripheral blood cells are induced by the necrotic changes in the myocardium?
Правильний ответ	Neutrophilic leukocytosis
B	Monocytosis
C	Eosinophilia
D	Thrombocytopenia
E	Lymphopenia
№	krok 2015
Тема	BLOOD
Текст завдання	Tooth extraction in a patient with chronic persistent hepatitis was complicated by a prolonged bleeding. What is the cause of hemorrhagic syndrome?
Правильний ответ	Decreased production of thrombin

B	Increased production of thromboplastin
C	Decreased production of fibrin
D	Increased synthesis of fibrinogen
E	Increased fibrinolysis
№	krok 2015
Тема	BLOOD
Текст завдання	After the transfusion of the concentrated red blood cells the patient developed posttransfusion shock. What is the leading mechanism of acute renal failure in this case?
Правильний ответ	Glomerular filtration disorder
B	Tubular reabsorption disorder
C	Tubular secretion disorder
D	Urinary excretion disorder
E	Impairment of the renal incretory function
№	krok 2015
Тема	BLOOD
Текст завдання	During AB0 blood grouping by using coliclons (diagnostic monoclonal antibodies), haemagglutination did not occur with any of the coliclons. What is the blood group of the patient under examination?
Правильний ответ	0 (I)
B	A (II)
C	B (III)
D	AB (IV)
E	-
№	krok 2015
Тема	BLOOD
Текст завдання	A patient is diagnosed with pancreatic diabetes with associated hyperglycemia. Glycemia rate can be assessed retrospectively (4-8 weeks prior to examination) by measuring concentration of the following blood plasma protein:
Правильний ответ	Glycated hemoglobin
B	Albumin
C	Fibrinogen
D	C-reactive protein

Е	Ceruloplasmin
№	krok 2015
Тема	BLOOD
Текст завдання	A woman with A (II), Rh-negative blood had a child with B (III), Rh-positive blood. The child was diagnosed with congenital anaemia of newborns. What is the most likely cause of its development?
Правильний ответ	Rhesus incompatibility
В	Hereditary chromosomal pathology
С	ABO-incompatibility
Д	Intrauterine intoxication
Е	Intrauterine infection
№	krok 2017, 2016
Тема	CARDIOVASCULAR DESEASES
Текст завдання	A patient has a history of chronic heart failure. Which of the following hemodynamic parameters is a major symptom of cardiac decompensation development?
Правильний ответ	Decreased stroke volume
В	Tachycardia development
С	Tonogenic dilatation
Д	Increased peripheral vascular resistance
Е	Increased central venous pressure
№	krok 2017
Тема	CARDIOVASCULAR DESEASES
Текст завдання	A patient on the 2nd day after cardiac infarction presents with acute decrease of systolic blood pressure down to 60 mm Hg with tachycardia 140/min., dyspnea, loss of consciousness. What mechanism is essential in the pathogenesis of shock developed in this case?
Правильний ответ	Decreased cardiac output
В	Increased myocardial excitability caused by products of necrotic disintegration
С	Decreased circulating blood volume
Д	Development of paroxysmal tachycardia
Е	Development of anaphylactic reaction to myocardial proteins
№	krok 2017

Тема	RESPIRATORY PATHOPHYSIOLOGY
Текст завдання	Premature babies often develop respiratory distress syndrome. This pathology is caused by the deficiency of a certain component of the blood–air barrier. Name this component:
Правильний відповідь	Surfactant
B	Capillary endothelium
C	Endothelial basement membrane
D	Alveolar basement membrane
E	Alveolocytes
№	krok 2017
Тема	CARDIOVASCULAR DESEASES
Текст завдання	An athlete (a long-distance runner) during competition has developed acute heart failure. This pathology developed due to:
Правильний відповідь	Volume overload
B	Coronary blood flow disturbance
C	Direct damage to myocardium
D	Pericardial pathology
E	Pressure overload
№	krok 2017
Тема	CARDIOVASCULAR DESEASES
Текст завдання	A person found oneself in an emotionally straining situation. As the result the blood adrenaline level has risen, therefore increasing the strength of cardiac contractions. In what way does adrenaline increase the strength of cardiac contractions?
Правильний відповідь	Activates cardiac β -adrenergic receptors
B	Activates vascular baroreceptors
C	Decreases tone of vagus nerves
D	Activates peripheral chemoreceptors
E	Decreases excitability of pacemaker cells
№	krok 2017
Тема	PATHOPHYSIOLOGY OF VESSELS
Текст завдання	During thermal stimulation it is characteristic of oral cavity blood vessels to:
Правильний відповідь	Dilate in response to both cold and hot stimuli
B	Present no response towards thermal stimuli

C	Respond with constriction to cold stimuli
D	Respond with constriction to hot stimuli
E	Respond depending on the vessel functional condition
№	krok 2015
Тема	THE CARDIOVASCULAR SYSTEM
Текст завдання	As a result of a trauma a patient 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:
Правильний ответ	Erectile
B	Latent
C	Terminal
D	Torpid
E	-
№	krok 2015
Тема	THE CARDIOVASCULAR SYSTEM
Текст завдання	A patient suffering from pericarditis with rapid progression has developed acute cardiac tamponade. What regulation mechanism is most likely to compensate for this pathology?
Правильний ответ	Tachycardia
B	Heterometric
C	Homeometric
D	Inotropic effect of catecholamines
E	Vasoconstriction
№	krok 2015
Тема	THE CARDIOVASCULAR SYSTEM
Текст завдання	As a result of a rapid change from horizontal to vertical body position a 16-year-old girl lost consciousness. What is the reason for it?
Правильний ответ	Decreased venous return
B	Increased venous return
C	Heart rate decrease
D	Arterial pressure rise
E	-

№	krok 2016
Тема	resiratory tract
Текст завдання	During auscultation a 26-year-old patient was asked to breathe deep. After 10 breaths the patient lost consciousness, which is associated with the development of the following condition:
Правильний відповідь	Respiratory alkalosis
B	Carbon dioxide acidosis
C	Erythropenia
D	Polycythemia
E	Reduced oxygen capacity of blood
№	krok 2016
Тема	the respiratory tract
Текст завдання	Students have been remaining for a long time in a badly ventilated room. They developed respiratory changes caused by irritation of their peripheral chemoreceptors that react primarily to:
Правильний відповідь	Decrease of oxygen tension in arterial blood
B	Increase of oxygen tension in arterial blood
C	Decrease of carbon dioxide tension in arterial blood
D	Increase of hydrogen ion concentration in arterial blood
E	Decrease of hydrogen ion concentration in arterial blood
№	krok 2016
Тема	respiratory tract
Текст завдання	A 30-year-old man died from electrocution. What was the cause of death?
Правильний відповідь	Central respiratory arrest
B	Acute renal failure
C	Acute respiratory failure
D	Shock
E	Internal hemorrhage
№	krok 2015
Тема	respiratory tract
Текст завдання	Sharp decrease of lungs surfactant activity has been detected in a patient. It will result in the following:
Правильний відповідь	Alveoli will become prone to deflation

B	Airways resistance decreases
C	Respiratory muscles work decreases
D	Pulmonary ventilation increases
E	Hyperoxemia
№	krok 2015
Тема	THE RESPIRATORY TRACT
Текст завдання	A 42-year-old patient with tetanus developed an acute respiratory failure. What type of respiratory failure occurs in this case?
Правильний відповідь	Disregulatory impairment of alveolar ventilation
B	Restrictive impairment of alveolar ventilation
C	Obstructive impairment of alveolar ventilation
D	Perfusion impairment
E	Diffusion impairment
№	krok 2017
Тема	RENAL PATHOPHYSIOLOGY
Текст завдання	A patient with chronic renal failure presents with reduced inulin clearance of ml/min. The following renal function is disturbed:
Правильний відповідь	Glomerular filtration
B	Tubular secretion
C	Reabsorption in the proximal tubular segment of the nephron
D	Reabsorption in the distal tubular segment of the nephron
E	Reabsorption in the tubules of collecting duct
№	krok 2017, 2016
Тема	RENAL PATHOPHYSIOLOGY
Текст завдання	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 alterations are the most likely to be caused by the increased secretion of the following hormone:
Правильний відповідь	Aldosterone
B	Oxytocin
C	Adrenaline
D	Glucagon
E	Testosterone
№	krok 2017, 2016

Тема	GASTROINTESTINAL SYSTEM
Текст завдання	Roentgenologically confirmed obstruction of common bile duct resulted in preventing bile from inflowing to the duodenum. What process is likely to be disturbed?
Правильний відповідь	Fat emulgation
B	Protein absorption
C	Carbohydrate hydrolysis
D	Hydrochloric acid secretion in stomach
E	Salivation inhibition
№	krok 2016
Тема	GASTROINTESTINAL TRACT. RENAL FAILURE
Текст завдання	For several days a 55-year-old woman has been suffering from pain attacks in the right upper quadrant after eating fatty foods. Visually, there is yellowness of sclera and skin. The patient has acholic stool, beer-colored urine. What substance present in the patient's urine causes its dark color?
Правильний відповідь	Conjugated bilirubin
B	Ketone bodies
C	Unconjugated bilirubin
D	Stercobilin
E	Bilirubin glucuronides
№	krok 2016
Тема	GASTROINTESTINAL TRACT. RENAL FAILURE
Текст завдання	A patient with chronic hepatitis complains of increased sensitivity to barbiturates that previously induced no symptoms of intoxication. What hepatic function is disrupted and primarily responsible for such reaction in this patient?
Правильний відповідь	Metabolic
B	Bilification
C	Hemodynamic
D	Hemopoietic
E	Phagocytic
№	krok 2016
Тема	GASTROINTESTINAL TRACT

Текст завдання	After the traumatic tooth extraction a patient is complaining of severe dull poorly localized pain in gingiva, body temperature rise up to 37,5° C . The patient has been diagnosed with alveolitis. Specify the kind of pain in this patient:
Правильний ответ	Protopathic
B	Epicritic
C	Visceral
D	Heterotopic
E	Phantom
№	krok 2016
Тема	gASTROINTESTINAL TRACT.RENAL FAILURE
Текст завдання	A patient with gastric juice hypersecretion has been recommended to exclude from the diet rich broths and vegetable infused water. A doctor recommended it, because these food products stimulate production of the following hormone:
Правильний ответ	Gastrin
B	Secretin
C	Cholecystokinin
D	Somatostatin
E	Neurotensin
№	krok 2017
Тема	GASTROINTESTINAL TRACT
Текст завдання	A patient is diagnosed with pancreatitis. Starch decomposition disturbance occurs in the patient's intestine due to deficiency of the following pancreatic enzyme:
Правильний ответ	Amylase
B	Tripsin
C	Chymotrypsin
D	Lipase
E	Carboxypeptidase
№	krok 2017
Тема	GASTROINTESTINAL SYSTEM
Текст завдання	Ulcer disease of the duodenum has been detected in a 38-year-old man. A treatment was prescribed after which the patient considered himself to be healthy. However, half a year later the patient developed pain in the epigastrium, heartburn, and insomnia. The patient's condition can be estimated as a:

Правильный ответ	Relapse
B	Remission
C	Development of chronic disease
D	Latent period
E	Pathological state
№	krok 2017
Тема	RENAL PATHOPHYSIOLOGY
Текст завдання	A 30-year-old man with glomerulonephritis has developed nephrotic syndrome. What symptom invariably accompanies nephrotic syndrome?
Правильный ответ	Proteinuria
B	Glucosuria
C	Low urine specific gravity
D	Anemia
E	Azotemia
№	krok 2017
Тема	GASTROINTESTINAL SYSTEM
Текст завдання	A 50-year-old man, who has been suffering for a long time from viral hepatitis, developed mental impairments, impairments of consciousness, and motor disturbances (tremor, ataxia, etc.). What is the mechanism of such condition?
Правильный ответ	Decreased detoxification function of the liver
B	Insufficient phagocytic function of stellate macrophages
C	Decreased synthesis of albumins and globulins in the liver
D	Disturbed lipid exchange in the liver
E	Alterations in the lipid composition of blood
№	krok 2015
Тема	renal failure
Текст завдання	There is high content of proteins and erythrocytes in urine. This can be caused by increased:
Правильный ответ	Permeability of renal filter permeability
B	Effective filtration pressure
C	Hydrostatic blood pressure in glomerular capillaries
D	Hydrostatic pressure of primary urine in capsule

Е	Oncotic pressure of blood plasma
№	krok 2015
Тема	renal failure
Текст завдання	A patient has oliguria caused by acute renal failure. What daily amount of urine corresponds with this symptom?
Правильний відповідь	100-500 ml
В	1500-2000 ml
С	1000-1500 ml
Д	500-1000 ml
Е	50-100 ml
№	krok 2015
Тема	the Gastrointestinal tract
Текст завдання	A 39-year-old patient has been suffering from gastric ulcer for the last 4 years. His condition exacerbates in spring and autumn: he suffers from pain in epigastrium, heartburn, nausea, constipation. What nosological term can be applied to the period between two exacerbations?
Правильний відповідь	Pathological state
В	Pathological process
С	Pathological reaction
Д	Typical pathological process
Е	Good health
№	krok 2015
Тема	RENAL FAILURE
Текст завдання	A patient, who has been suffering from severe injury of thorax, went into shock followed by symptoms of acute renal failure. What is the primary mechanism of acute renal failure development in this case?
Правильний відповідь	Arterial pressure drop
В	Disruption of urinary outflow
С	Increase of pressure in glomerular capsule
Д	Increase of pressure in renal arteries
Е	Decrease of oncotic blood pressure
№	krok 2015
Тема	THE GASTROINTESTINAL TRACT

Текст завдання	A patient has addressed a doctor with complaint of gastric ulcer exacerbation. The following membrane cytoceptors should be blocked in the course of the patient's complex therapy:
Правильний ответ	H ₂ -histamine
B	H ₁ -histamine
C	α -adrenergic receptor
D	β ₁ -adrenergic receptor
E	β ₂ -adrenergic receptor
№	krok 2017
Тема	Endocrinal pathology
Текст завдання	A 30-year-old woman has decreased enzyme content in the pancreatic juice. This condition can be caused by insufficient secretion of the following hormone:
Правильний ответ	Cholecystokininpancreozymin
B	Somatostatin
C	Secretin
D	Gastric inhibitory polypeptide
E	Vasoactive intestinal peptide
№	krok 2017
Тема	ENDOCRINE PATHOPHYSIOLOGY
Текст завдання	A patient is in the state of hypoglycemic coma. What hormone can cause this condition if overdosed?
Правильний ответ	Insulin
B	Progesterone
C	Cortisol
D	Somatotropin
E	Corticotropin
№	krok 2017
Тема	ENDOCRINE PATHOPHYSIOLOGY
Текст завдання	Due to morbid affection of the supraoptic and paraventricular nuclei of the hypothalamus a 40-year-old patient has developed polyuria (10-12 liters per day) and polydipsia. The following hormone is deficient, thus leading to this disturbance:
Правильний ответ	Vasopressin
B	Oxytocin

C	Corticotropin
D	Somatotropin
E	Thyrotropin
№	krok 2017
Тема	ENDOCRINE PATHOPHYSIOLOGY
Текст завдання	A doctor has established significant growth retardation, disproportional body build, and mental deficiency of a child. What is the most likely cause of this pathology?
Правильний ответ	Hypothyroidism
B	Insufficient nutrition
C	Hyperthyroidism
D	Genetic defects
E	Hypopituitarism
№	krok 2017, 2016
Тема	CENTRAL NERVOUS SYSTEM
Текст завдання	The patient's examination in a hospital specialised in diseases of nervous system has revealed absence of light-induced miosis. It is caused by the damage of the following brain structures:
Правильний ответ	Vegetative nuclei of the 3rd pair of cranial nerves
B	Red nuclei of mesencephalon
C	Reticular nuclei of mesencephalon
D	Hypothalamus nuclei
E	Reticular nuclei of medulla oblongata
№	krok 2017
Тема	ENDOCRINE PATHOPHYSIOLOGY
Текст завдання	A 56-year-old man presents with parathyroid tumor. The following is observed: muscle weakness, osteoporosis, bone deformation, nephroliths consisting of oxalates and phosphates. The patient's condition is caused by:
Правильний ответ	Increased secretion of parathyroid hormone
B	Decreased secretion of parathyroid hormone
C	Increased secretion of calcitonin
D	Decreased secretion of calcitriol
E	Increased secretion of thyroxin

№	krok 2017
Тема	ENDOCRINE PATHOPHYSIOLOGY
Текст завдання	A patient with autoimmune thyroiditis has been prescribed a peptide hormonal agent. Specify this agent:
Правильний відповідь	L-thyroxin
B	Trimethoprim
C	Triamcinolone
D	Triquilar
E	Tamoxifen
№	krok 2017
Тема	CENTRAL NERVOUS SYSTEM
Текст завдання	A patient presents with dysfunction of the cerebral cortex accompanied by epileptic seizures. He has been administered a biogenic amine synthesized from glutamate and responsible for central inhibition. What substance is it?
Правильний відповідь	γ -aminobutyric acid
B	Serotonin
C	Dopamine
D	Acetylcholine
E	Histamine
№	krok 2017
Тема	CENTRAL NERVOUS SYSTEM
Текст завдання	An 84-year-old patient suffers from parkinsonism. One of the pathogenetic development elements of this disease is deficiency of a certain mediator in some of the brain structures. Name this mediator:
Правильний відповідь	Dopamine
B	Adrenaline
C	Noradrenaline
D	Histamine
E	Acetylcholine
№	krok 2016, 2015
Тема	ENDOCRINE SYSTEM. CENTRAL NERVOUS SYSTEM

Текст завдання	A 43-year-old woman complains of weight loss, hyperhidrosis, low-grade fever, increased irritability. She has been found to have hyperfunction of the sympatheticadrenal system and basal metabolism. These disorders can be caused by hypersecretion of the following hormone:
Правильний ответ	Thyroxine
B	Somatotropin
C	Corticotropin
D	Insulin
E	Aldosterone
№	krok 2016
Тема	ENDOCRINE SYSTEM. CENTRAL NERVOUS SYSTEM
Текст завдання	A 40-year-old woman suffering from diffuse toxic goiter presents with constant increase of her body temperature. What mechanism results in such clinical presentation?
Правильний ответ	Separatio of oxidation and phosphorization in cell mitochondria
B	Increased breakdown of glycogen inhepatic cells
C	Increased catabolism of protein in cells
D	Increased excitability of nerve cells
E	Increased cell sensitivity to catecholamines
№	krok 2016
Тема	endocrine system
Текст завдання	A patient with pituitary tumor complains of increased daily diuresis (polyuria). Glucose concentration in blood plasma equals 4,8 mmol/l. What hormone can be the cause of this, if its secretion is disturbed?
Правильний ответ	Vasopressin
B	Aldosterone
C	Natriuretic hormone
D	Insulin
E	Angiotensin I
№	krok 2016
Тема	the nervous system
Текст завдання	Parkinson's disease is caused by disrupted dopamine synthesis. What brain structure synthesizes this neurotransmitter?
Правильний ответ	Substantia nigra

B	Pallidum
C	Quadrigeminal plate
D	Red nuclei
E	Hypothalamus
№	krok 2015
Тема	endocrine system
Текст завдання	A 40-year-old patient was revealed to have blood clotting time of 2 minutes under a stressful condition. It is primarily caused by the following hormon affecting hemocoagulation:
Правильний ответ	Catecholamine
B	Cortisol
C	Aldosterone
D	Somatotropin
E	Vasopressin
№	krok 2015
Тема	nervous system
Текст завдання	Certain brain structures of test animals have been subjected to electrostimulation, as an experiment, resulting in development of polyphagia (abnormal desire to consume excessive amounts of food) in test animals. Electrodes have been inserted in the following brain structures:
Правильний ответ	Lateral nuclei of hypothalamus
B	Ventromedial nuclei of hypothalamus
C	Supraoptic nuclei of hypothalamus
D	Adenohypophysis
E	Red nuclei
№	krok 2015
Тема	ENDOCRINE SYSTEM
Текст завдання	A 12-year-old child is of short stature, has disproportionate body structure and mental retardation. These characteristics might be caused by the hyposecretion of the following hormone:
Правильний ответ	Thyroxine
B	Insulin
C	Cortisol

D	Somatotropin
E	Glucagon
№	krok 2015
Тема	THE ENDOCRINE SYSTEM
Текст завдання	A preparation of endocrine gland demonstrates cortical and medullary substances divided with connective tissue layer. In the cortical substance parenchyma cells make up three zones: they form rounded clusters in the superficial zone, parallel strands in the middle one, and in the deep zone cell strands form netlike structure. What gland is it?
Правильний ответ	Adrenal
B	Thyroid
C	Hypophysis
D	Epiphysis
E	Hypothalamus
№	krok 2015
Тема	THE NERVOUS SYSTEM
Текст завдання	The patient's examination in a hospital specialised in diseases of nervous system has revealed absence of light-induced miosis. It is caused by damage of the following brain structures:
Правильний ответ	Vegetative nuclei of the 3rd pair of cranial nerves
B	Red nuclei of mesencephalon
C	Reticular nuclei of mesencephalon
D	Hypothalamus nuclei
E	Reticular nuclei of medulla oblongata
№	krok 2015
Тема	THE ENDOCRINE SYSTEM
Текст завдання	A patient with pituitary tumor complains of increased daily diuresis (polyuria). Glucose concentration in blood plasma equals 4,8 mmol/l. What hormone can be the cause of this if its secretion is disturbed?
Правильний ответ	Vasopressin
B	Aldosterone
C	Natriuretic hormone
D	Insulin
E	Angiotensin I

№	krok 2015
Тема	THE NERVOUS SYSTEM
Текст завдання	After arriving in the polar region, researchers from Australia have complained of nervous disorders, loss of appetite, aggravation of chronic diseases for 6 months. What process has been disrupted in extreme conditions?
Правильний відповідь	Adaptation
B	Tolerance
C	Tachyphylaxis
D	Stress
E	Reparation
№	krok 2015
Тема	NERVOUS SYSTEM
Текст завдання	Peripheral nerve trauma causes muscle atrophy; bones become porous and brittle; sores appear on skin and mucosa. What function of nervous system is damaged?
Правильний відповідь	Trophic
B	Motor
C	Sensory
D	Vegetative
E	Higher nervous activity
№	krok 2015
Тема	THE NERVOUS SYSTEM
Текст завдання	A 36-year-old patient had had a traumatic brain injury which caused a swallowing impairment. Which part of brain was affected?
Правильний відповідь	Medulla oblongata
B	Mesencephalon
C	Diencephalon
D	Reticular formation
E	Thalamus
№	krok 2015
Тема	THE ENDOCRINE SYSTEM
Текст завдання	A 43-year-old patient has acute pancreatitis with concomitant disruption of common bile duct patency. What condition can it result in?

Правильный ответ	Mechanical jaundice
B	Hemolytic jaundice
C	Hepatocellular jaundice
D	Hepatic coma
E	Portal hypertension
№	krok 2015
Тема	THE NERVOUS SYSTEM
Текст завдання	In course of an experiment researchers stimulate a branch of a sympathetic nerve that innervates heart. What changes in cardiac activity should be registered?
Правильный ответ	Increase in heart rate and heart force
B	Decrease in heart force
C	Increase in heart rate
D	Increase in heart force
E	Increase in arterial pressure
№	krok 2015
Тема	THE ENDOCRINE SYSTEM
Текст завдання	A patient with hypoparathyreosis has multiple carious lesions of teeth. This pathology is caused by insufficiency of the following hormone:
Правильный ответ	Calcitonin
B	Thyroxin
C	Triiodothyronine
D	Thyroidstimulating hormone
E	Somatotropin
№	krok 2012
Тема	Endocrinal pathophysiology
Текст завдання	A patient at the early stage of diabetes mellitus was found to have polyuria. What is its cause?
Правильный ответ	Hyperglycemia
B	Ketonemia
C	Hypocholesterolemia
D	Hypercholesterolemia

Е	Hyperkalemia
№	krok 2012
Тема	vascular pathophysiology
Текст завдання	A 67-year-old patient has atherosclerosis of cardiac and cerebral vessels. Examination revealed hyperlipidemia. What class of blood plasma lipoproteids is most important in atherosclerosis pathogenesis?
Правильний відповідь	Low-density lipoproteids
В	Chylomicrons
С	α -lipoproteids
Д	High-density lipoproteids
Е	-
№	krok 2012
Тема	cardiac pathophysiology
Текст завдання	After a serious psychoemotional stress a 48-year-old patient suddenly developed acute heart ache irradiating to the left arm. Nitroglycerine relieved pain after 10 minutes. What is the leading pathogenetic mechanism of this process development?
Правильний відповідь	Spasm of coronary arteries
В	Dilatation of peripheral vessels
С	Obstruction of coronary vessels
Д	Compression of coronary vessels
Е	Increase in myocardial oxygen consumption
№	krok 2012
Тема	PATHOPHYSIOLOGY OF EXTREMAL STATES
Текст завдання	A comatose patient has been delivered to a hospital. He has a 5-year history of type 2 diabetes mellitus. Objectively: breathing is deep and noisy, there is a smell of acetone around the patient. The concentration of glucose in blood is 15,2 millimole/l, of ketone bodies - 100 micromole/l. These disorders are typical for the following complication of this disease:
Правильний відповідь	Ketoacidotic coma
В	Hepatic coma
С	Hyperglycemic coma
Д	Hypoglycemic coma
Е	Hyperosmolar coma
№	krok 2012, 2008

Тема	blood pathophysiology
Текст завдання	A 42-year-old 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 - $2,8 \cdot 10^{12}/l$, leukocytes - $8 \cdot 10^9/l$, Hb- 90 g/l. What complication is it?
Правильний відповідь	Haemorrhage
B	Penetration
C	Perforation
D	Canceration
E	Pyloric stenosis
№	krok 2012, 2010
Тема	PATHOPHYSIOLOGY OF EXTREMAL STATES
Текст завдання	As a result of a trauma a patient 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:
Правильний відповідь	Erectile
B	Latent
C	Terminal
D	Torpid
E	-
№	krok 2012
Тема	pathophysiology of respiration
Текст завдання	A patient with evident pneumosclerosis that developed after infiltrative pulmonary tuberculosis presents with respiratory failure. What is its pathogenetic type?
Правильний відповідь	Restrictive
B	Obstructive
C	Disregulative
D	Reflectory
E	Apneustic
№	krok 2012, 2008
Тема	allergy

Текст завдання	A patient has been diagnosed with acute glomerulonephritis that developed after he had had streptococcal infection. It is most likely that the affection of basal glomerular membrane is caused by an allergic reaction of the following type:
Правильний ответ	Immune complex
B	Anaphylactic
C	Cytotoxic
D	Delayed
E	Stimulating
№	krok 2012
Тема	Endocrinal pathophysiology
Текст завдання	A 45-year-old woman has been diagnosed with endemic goiter. What mechanism has caused hyperplasia of thyroid gland in this patient?
Правильний ответ	Increased thyrotropin production
B	Increased thyroxine production
C	Increased iodine absorption
D	Increased hydration of derma and hypodermic cellulose
E	Increased catecholamine production
№	krok 2012, 2011, 2010
Тема	Blood pathophysiology
Текст завдання	As a result of a road accident a 26-year-old man is in the torpid phase of shock. Blood count: leukocytes - $3,2 \cdot 10^9/l$. What is the leading mechanism of leukopenia development?
Правильний ответ	Leukocyte redistribution in the bloodstream
B	Leukopoiesis inhibition
C	Faulty release of mature leukocytes from the bone marrow into the blood
D	Leukocyte destruction in the hematopoietic organs
E	Increased excretion of the leukocytes from the organism
№	krok 2012, 2011, 2010
Тема	Endocrinal pathophysiology
Текст завдання	A 5-month-old boy was hospitalized for tonic convulsions. He has a life-time history of this disease. Examination revealed coarse hair, thinned and fragile nails, pale and dry skin. In blood: calcium - 1,5 millimole/l, phosphor - 1,9 millimole/l. These changes are associated with:

Правильный ответ	Hypoparathyroidism
B	Hyperparathyroidism
C	Hyperaldosteronism
D	Hypoaldosteronism
E	Hypothyroidism
№	krok 2012
Тема	pathophysiology of respiration
Текст завдання	When water affects mucous membrane of the inferior nasal meatuses, this causes "diver reflex" that provokes:
Правильный ответ	Reflexory apnea
B	Reflexory dyspnea
C	Reflexory hyperpnea
D	Cough
E	Bronchospasm
№	krok 2012
Тема	blood pathophysiology
Текст завдання	A group of students who were climbing up a mountain presented with euphoria, tachypnea, tachycardia. Specify the immediate reason for hypocapnia accompanying mountain sickness:
Правильный ответ	Increase in respiration rate and depth
B	Decrease in respiration depth
C	Erythrocytosis
D	Anaemia
E	Increase in heart rate
№	krok 2012
Тема	cardiac pathophysiology
Текст завдання	A 67-year-old patient complains of periodic heart ache, dyspnea during light physical activities. ECG reveals extraordinary contractions of heart ventricles. Such arrhythmia is called:
Правильный ответ	Extrasystole
B	Bradycardia
C	Tachycardia
D	Flutter

Е	Fibrillation
№	krok 2012
Тема	digestive pathophysiology. jaundice
Текст завдання	An infectious disease unit admitted a patient with signs of jaundice caused by hepatitis virus. Select an indicator that is specific only for parenchymatous jaundice:
Правильний ответ	Increase in ALT and AST rate
В	Hyperbilirubinemia
С	Bilirubinuria
Д	Cholaemia
Е	Urobilinuria
№	krok 2012
Тема	digestive pathophysiology
Текст завдання	Toxic affection of liver results in dysfunction of protein synthesis. It is usually accompanied by the following kind of dysproteinemia:
Правильний ответ	Absolute hypoproteinemia
В	Relative hypoproteinemia
С	Absolute hyperproteinemia
Д	Relative hyperproteinemia
Е	Paraproteinemia
№	krok 2012
Тема	pathophysiology of aCID-base BALANCE
Текст завдання	A 30-year-old comatous patient with type I diabetes mellitus had been admitted to a hospital. Laboratory tests revealed hyperglycemia, ketonemia. Which of the following metabolic disorders might be found in this patient?
Правильний ответ	Metabolic acidosis
В	Metabolic alkalosis
С	Respiratory acidosis
Д	Respiratory alkalosis
Е	Normal acid-base state
№	krok 2012
Тема	BLOOD pathophysiology

Текст завдання	A 26-year-old pregnant woman is under treatment at an inpatient hospital. After a continuous attack of vomiting she was found to have reduced volume of circulating blood. What kind of change in general blood volume is the case?
Правильний ответ	Polycythemic hypovolemia
B	Simple hypovolemia
C	Oligocythemic hypovolemia
D	Polycythemic hypervolemia
E	Oligocythemic hypervolemia
№	krok 2012
Тема	ALLERGY
Текст завдання	A 45-year-old male died from disseminated tuberculosis. On autopsy the symptoms of tuberculosis were confirmed by both microscopical and histological analyses. All the affected organs had epithelioid cell granulomas with caseous necrosis in the centre. What kind of hypersensitivity reaction underlies the process of granuloma development?
Правильний ответ	Delayed
B	Antibody-dependent cytotoxicity
C	Complement-dependent cytotoxicity
D	Anaphylactic
E	Immune complex
№	krok 2012
Тема	pathophysiology OF CNS
Текст завдання	After a car accident a patient has been diagnosed with a fracture of spine. He is unable to move his lower extremities. This form of motor disorder is called:
Правильний ответ	Paraplegia
B	Hemiplegia
C	Quadriplegia
D	Paresis
E	Paralysis
№	krok 2011
Тема	INFLAMMATION
Текст завдання	An inflammation is characterized by the dilatation of blood capillaries in the region of injury, reduced circulation, increased permeability of vessel walls. What cells play the main part in the development of these changes?

Правильный ответ	Tissue basophils
B	Fibroblasts
C	Plasmocytes
D	Eosinophils
E	Macrophages
№	krok 2011, 2010
Тема	DIGESTIVE PATHOPHYSIOLOGY
Текст завдання	A 30-year-old woman has subnormal concentration of enzymes in the pancreatic juice. This might be caused by the hyposecretion of the following gastro-intestinal hormone:
Правильный ответ	Cholecystokininpancreozymin
B	Somatostatin
C	Secretin
D	Gastro-inhibiting peptide
E	Vaso-intestinal peptide
№	krok 2011
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	A patient complains of frequent gingival haemorrhages he has been experiencing since his childhood. Blood test revealed a deficiency in blood-coagulation factor VIII. This means that the patient has an impairment of:
Правильный ответ	Prothrombinase generation
B	Thrombin generation
C	Fibrin generation
D	Thrombocyte adhesion
E	Thrombocyte aggregation
№	krok 2011
Тема	PATHOPHYSIOLOGY OF CNS
Текст завдання	A 70-year-old patient is diagnosed with brainstem haemorrhage. Examination revealed increased tonus of flexor muscles accompanied by decreased tonus of extensor muscles. Such changes in muscle tonus can be explained by the irritation of the following brain structures:
Правильный ответ	Red nuclei
B	Vestibular nuclei

С	Quadrigeminal plate
D	Black substance
E	Reticular formation
№	krok 2011
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	A child presents with symptoms of psychic and physical retardation (cretinism). It is usually associated with the following hormone deficiency:
Правильний відповідь	Thyroxin
B	Somatotropic
С	Calcitonin
D	Insulin
E	Testosterone
№	krok 2011
Тема	PATHOPHYSIOLOGY OF CNS
Текст завдання	A patient lost consciousness as a result of a cerebral trauma. This might be caused by damaging the following zones of cerebral cortex:
Правильний відповідь	Occipital
B	Temporal
С	Frontal
D	Parietal
E	Temporal and parietal
№	krok 2011
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	A 29-year-old patient was delivered to a hospital because of intoxication with carbon monoxide. Objectively: the patient presents with symptoms of severe hypoxia - evident dyspnea, cyanosis, tachycardia. What compound is produced as a result of intoxication with carbon monoxide?
Правильний відповідь	Carboxyhemoglobin
B	Methemoglobin
С	Carbhemoglobin
D	Sulfhemoglobin

Е	Oxyhemoglobin
№	krok 2011
Тема	PATHOPHYSIOLOGY OF KIDNEYS
Текст завдання	A patient with a history of chronic glomerulonephritis presents with azotemia, oliguria, hypo- and isosthenuria, proteinuria. What is the leading factor in the pathogenesis of these symptoms development under chronic renal failure?
Правильний ответ	Mass decrease of active nephrons
В	Intensification of glomerular filtration
С	Tubular hyposecretion
Д	Disturbed permeability of glomerular membranes
Е	Intensification of sodium reabsorption
№	krok 2011
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	A 29-year-old female patient has moon face, upper body obesity, striae on her anterior abdominal wall, hirsutism; urine shows an increased rate of 17-oxy ketosteroids. What disease are these presentations typical for?
Правильний ответ	Itsenko-Cushing syndrome
В	Pheochromocytoma
С	Conn's syndrome
Д	Primary aldosteronism
Е	Secondary aldosteronism
№	krok 2011
Тема	PATHOPHYSIOLOGY OF WATER METABOLISM
Текст завдання	In the focus of inflammation the vessels of microvasculature exhibit an increased permeability and hydrodynamic pressure rise. Intertissue fluid has an increase in osmotic concentration and dispersity of protein structures. What type of edema will develop in this case?
Правильний ответ	Combined
В	Hydrodynamic
С	Colloid osmotic
Д	Lymphogenous
Е	Membranogenic
№	krok 2011

Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	After an attack of bronchial asthma a patient had his peripheral blood tested. What changes can be expected?
Правильный ответ	Eosinophilia
B	Leukopenia
C	Lymphocytosis
D	Thrombocytopenia
E	Erythrocytosis
№	krok 2011, 2010
Тема	ALLERGY
Текст завдання	A teenager had his tooth extracted under novocain anaesthesia. 10 minutes later he presented with skin pallor, dyspnea, hypotension. When this reaction is developed and the allergen achieves tissue basophils, it reacts with:
Правильный ответ	IgE
B	IgA
C	IgD
D	IgM
E	T-lymphocytes
№	krok 2011
Тема	VASCULAR PATHOPHYSIOLOGY
Текст завдання	A 50-year-old patient suffers from essential hypertension. After a physical stress he experienced muscle weakness, breathlessness, cyanosis of lips, skin and face. Respiration was accompanied by distinctly heard bubbling rales. What mechanism underlies the development of this syndrome?
Правильный ответ	Acute left-ventricular failure
B	Chronic right-ventricular failure
C	Chronic left-ventricular failure
D	Collapse
E	Cardiac tamponade
№	krok 2011
Тема	VASCULAR PATHOPHYSIOLOGY
Текст завдання	A patient with obliterating endarteritis underwent ganglionic sympathectomy. What type of arterial hyperaemia should have developed as a result of the surgery?

Правильный ответ	Neuroparalytic
B	Neurotonic
C	Metabolic
D	Functional
E	Reactive
№	krok 2011
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	A 58-year-old female patient complains of rapid fatigability, performance decrement, sleepiness, dyspnea during fast walking. In blood: RBCs - $4,0 \cdot 10^{12}/l$, Hb - 80 g/l, CI - 0,6; alurge number of annulocytes and microcytes. What anaemia are these presentations typical for?
Правильный ответ	Iron-deficient
B	Posthemorrhagic
C	Haemolytic
D	Pernicious
E	Sickle-cell
№	krok 2011
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	A 46-year-old female patient complaining of having alveolar haemorrhage for 6 hours after a tooth extraction, general weakness and dizziness was delivered to a hospital. The patient has a history of essential hypertension. Objectively: pale skin and mucous membranes. In blood: Hb - 80 g/l, Ht30%, bleeding and coagulation time is normal. What complication had been provoked by the haemorrhage?
Правильный ответ	Acute posthaemorrhagic anaemia
B	Iron deficiency anaemia
C	Chronic posthaemorrhagic anaemia
D	Folic acid deficiency anaemia
E	Haemolytic anaemia
№	krok 2011
Тема	ENDOCRINAL PATHOPHYSIOLOGY

Текст завдання	A 20-year-old patient complains of morbid thirst and huperdiuresis (up to 10 l daily). Glucose concentration in blood is normal but it is absent in urine. The patient has been diagnosed with diabetes insipidus. What hormonal drug is the most appropriate for management of this disorder?
Правильний ответ	Vasopressin
B	Cortisol
C	Thyroxin
D	Oxytocin
E	Insulin
№	krok 2011, 2010
Тема	ALLERGY
Текст завдання	A child suspected for tuberculosis underwent Mantoux test. 24 hours after allergen injection there appeared a swelling, hyperaemia and tenderness. What are the main components in the development of this reaction?
Правильний ответ	Mononuclears, T-lymphocytes and lymphokines
B	Granulocytes, T-lymphocytes and IgG
C	Plasmatic cells, T-lymphocytes and lymphokines
D	B-lymphocytes, IgM
E	Macrophages, B-lymphocytes and monocytes
№	krok 2011, 2010
Тема	PATHOPHYSIOLOGY OF CNS
Текст завдання	A 60-year-old patient consulted a doctor about retrosternal pain arising immediately after physical exercise. He was prescribed nitroglycerin. The medication relieved retrosternal pain but the patient got acute headache. What is the likely mechanism of this side effect?
Правильний ответ	Intracranial pressure rise
B	α -adrenoreceptor block
C	Phosphodiesterase block
D	Reduced accumulation of calcium ions
E	Inhibited formation of mediators in brain
№	krok 2011, 2010
Тема	IMPAIRMENT OF METABOLISM

Текст завдання	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?
Правильний ответ	Absolute hypoalbuminemia
B	Absolute hyperalbuminemia
C	Absolute hyperfibrinogenemia
D	Protein rate in blood will stay unchanged
E	Absolute hyperglobulinemia
№	krok 2011, 2010
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	It is known that patients with diabetes mellitus are more subject to inflammatory processes, they have low regeneration and slower wound healing. What is the reason for this?
Правильний ответ	Decrease in proteosynthesis
B	Increase in lipolysis
C	Accelerated gluconeogenesis
D	Decrease in lipolysis
E	Intensification of catabolism
№	krok 2011, 2010
Тема	PATHOPHYSIOLOGY OF WATER METABOLISM
Текст завдання	A 49-year-old woman spent a lot of time standing. As a result of it she got leg edema. What is the most likely cause of the edema?
Правильний ответ	Increase in hydrostatic pressure of blood in veins
B	Decrease in hydrostatic pressure of blood in veins
C	Decrease in hydrostatic pressure of blood in arteries
D	Increase in oncotic pressure of blood plasma
E	Increase in systemic arterial pressure
№	krok 2011
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	Blood test of a patient suffering from atrophic gastritis gave the following results: RBCs - $2,0 \cdot 10^{12}/l$, Hb - 87 g/l, colour index - 1,3, WBCs - $4,0 \cdot 10^9/l$, thrombocytes - $180 \cdot 10^9/l$. Anaemia might have been caused by the following substance deficiency:
Правильний ответ	Vitamin B_{12}
B	Vitamin A

C	Vitamin K
D	Iron
E	Zinc
№	krok 2010
Тема	PATHOPHYSIOLOGY OF CNS
Текст завдання	A 70year-old patient is diagnosed with brainstem haemorrhage. Examination revealed increased tonus of flexor muscles accompanied by decreased tonus of extensor muscles. Such changes in muscle tonus can be explained by the irritation of the following brain structures:
Правильний ответ	Red nuclei
B	Vestibular nuclei
C	Quadrigeminal plate
D	Black substance
E	Reticular formation
№	krok 2010
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	Glucose concentration in a patient's blood is 15 millimole/l (reabsorption threshold is 10 millimole/l). What effect can be expected?
Правильний ответ	Glucosuria
B	Diuresis reduction
C	Reduced glucose reabsorption
D	Reduced vasopressin secretion
E	Reduced aldosterone secretion
№	krok 2010, 2008
Тема	VASCULAR PATHOPHYSIOLOGY
Текст завдання	Introduction of a local anesthetic to a patient resulted in the development of anaphylactic shock. What is the leading mechanism of blood circulation disturbance?
Правильний ответ	Decrease of vascular tone
B	Hypervolemia
C	Pain
D	Activation of sympathoadrenal system

Е	Reduction of contractile myocardium function
№	krok 2010
Тема	IMPAIRMENT OF ELECTROLITES METABOLISM
Текст завдання	A woman with intractable vomiting was admitted to the infectious disease ward. What changes of water-salt metabolism are likely to be observed?
Правильний ответ	Hypo-osmolar dehydration
В	Isoosmolar dehydration
С	Hyperosmolar dehydration
Д	Hypo-osmolar hyperdehydration
Е	Hyper-osmolar hyperdehydration
№	krok 2010
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	Examination of a 35-year-old patient included histological analysis of the red bone marrow punctate that revealed a significant increase in the megakaryocyte number. This will cause the following alterations in the peripheral blood:
Правильний ответ	Thrombocytopenia
В	Leukocytosis
С	Thrombocytosis
Д	Agranulocytosis
Е	Leukopenia
№	krok 2010
Тема	PATHOPHYSIOLOGY OF CNS
Текст завдання	30 minutes after a road accident a 35-year-old man was found to have a massive trauma of his lower extremities without significant external haemorrhage. The injured is in excited state. What is the leading component of traumatic shock pathogenesis that requires immediate correction?
Правильний ответ	Pain
В	Internal haemorrhage
С	Internal plasm loss
Д	Intoxication
Е	Internal organs dysfunction
№	krok 2010

Тема	PATHOPHYSIOLOGY OF CNS
Текст завдання	A patient with toxic paralysis of respiratory centre was given several cordiamin injections intended to stimulate the respiratory centre. What side effect may arise?
Правильний ответ	Clonic convulsions
B	Tonic convulsions
C	Arrhythmia
D	Collapse
E	Bronchospasm
№	krok 2010, 2008
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	A pregnant woman lost for about 800 ml of blood during labour. There is also tachycardia, arterial pressure is 100/70 mm Hg, tachypnea up to 28/min. What hypoxia type is primary in such clinical situation?
Правильний ответ	Blood
B	Cardiovascular
C	Mixed
D	Tissue
E	Respiratory
№	krok 2010
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	Examination of a patient, suffering from atrophic gastritis, revealed megaloblastic anemia. The anemia is likely to be caused by the deficiency of the following substance:
Правильний ответ	Gastromucoproteid
B	Vitamin B_6
C	Vitamin B_1
D	Iron
E	Erythropoietins
№	krok 2010, 2008
Тема	CARDIAC PATHOPHYSIOLOGY
Текст завдання	An electrical cardiostimulator was implanted to a 75 y.o. man with heart rate of 40 bpm. After that heart rate rose up to 70 bpm. Cardiostimulator assumed the function of the following heart part:

Правильный ответ	Sinoatrial node
B	Atrioventricular node
C	His' bundle branches
D	His' bundle fibers
E	Purkinje's fibers
№	krok 2010, 2009
Тема	PATHOPHYSIOLOGY OF DIGESTION. JAUNDICE.
Текст завдання	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?
Правильный ответ	Increased haemolysis of erythrocytes
B	Obstruction of bile outflow from the liver
C	Damage of liver parenchyma
D	Impaired generation of direct bilirubin
E	Impaired transformation of urobilinogen in the liver
№	krok 2010, 2008
Тема	PATHOPHYSIOLOGY OF ACID-BASE BALANCE
Текст завдання	Prophylactic examination of a patient revealed hyperglycemia, ketonuria, polyuria, glycosuria. What form of acid-base balance disorder is the case?
Правильный ответ	Metabolic acidosis
B	Gaseous acidosis
C	Nongaseous acidosis
D	Gaseous alkalosis
E	Metabolic alkalosis
№	krok 2010
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	Analysis of urine from a 24-year-old man revealed the following changes: daily diuresis - 10 l, relative density - 1,001, qualitative alterations are absent. A patient complains of excessive thirst, frequent urination. What is the most likely cause of this disease?
Правильный ответ	Vasopressin hyposecretion
B	Glucocorticoid hypersecretion
C	Vasopressin hypersecretion

D	Relative insulin insufficiency
E	Aldosteron hypersecretion
№	krok 2010
Тема	ALLERGY
Текст завдання	During anaesthetization of the oral cavity mucous tunic a patient developed anaphylactic shock (generalized vasodilatation, increase in vascular permeability along with escape of liquid to the tissues). What type of hypersensitivity has the patient developed?
Правильний ответ	I type (anaphylactic)
B	II type (antibody-dependent)
C	III type (immune complex)
D	IV type (cellular cytotoxicity)
E	V type (granulomatosis)
№	krok 2009
Тема	PATHOPHYSIOLOGY OF ACID-BASE BALANCE
Текст завдання	As a result of improper feeding an infant got fullblown diarrhea. One of its main consequences is excretion of large amount of sodium bicarbonate. What form of acid-base balance disturbance is it?
Правильний ответ	Excretory acidosis
B	Metabolic alkalosis
C	Respiratory acidosis
D	Respiratory alkalosis
E	Acid-base balance won't be disturbed
№	krok 2009
Тема	PATHOPHYSIOLOGY OF EXTREMAL STATES
Текст завдання	An experimental rat got intraabdominal injection of 10 ml of 40% glucose solution. 60 minutes later the rat passed into a comatose state as a result of dehydration. What is the mechanism of development of this state?
Правильний ответ	Rise of osmotic pressure of extracellular fluid
B	Rise of oncotic pressure of extracellular fluid
C	Reduction of vasopressin secretion
D	Loss of salts and water
E	Acid-base disbalance

№	krok 2009
Тема	RESPIRATORY PATHOPHYSIOLOGY
Текст завдання	A 62 year old patient with cerebral haemorrhage was admitted to the neurological department in grave condition. Objectively: increase of respiration depth and rate with its following reduction to apnoea, thereafter respiration cycle restores. What respiration type is it?
Правильний ответ	Cheyne-Stokes
B	Kussmaul's
C	Biot's
D	Gasping
E	Apneustic
№	krok 2009
Тема	PATHOPHYSIOLOGY OF KIDNEYS
Текст завдання	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:
Правильний ответ	Polyuric
B	Metabolic
C	Hemodynamic
D	Ischemic
E	Pathochemical
№	krok 2009
Тема	PATHOPHYSIOLOGY OF WATER BALANCE
Текст завдання	Examination of experimental rats that have been getting only carbohydrate feed for a long time revealed accumulation of water in tissues. What is the leading pathogenetic mechanism of edema development?
Правильний ответ	Hypooncotic
B	Membranogenic
C	Dysregulatory
D	Lymphogenous
E	Hyperosmolar
№	krok 2009
Тема	BLOOD PATHOPHYSIOLOGY

Текст завдання	Examination of a patient 24 hours after appendectomy revealed neutrophilic leukocytosis with regenerative shift. What is the most probable mechanism of development of absolute leukocytosis in peripheral blood?
Правильний ответ	Intensification of leukopoiesis
B	Redistribution of leukocytes in the organism
C	Reduction of leukolysis
D	Slower emigration of leukocytes to the tissues
E	Immunity activation
№	krok 2009
Тема	PATHOPHYSIOLOGY OF EXTREMAL STATES
Текст завдання	On the 2nd day after myocardium infarction the patient's 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?
Правильний ответ	Decrease of stroke volume
B	Intoxication by the products of necrotic degeneration
C	Decrease of circulating blood volume
D	Paroxysmal tachycardia
E	Anaphylactic reaction to myocardial proteins
№	krok 2009
Тема	PATHOPHYSIOLOGY OF KIDNEYS
Текст завдання	A 35 year old patient complains about permanent thirst, poor appetite. He drinks 9 l water per day. Daily diuresis is increased, urine is colourless, its relative density is 1,005. The most probable cause of this pathology development is damage of:
Правильний ответ	Hypothalamic nuclei
B	Epithelium of renal tubuli
C	Adenohypophysis
D	Epiphysis
E	Basal membrane of glomerular capillaries
№	krok 2009
Тема	CARDIAC PATHOPHYSIOLOGY
Текст завдання	A patient suffering from essential arterial hypertension got hypertensive crisis that caused an attack of cardiac asthma. What is the leading mechanism of cardiac insufficiency in this case?

Правильный ответ	Cardiac overload due to increased resistance
B	Cardiac overload due to increased blood volume
C	Absolute coronary insufficiency
D	Myocardium damage
E	Disturbed blood inflow to the heart
№	krok 2009
Тема	PATHOPHYSIOLOGY OF CNS
Текст завдання	A patient underwent partial removal of a structure of central nervous system by medical indications. This resulted in development of atony, astasia, intention tremor, ataxia, adiadochokinesis. What structure of CNS was partially removed?
Правильный ответ	Cerebellum
B	Amygdaloid complex
C	Hippocampus
D	Basal ganglions
E	Motor cortex
№	krok 2009
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	A patient has been suffering from diabetes mellitus for 5 years. As a result of not keeping to a diet the patient passed into a comatose state. Emergency doctor injected him glucose. The patient's state got better. What is the most probable type of coma in this case?
Правильный ответ	Hypoglycemic
B	Acidotic
C	Hyperglycemic
D	Hepatic
E	Hypothyreoid
№	krok 2009
Тема	PATHOPHYSIOLOGY OF WATER METABOLISM
Текст завдання	A patient was admitted to the infectious diseases department. His skin was dry, with low turgor; he had ricewater stool. The patient was diagnosed with cholera. This disease is ordinarily accompanied by the following disorder of water-electrolytic balance:
Правильный ответ	Isoosmotic hypohydration
B	Hyperosmotic hyperhydration

C	Hypoosmotic hypohydration
D	Hyperosmotic hypohydration
E	Hyposmotic hyperhydration
№	krok 2009
Тема	PATHOPHYSIOLOGY OF EXTREMAL STATES
Текст завдання	For the purpose of anaesthetization a patient got injection of local anesthetic. A few minutes later the patient got dyspnea and tachycardia; he lost consciousness. What type of shock is it?
Правильний ответ	Anaphylactic
B	Cardiogenic
C	Haemorrhagic
D	Traumatic
E	Burn
№	krok 2008
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	A 9 y.o. boy was admitted to the endocrinological department. This boy has already had several fractures of hist extremities due to bone brittleness. The function of the following endocrinal glands (gland) is disturbed:
Правильний ответ	Parathyroid
B	Thyroid
C	Thymus
D	Adrenal
E	Epiphysis
№	krok 2008
Тема	PATHOPHYSIOLOGY OF SENSORY SYSTEMS
Текст завдання	As a result of punctate retinal hemorrhage a patient lost ability to see objects in the centre of visual field. In what part of retina did the hemorrhage take place?
Правильний ответ	Yellow spot
B	Ciliary part of retina
C	Iris
D	Blind spot
E	Vascular membrane

№	krok 2008
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	A 20 y.o. patient complains about morbid thirst and profuse urination (up to 10 l a day). Glucose concentration in blood is normal, urine contains no glucose. Such condition may be caused by deficiency of the following hormone:
Правильний ответ	Vasopressin
B	Oxytocin
C	Insulin
D	Triiodothyronine
E	Cortisol
№	krok 2008
Тема	PATHOPHYSIOLOGY OF EXTREMAL STATES
Текст завдання	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:
Правильний ответ	Somatotropin
B	Somatostatin
C	Tetraiodothyronine
D	Triiodothyronine
E	Cortisol
№	krok 2008
Тема	PATHOPHYSIOLOGY OF KIDNEYS
Текст завдання	A patient ill with chronic glomerulonephritis has a disturbed excretory function of kidneys. It will result in the deficit of the following blood corpuscles:
Правильний ответ	Erythrocytes
B	Leukocytes
C	Thrombocytes
D	Leukocytes and thrombocytes
E	Erythrocytes and leukocytes
№	krok 2008
Тема	RESPIRATORY PATHOPHYSIOLOGY

Текст завдання	A neurological department admitted a 62 y.o. man in grave condition on account of cerebral hemorrhage. Objectively: increase of respiration depth and frequency, then its decrease to apnoea, whereupon the cycle of respiratory movements is restored. What respiration type is it?
Правильний відповідь	Chain-Stoke's
B	Kussmaul's
C	Biot's
D	Gasping respiration
E	Apneustic
№	krok 2008
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	3 years ago a 52 y.o. man underwent an operation for stomach extraction. Results of blood analysis: erythrocytes - $2, 0 \cdot 10^{12}/l$, Hb- 85 g/l, colour index - 1,27. These changes were caused by disturbed assimilation of the following vitamin:
Правильний відповідь	B_{12}
B	B_6
C	C
D	P
E	A
№	krok 2008
Тема	INFLAMMATION
Текст завдання	Up to 50% of world population aged above thirty is affected by paradontosis. The leading part in pathogenesis of this disease is played by:
Правильний відповідь	Neurodystrophic factor
B	Parodontium tissues damaged by kallikrein
C	Parodontium damaged by active cells
D	Dental calculus caused by microflora
E	Immune damage of tissues
№	krok 2008
Тема	VASCULAR PATHOPHYSIOLOGY
Текст завдання	A patient with closed fracture of humeral bone was bandaged with plaster. The next day the injured hand became swollen, cyanotic and cold. What disorder of peripheral blood circulation are these symptoms typical for?

Правильный ответ	Venous hyperemia
B	Arterial hyperemia
C	Ischemia
D	Thrombosis
E	Embolism
№	krok 2008
Тема	CARDIAC PATHOPHYSIOLOGY
Текст завдання	A 50 y.o. 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?
Правильный ответ	Ciliary arrhythmia
B	Respiratory arrhythmia
C	Paroxysmal tachycardia
D	Atrioventricular heart block
E	Sinus extrasystole
№	krok 2008
Тема	CARDIAC PATHOPHYSIOLOGY
Текст завдання	On the 2nd day after myocardium infarction a patient experienced abrupt drop of systolic arterial pressure down to mm Hg accompanied by tachycardia of 140 beats per minute, dyspnea, loss of consciousness. What is the leading mechanism of shock pathogenesis?
Правильный ответ	Decrease of stroke volume
B	Intoxication by the products of necrotic breakdown
C	Decreased volume of circulating blood
D	Paroxysmal tachycardia
E	Anaphylactic reaction to the myocardial proteins
№	krok 2008
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	A 20 y.o. patient complains of general weakness, dizziness, rapid fatigability. Examination results: Hb- 80 g/l; microscopical analysis results: erythrocytes are deformed. These symptoms might be caused by:
Правильный ответ	Sickle-cell anemia
B	Parenchymatous jaundice

C	Acute intermittent porphyria
D	Obturator jaundice
E	Addison's disease
№	krok 2008
Тема	PATHOPHYSIOLOGY OF RESPIRATION
Текст завдання	A doctor recorded in the medical history that a patient had hypopnoe (reduced respiration depth). It means that the following characteristic of external respiration is reduced:
Правильний відповідь	Respiratory volume
B	Vital lung capacity
C	Functional residual capacity
D	Expiration capacity
E	Respiratory minute volume
№	krok 2008
Тема	ALLERGY
Текст завдання	A patient was stung by a bee. Examination results: his left hand is hot, pink and edematous, there is a big blister on the spot of the sting. What is the leading mechanism of edema development?
Правильний відповідь	Increased vascular permeability
B	Reduced blood filling of vessels
C	Vascular damage caused by the sting
D	Reduction of oncotic pressure of tissue
E	Reduction of osmotic pressure of tissue
№	krok 2008
Тема	ALLERGY
Текст завдання	A surgeon used novocaine as an anaesthetic during surgical manipulations. minutes after it the patient became pale, he got dyspnea and hypotension. What type of allergic reaction is it?
Правильний відповідь	Anaphylactic
B	Cytotoxic
C	Immune complex
D	Stimulating
E	Cell-mediated

№	krok 2008
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	After a surgical procedure an experimental animal died from intense convulsions. What endocrinal glands were extracted?
Правильний ответ	Parathyroid
B	Thyroid
C	Adrenal
D	Ovaries
E	Testicles
№	krok 2008
Тема	ALLERGY
Текст завдання	A patient has an allergic reaction accompanied by itching, edemata and reddening of skin. What biogenic amine has an increased concentration in the tissues?
Правильний ответ	Histamine
B	Serotonin
C	Tryptamine
D	Dopamine
E	Gamma-aminobutyric acid
№	krok 2008
Тема	PATHOPHYSIOLOGY OF WATER METABOLISM
Текст завдання	A patient with enteritis accompanied with intense diarrhea has reduced quantity of water in the extracellular space and increased quantity of water inside the cells as well as low blood osmolarity. Name this disorder of water-electrolytic metabolism:
Правильний ответ	Hyposmolar hypohydration
B	Hyperosmolar hypohydration
C	Osmolar hypohydration
D	Hyposmolar hyperhydration
E	Hyperosmolar hyperhydration
№	krok 2008
Тема	PATHOPHYSIOLOGY OF DIGESTION. JAUNDICE
Текст завдання	Blood analysis of a patient ill with jaundice revealed increase of total bilirubin by its indirect fraction. Urine and feces are intensively stained. What is the most probable mechanism of these abnormalities? Increased erythrocyte hemolysis

Правильный ответ	Obstructed bile outflow from the liver
B	Damage of liver parenchyma
C	Disturbed formation of direct bilirubin
D	Disturbed conversion of urobilinogen in liver
E	-
№	krok 2008
Тема	PATHOPHYSIOLOGY OF KIDNEYS
Текст завдання	A patient has recently had staphylococcal infection that led to anasarca; laboratory urine analysis revealed massive proteinuria. Results of blood analysis: hypoproteinemia, hyperlipemia. What pathology can be suspected?
Правильный ответ	Nephrotic syndrome
B	Glomerulonephritis
C	Pyelonephritis
D	Urolithiasis
E	Chronic renal insufficiency
№	krok 2008
Тема	VASCULAR PATHOPHYSIOLOGY
Текст завдання	In course of an operation on account of a granuloma in the area of the right upper incisor a patient began to bleed. The hemorrhage was stopped just only 3 hours later. The patient's anamnesis contains information about chronic lymphatic leukemia. What is the most probable cause of hemorrhage?
Правильный ответ	Thrombocytopenia
B	Thrombocytopathia
C	Lymphocytosis
D	Leukopenia
E	Eosinophilia
№	krok 2008
Тема	ALLERGY
Текст завдання	Hemotransfusion stimulated development of intravascular erythrocyte hemolysis. The patient has the following type of hypersensitivity:
Правильный ответ	II type hypersensitivity (antibody-dependent)
B	I type hypersensitivity (anaphylactic)

C	III type hypersensitivity (immune complex)
D	IV type hypersensitivity (cellular cytotoxicity)
E	V type hypersensitivity (granulomatosis)
№	krok 2007
Тема	INFLAMMATION
Текст завдання	Examination of a patient who was exposed to the ionizing radiation revealed damage of white pulp. What cells of white pulp undergo pathological changes?
Правильний відповідь	Lymphocytes
B	Neutrophilic leukocytes
C	Basophilic leukocytes
D	Monocytes
E	Tissue basophils
№	krok 2007
Тема	PATHOPHYSIOLOGY OF CNS
Текст завдання	A patient complains of rapid fatigability. Objectively: he staggers and overbalances in the upright position with closed eyes. Skeletal muscular tonus is decreased. What brain structure is most likely to be damaged?
Правильний відповідь	Cerebellum
B	Thalamus
C	Hypothalamus
D	Precentral gyrus of cerebrum cortex
E	Basal ganglions
№	krok 2007
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	A patient with chronic glomerulonephritis has disorder of excretory function of kidneys. What blood elements deficit will result from it?
Правильний відповідь	Erythrocytes
B	Leukocytes
C	Thrombocytes
D	Leukocytes and thrombocytes
E	Erythrocytes and leukocytes

№	krok 2007
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	A child has disturbed enamel and dentine formation as a result of decreased content of calcium ions in his blood. What hormone deficiency may cause such changes?
Правильний відповідь	Thyreocalcitonin
B	Somatotropin
C	Thyroxin
D	Parathormone
E	Triiodothyronine
№	krok 2007
Тема	VASCULAR PATHOPHYSIOLOGY
Текст завдання	A 2 year old child suffers from intestinal dysbacteriosis that lead to the development hemorrhagic syndrome. The most probable cause of hemorrhage is:
Правильний відповідь	Vitamin K deficiency
B	Activation of tissue thromboplastin
C	Hypovitaminosis PP
D	Fibrinogen deficiency
E	Hypocalcemia
№	krok 2007
Тема	PATHOPHYSIOLOGY OF RESPIRATION
Текст завдання	A 62 year old patient in grave condition was admitted to the neurological department on account of cerebral hemorrhage. Objectively: hyperpnoe and rising of respiratory rate, then it falls to apnea, after that the cycle of respiratory movements restores. What respiratory type is it?
Правильний відповідь	Cheyne-Stokes respiration
B	Kussmaul's respiration
C	Biot's respiration
D	Gasping respiration
E	Apneustic
№	krok 2007
Тема	ENDOCRINAL PATHOPHYSIOLOGY

Текст завдання	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?
Правильний ответ	Somatotropic
B	Corticotrophic
C	Thyreotropic
D	Gonadotropic
E	Prolactin
№	krok 2007
Тема	PATHOPHYSIOLOGY OF WATER METABOLISM
Текст завдання	A patient with pneumosclerosis has pulmonary hypertension and cardiac insufficiency of right ventricle with ascites and edemata. What is the main pathogenetic mechanism of edemata development?
Правильний ответ	Rise of hydrostatic blood pressure in veins
B	Rise of oncotic pressure of intracellular fluid
C	Reduction of oncotic blood pressure
D	Increased permeability of vessel walls
E	-
№	krok 2007
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	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 thos pathology?
Правильний ответ	Castle's factor
B	Hydrochloride acid
C	Mucin
D	Pepsin
E	Gastrin
№	krok 2007
Тема	PATHOPHYSIOLOGY OF EXTREMAL STATES

Текст завдання	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^0 - 35, 0 ⁰ , low muscular tonus, reflexes are absent, pulse is rapid and weak, AP- 50/30 mm Hg. What clinical shock stage is it?
Правильний ответ	Terminal stage
B	Erectile stage
C	Excitement stage
D	Inhibition stage
E	Torpid stage
№	krok 2007
Тема	PATHOPHYSIOLOGY OF CNS
Текст завдання	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 ⁰ . He was diagnosed with alveolitis. What type of pain does the patient have?
Правильний ответ	Protopathic
B	Epicritic
C	Visceral
D	Referred
E	Phantom
№	krok 2007
Тема	PATHOPHYSIOLOGY OF KIDNEYS
Текст завдання	A patient with primary nephrotic syndrome has the following content of whole protein: 40 g/l. What factor caused hypoproteinemia?
Правильний ответ	Proteinuria
B	Transition of protein from vessels to tissues
C	Reduced protein synthesis in liver
D	Increased proteolysis
E	Disturbance of intestinal protein absorption
№	krok 2007
Тема	PATHOPHYSIOLOGY OF WATER METABOLISM
Текст завдання	Laboratory rats that have been fed only with carbohydrate food for a long time display water accumulation in the tissues. What pathogenetic mechanism is the main cause of edema in this case?

Правильный ответ	Hypooncotic
B	Membranogenic
C	Disregulatory
D	Lymphogenic
E	Hyperosmolar
№	krok 2007
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	A patient with adenoma of glomerular zone of adrenal cortex (Conn's disease) has arterial hypertension, convulsions, polyuria. What is the main link in pathogenesis of these disorders?
Правильный ответ	Aldosterone hypersecretion
B	Aldosterone hyposecretion
C	Catecholamine hypersecretion
D	Glucocorticoid hypersecretion
E	Glucocorticoid hyposecretion
№	krok 2007
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	A 30 year old man was exposed to irradiation with about 3 Gy. What blood change will be evident in 8 hours after irradiation?
Правильный ответ	Lymphopenia
B	Leukopenia
C	Granulocytopenia
D	Thrombocytopenia
E	Anemy
№	krok 2007
Тема	PATHOPHYSIOLOGY OF ACID-BASE BALANCE
Текст завдання	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?
Правильный ответ	Nongaseous alkalosis
B	Gaseous alkalosis
C	Gaseous acidosis
D	Metabolic acidosis

Е	Excretory acidosis
№	krok 2007
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	A 19 year old patient was diagnosed with chronic acquired hemolytic anemia. What is the leading pathogenetic mechanism of this pathology's development?
Правильный ответ	Autoimmune hemolysis
В	Toxic hemolysis
С	Intracellular hemolysis
Д	Hyposmolarity of plasm
Е	Osmotic hemolysis
№	krok 2007
Тема	BLOOD PATHOPHYSIOLOGY
Текст завдання	A patient with chronic myeloleukemia has presentations of anemy - decrease of erythrocyte number and hemoglobin content, oxyphil and polychromatophil normocytes, microcytes. What pathogenetic mechanism is the main for the development of this anemy?
Правильный ответ	Replacement of erythrocytic shoot
В	Intravascular erythrocyte hemolysis
С	Vitamin ₁₂ deficiency
Д	Reduction of erythropoietin synthesis
Е	Chronic hemorrhage
№	krok 2007
Тема	VASCULAR PATHOPHYSIOLOGY
Текст завдання	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:
Правильный ответ	Gaseous
В	Air
С	Fat
Д	Paradoxical
Е	Tissue
№	krok 2007

Тема	ALLERGY
Текст завдання	A 10 year old child was subjected to Mantoux test (with tuberculine). 48 hours later a papule up to 8 mm in diameter appeared on the site of tuberculine injection. What type of hyperresponsiveness reaction has developed after tuberculine injection?
Правильний ответ	Hyperresponsiveness reaction type IV
B	Reaction of Arthus phenomenon type
C	Reaction of serum sickness type
D	Atopic reaction
E	Hyperresponsiveness reaction type II
№	krok 2018
Тема	Disorders of water-salt metabolism: etiology, pathogenesis. Dyshydria, edema.
Текст завдання	A woman presents with edemas. In her urine there is a large amount of protein excreted. What nephron segment is functionally disturbed in this case?
Правильний ответ	Renal corpuscle
B	Proximal convoluted tubule
C	Distal convoluted tubule
D	Descending limb of loop of Henle
E	Ascending limb of loop of Henle
№	krok 2018
Тема	Disorders of water-salt metabolism: etiology, pathogenesis. Dyshydria, edema.
Текст завдання	A woman presents with edemas. In her urine there is a large amount of protein excreted. What nephron segment is functionally disturbed in this case?
Правильний ответ	Renal corpuscle
B	Proximal convoluted tubule
C	Distal convoluted tubule
D	Descending limb of loop of Henle
E	Ascending limb of loop of Henle
№	krok 2018
Тема	Pathophysiology of carbohydrate metabolism.
Текст завдання	A patient suffers from diabetes mellitus with fasting hyperglycemia over 7.2 mmol/L. What blood plasma protein would allow to assess the patient's glycemia level retrospectively (4-8 weeks prior to examination)?

Правильный ответ	Glycated hemoglobin
B	Albumin
C	Fibrinogen
D	C-reactive protein
E	Ceruloplasmin
№	krok 2018
Тема	Pathophysiology of carbohydrate metabolism.
Текст завдання	The patient exhausted by starvation presents with intensification of the following process in the liver and kidneys:
Правильный ответ	Gluconeogenesis
B	Urea synthesis
C	Bilirubin synthesis
D	Hippuric acid synthesis
E	Uric acid synthesis
№	krok 2018
Тема	Pathophysiology of carbohydrate metabolism.
Текст завдання	Chronic overdosage of glucocorticoids leads to the development of hyperglycemia. What process of carbohydrate metabolism is responsible for this effect?
Правильный ответ	Gluconeogenesis
B	Glycogenolysis
C	Aerobic glycolysis
D	Pentose-phosphate cycle
E	Glycogenesis
№	krok 2018
Тема	Anemia.
Текст завдання	A patient with glossitis presents with disappearance of lingual papillae, reddening and burning pain in the tongue. Blood test: erythrocytes $2.2 \cdot 10^{12}/l$, hemoglobin - 103 g/l, color index - 1.4. What type of anemia is it?
Правильный ответ	B_{12} folate-deficiency
B	Iron deficiency
C	α -thalassemia
D	β -thalassemia

Е	Iron refractory
№	krok 2018
Тема	Pathophysiology of acid-base metabolism: acidosis, alkalosis.
Текст завдання	A pregnant woman developed severe toxemia with exhausting recurrent vomiting throughout a day. By the end of the day she developed tetanic convulsions and dehydration. The described changes were caused by the following type of acid-base imbalance:
Правильный ответ	Nongaseous excretory alkalosis
В	Gaseous alkalosis
С	Gaseous acidosis
Д	Nongaseous metabolic acidosis
Е	Nongaseous excretory acidosis
№	krok 2018
Тема	Hypoxia.
Текст завдання	A 13-year-old girl is an inpatient at the hematology department of the regional children's hospital. She was diagnosed with iron-deficiency anemia. What type of hypoxia does this patient have?
Правильный ответ	Hemic
В	Circulatory
С	Tissue
Д	Respiratory
Е	Mixed
№	krok 2018
Тема	Anemia.
Текст завдання	A 55-year-old man was diagnosed with acute glomerulonephritis. Name the main mechanism of anemia development in this case:
Правильный ответ	Decreased erythropoietin synthesis
В	Decreased glomerular filtration
С	Decreased synthesis of renal prostaglandins
Д	Renal azotemia
Е	Decreased tubular reabsorption
№	krok 2018
Тема	Pathophysiology of external respiration . Respiratory failure.

Текст завдання	Macroscopic examination of lung tissue revealed areas of high airiness with small bubbles. Histological examination revealed thinning and rupture of alveolar septa accompanied by formation of large diversiform cavities. What disease was revealed in the lung?
Правильний ответ	Pulmonary emphysema
B	Multiple bronchiectasis
C	Cavernous tuberculosis
D	Chronic bronchitis
E	Fibrosing alveolitis
№	krok 2018
Тема	Violations of digestion in the gastro-intestinal tract.
Текст завдання	A 30-year-old woman complains of intense thirst and dryness of the mouth that developed after a severe emotional shock. Laboratory analysis revealed increase of the patient's blood sugar level up to 10 mmol/L. What endocrine gland is affected in the patient?
Правильний ответ	Pancreas
B	Thyroid gland
C	Gonads
D	Adrenal glands
E	Pineal gland
№	krok 2018
Тема	Pathophysiology of acid-base metabolism: acidosis, alkalosis.
Текст завдання	A patient presents with disturbed patency of the airways at the level of small and medium bronchial tubes. What acid-base imbalance can the patient develop?
Правильний ответ	Respiratory acidosis
B	Respiratory alkalosis
C	Metabolic acidosis
D	Metabolic alkalosis
E	Acid-base balance remains unchanged
№	krok 2018
Тема	General etiology and pathogenesis of endocrine disorders.

Текст завдання	Due to trauma the patient's parathyroid glands have been removed, which resulted in inertness, thirst, sharp increase of neuromuscular excitability. Metabolism of the following substance is disturbed:
Правильний ответ	Calcium
В	Manganese
С	Chlorine
Д	Molybdenum
Е	Zinc
№	krok 2018
Тема	Disorders of water-salt metabolism: etiology, pathogenesis. Dyshydria, edema.
Текст завдання	A patient presents with high content of vasopressin (antidiuretic hormone) in the blood. What changes in the patient's diuresis will occur?
Правильний ответ	Oliguria
В	Polyuria
С	Anuria
Д	Glycosuria
Е	Natriuria
№	krok 2018
Тема	General etiology and pathogenesis of endocrine disorders.
Текст завдання	A patient presents with osteoporosis; hypercalcemia and hypophosphatemia are observed in the patient's blood. What is the cause of this condition?
Правильний ответ	Increased parathormone secretion
В	Increased thyroxin secretion
С	Inhibited parathormone secretion
Д	Increased corticosteroid secretion
Е	Inhibited corticosteroid secretion
№	krok 2018
Тема	Pathophysiology of the kidneys.
Текст завдання	A 49-year-old man presents with facial edema, significant proteinuria, hypoproteinemia, dysproteinemia, and hyperlipidemia. What provisional diagnosis can be made?
Правильний ответ	Nephrotic syndrome

B	Urolithiasis
C	Prostatitis
D	Pyelonephritis
E	Cystitis
№	krok 2018
Тема	Pathophysiology of the liver. Hepatic insufficiency. Coma. Jaundice.
Текст завдання	Detoxification of bilirubin occurs in the membranes of endoplasmic reticulum of hepatocytes. Bilirubin is secreted by hepatocytes into bile for the most part as:
Правильний ответ	Bilirubin diglucuronide
B	Unconjugated bilirubin
C	Bilirubin monoglucuronide
D	Indirect reacting bilirubin
E	-
№	krok 2018
Тема	Pathophysiology of systemic circulation. Heart failure.
Текст завдання	A patient on the 2nd day after cardiac infarction presents with acute decrease of systolic blood pressure down to 60 mm Hg with tachycardia 140/min., dyspnea, loss of consciousness. What mechanism is essential in the pathogenesis of shock developed in this case?
Правильний ответ	Decreased cardiac output
B	Increased myocardial excitability caused by products of necrotic disintegration
C	Decreased circulating blood volume
D	Development of paroxysmal tachycardia
E	Development of anaphylactic reaction to myocardial proteins
№	krok 2018
Тема	Pathophysiology of the energy and protein metabolism.
Текст завдання	A 42-year-old woman, who has been keeping to a vegetarian diet for a long period of time, consulted a doctor. Examination revealed negative nitrogen balance in the patient. What factor is the most likely cause of such a condition?
Правильний ответ	Insufficient amount of proteins in the diet
B	Insufficient amount of dietary fiber
C	Excessive amount of fats in the diet

D	Insufficient amount of fats in the diet
E	Decreased rate of metabolic processes
№	krok 2018
Тема	Fever.
Текст завдання	In hot weather the bus passengers asked to open the roof hatches. What way of heat transfer is activated in this situation?
Правильний ответ	Convection
B	Conduction
C	Radiation
D	Conduction and radiation
E	Sweat evaporation
№	krok 2018
Тема	General etiology and pathogenesis.
Текст завдання	At the end of winter a student, who had been lately in the state of nervous tension, developed a case of URTI after overexposure to cold. What is the case of this disease?
Правильний ответ	Pathogenic agent
B	Nervous stress
C	Overexposure to cold
D	Improper diet
E	Hypovitaminosis
№	krok 2018
Тема	Allergy: Allergic reactions of I-IV types.
Текст завдання	30 minutes after dental treatment the patient developed red itching spots on the face and oral mucosa. The patient was diagnosed with urticaria. What bioactive substance with vasodilating and pruriginous effect is produced during this type of allergic reaction?
Правильний ответ	Histamine
B	Prostaglandin E2
C	Leukotriene B4
D	Interleukin-1
E	Bradykinin
№	krok 2018
Тема	Allergy: Allergic reactions of I-IV types.

Текст завдання	A patient has been administered conduction anesthesia with novocaine in preparation for tooth extraction. After the anesthesia administration the patient developed swelling and hyperemy around the injection site, skin itch, general fatigue, motor agitation. Name the developed complication:
Правильний ответ	Allergy
B	Idiosyncrasy
C	Tachyphylaxis
D	Drug dependence
E	Inflammation
№	krok 2018
Тема	Pathophysiology of the energy and protein metabolism.
Текст завдання	A 16-year-old girl, who has been starving herself for a long time to lose weight, developed an edema. This phenomenon is mainly caused by:
Правильний ответ	Hypoproteinemia due to protein synthesis disturbance
B	Hypoglycemia due to glycogen synthesis disturbance
C	Venous congestion and increased venous pressure
D	Deceleration of glomerular filtration rate
E	Decreased production of vasopressin in the hypothalamus
№	krok 2018
Тема	Pathophysiology of carbohydrate metabolism.
Текст завдання	Erythrocytes of the patient with hemolytic anemia present with significant decrease of pyruvate kinase activity. What methabolic process is disturbed in this case?
Правильний ответ	Glycolysis
B	Glycogenolysis
C	Gluconeogenesis
D	Pentose-phosphate pathway of glucose oxidation
E	Glycogen synthesis
№	krok 2018
Тема	Pathophysiology of the hemostasis system. Hemorrhagic syndrome: thrombosis and DIC.
Текст завдання	A 28-year-old patient complains of frequent gingival hemorrhages. Blood test revealed the clotting factor II (prothrombin) deficiency. What phase of blood coagulation is impaired in this patient?

Правильный ответ	Thrombin generation
B	Vascular-platelet haemostasis
C	Clot retraction
D	Fibrinolysis
E	-
№	krok 2018
Тема	Inflammation.
Текст завдання	Several hours after the dental trauma the tooth pulp presents with hyperemic vessels, marked tissue edema with isolated neutrophils, lymphocytes, and minor dystrophic changes of nerve fibers. Make the diagnosis:
Правильный ответ	Serous pulpitis
B	Suppurative pulpitis
C	Gangrenous pulpitis
D	Granulating pulpitis
E	Fibrous pulpitis
№	krok 2018
Тема	Pathophysiology of the hemostasis system. Hemorrhagic syndrome: thrombosis and DIC.
Текст завдання	A 60-year-old woman with hepatocirrhosis developed hemorrhagic syndrome. What mechanism leads to the development of this condition?
Правильный ответ	Decreased synthesis of prothrombin and fibrinogen
B	Increased portal venous pressure
C	Deceased blood oncotic pressure
D	Reduction of hepatic glycogen stores
E	Emergence of neurotoxins in the blood
№	krok 2018
Тема	Pathophysiology of external respiration . Respiratory failure.
Текст завдання	Miners' work at the coalface often leads to development of anthracosis. What type of respiratory failure arises along with this disease?
Правильный ответ	Restrictive
B	Obstructive
C	Dysregulatory

D	Thoracic
E	Diaphragmatic
№	krok 2018
Тема	Disorders of water-salt metabolism: etiology, pathogenesis. Dyshydria, edema.
Текст завдання	During ultrasound a patient with atherosclerosis was diagnosed with bilateral stenosis of the renal arteries. Specify the bioactive substance that is the key pathogenetic link in the development of arterial hypertension in this case:
Правильний відповідь	Renin
B	Adrenaline
C	Vasopressin
D	Cortisol
E	Thyroxin
№	krok 2018
Тема	Pathophysiology of the liver. Hepatic insufficiency. Coma. Jaundice.
Текст завдання	A 72-year-old man with hepatocirrhosis developed hepatic coma. Its development is caused by the substances, that are being neutralized in the liver, entering into general circulation through portacaval shunts (portal hypertension syndrome) and necrosis of hepatic cells. What type of hepatic coma is characterized by these presentations?
Правильний відповідь	Mixed
B	Parenchymatous
C	Shunt
D	Hepatocellular
E	Ketoacidotic
№	krok 2018
Тема	Disorders of water-salt metabolism: etiology, pathogenesis. Dyshydria, edema.
Текст завдання	After a traffic accident a man presents with severe blood loss, consciousness disturbance, low blood pressure, as well as compensatory activation of the renin-angiotensin system, which results in:
Правильний відповідь	Hyperproduction of aldosterone
B	Increased blood coagulation
C	Intensification of erythropoiesis
D	Hyperproduction of vasopressin
E	Intensification of heart contractions

№	krok 2018
Тема	Pathophysiology of the liver. Hepatic insufficiency. Coma. Jaundice.
Текст завдання	Laboratory analysis revealed UDP-glucuronyl transferase deficiency in the patient. What blood values can confirm this enzymopathy?
Правильний відповідь	Hyperbilirubinemia
B	Indicanuria
C	Phenylketonuria
D	Ketoacidosis
E	Uremia
№	krok 2018
Тема	Pathophysiology of systemic circulation. Heart failure.
Текст завдання	A 67-year-old man was delivered to a cardiology department with complaints of periodical pains in his heart, dyspnea caused by even slight exertion, cyanosis and edemas. ECG shows additional excitations of heart ventricles. Name this type of rhythm disturbance:
Правильний відповідь	Extrasystole
B	Bradycardia
C	Tachycardia
D	Flutter
E	Fibrillation
№	krok 2018
Тема	Fever.
Текст завдання	A 40-year-old woman is being treated at the therapeutics department. Her temperature chart shows cyclic fevers alternating with periods of temperature normalization that last for several days. What type of temperature profile is it?
Правильний відповідь	<i>Febris recurrens</i>
B	<i>Febris intermittens</i>
C	<i>Febris remittens</i>
D	<i>Febris continua</i>
E	-
№	krok 2018
Тема	Typical disorders of the peripheral blood circulation and microcirculation

Текст завдання	A patient with heatstroke was delivered to the admission room. What compensatory reactions develop in the patient's body in such case?
Правильний ответ	Peripheral vasodilatation
B	Peripheral vasoconstriction
C	Increased heart rate
D	Coronary vasospasm
E	Persistent hyperglycemia
№	krok 2018
Тема	Pathophysiology of the liver. Hepatic insufficiency. Coma. Jaundice.
Текст завдання	A patient came to the doctor with complaints of general weakness and sleep disturbances. Objectively the patient's skin is yellow. In blood there is increased concentration of direct bilirubin and bile acids. Acholic stool is observed. What condition can be characterized by these changes?
Правильний ответ	Mechanical jaundice
B	Hemolytic jaundice
C	Parenchymatous jaundice
D	Familial nonhemolytic (Gilbert's) syndrome
E	E. Chronic cholecystitis
№	krok 2019
Тема	Pathophysiology of the hemostasis system. Hemorrhagic syndrome: thrombosis and DIC.
Текст завдання	A 60-year-old woman with hepatocirrhosis developed hemorrhagic syndrome. What mechanism leads to the development of this condition?
Правильний ответ	Emergence of neurotoxins in the blood
B	Reduction of hepatic glycogen stores
C	Decreased synthesis of prothrombin and fibrinogen
D	Increased portal venous pressure
E	Deceased blood oncotic pressure
№	krok 2019
Тема	Fever.
Текст завдання	In hot weather the bus passengers asked to open the roof hatches. What way of heat transfer is activated in this situation?
Правильний ответ	Radiation

B	Conduction and radiation
C	Convection
D	Conduction
E	Sweat evaporation
№	krok 2019
Тема	Pathophysiology of the hemostasis system. Hemorrhagic syndrome: thrombosis and DIC.
Текст завдання	A 28-year-old patient complains of frequent gingival hemorrhages. Blood test revealed the clotting factor II (prothrombin) deficiency. What phase of blood coagulation is impaired in this patient?
Правильний відповідь	Thrombin generation
B	Fibrinolysis
C	-
D	Vascular-platelet haemostasis
E	Clot retraction
№	krok 2019
Тема	Pathophysiology of external respiration . Respiratory failure.
Текст завдання	Miners' work at the coal-face often leads to development of anthracosis. What type of respiratory failure arises along with this disease?
Правильний відповідь	Obstructive
B	Dysregulatory
C	Restrictive
D	Diaphragmatic
E	Thoracic
№	krok 2019
Тема	Pathophysiology of the liver. Hepatic insufficiency. Coma. Jaundice.
Текст завдання	A diver that submerged to the depth of 75 meters detected signs of CNS functional disturbance: excitation, lapse of concentration, euphoria leading to professional errors. What substance has toxic effect on the neurons, thus leading to the development of these signs?
Правильний відповідь	Oxygen
B	Ammonia
C	Nitrogen

D	Lactate
E	Carbon dioxide
№	krok 2019
Тема	Pathophysiology of carbohydrate metabolism.
Текст завдання	A patient suffers from diabetes mellitus with fasting hyperglycemia over 7.2 mmol/L. What blood plasma protein would allow to assess the patient's glycemia level retrospectively (4-8 weeks prior to examination)?
Правильний ответ	C-reactive protein
B	Fibrinogen
C	Albumin
D	Ceruloplasmin
E	Glycated hemoglobin
№	krok 2019
Тема	Pathophysiology of carbohydrate metabolism.
Текст завдання	Chronic overdosage of glucocorticoids leads to the development of hyperglycemia. What process of carbohydrate metabolism is responsible for this effect?
Правильний ответ	Glycogenolysis
B	Aerobic glycolysis
C	Glycogenesis
D	Pentose-phosphate cycle
E	Gluconeogenesis^
№	krok 2019
Тема	Allergy: Allergic reactions of I-IV types.
Текст завдання	An ophthalmologist suspects blennorrhoea (gonococcal conjunctivitis) in a child with signs of suppurative keratoconjunctivitis. What laboratory diagnostics should be conducted to confirm the diagnosis?
Правильний ответ	Biological analysis and allergy test
B	Biological analysis and phagodiagnosics
C	Microscopy and serum diagnostics
D	Microscopy and bacteriological analysis
E	Serum diagnostics and allergy test,
№	krok 2019

Тема	Pathophysiology of the liver. Hepatic insufficiency. Coma. Jaundice.
Текст завдання	The patient exhausted by starvation presents with intensification of the following process in the liver and kidneys:
Правильний ответ	Bilirubin synthesis
В	Urea synthesis
С	Hippuric acid synthesis
D	Gluconeogenesis
Е	Uric acid synthesis
№	krok 2019
Тема	Pathophysiology of the kidneys.
Текст завдання	A patient presents with high content of vasopressin (antidiuretic hormone) in the blood. What changes in the patient's diuresis will occur?
Правильний ответ	Polyuria
В	Glycosuria
С	Anuria
D	Natriuria
Е	Oliguria
№	krok 2019
Тема	Allergy: Allergic reactions of I-IV types.
Текст завдання	30 minutes after dental treatment the patient developed red itching spots on the face and oral mucosa. The patient was diagnosed with urticaria. What bioactive substance with vasodilating and pruriginous effect is produced during this type of allergic reaction?
Правильний ответ	Prostaglandin E2
В	Leukotriene B4
С	Histamine v
D	Interleukin-1
Е	Bradykinin
№	krok 2019
Тема	Pathophysiology of the liver. Hepatic insufficiency. Coma. Jaundice.
Текст завдання	Detoxification of bilirubin occurs in the membranes of endoplasmic reticulum of hepatocytes. Bilirubin is secreted by hepatocytes into bile for the most part as:
Правильний ответ	Bilirubin diglucuronide

B	Bilirubin monoglucuronide
C	Indirect reacting bilirubin
D	Unconjugated bilirubin
E	-
№	krok 2019
Тема	Pathophysiology of acid-base metabolism: acidosis, alkalosis.
Текст завдання	A pregnant woman developed severe toxemia with exhausting recurrent vomiting throughout a day. By the end of the day she developed tetanic convulsions and dehydration. The described changes were caused by the following type of acid- base imbalance:
Правильний ответ	Gaseous acidosis
B	Nongaseous excretory alkalosis
C	Nongaseous excretory acidosis
D	Gaseous alkalosis
E	Nongaseous metabolic acidosis
№	krok 2019
Тема	Pathophysiology of systemic circulation. Heart failure.
Текст завдання	A 67-year-old man was delivered to a cardiology department with complaints of periodical pains in his heart, dyspnea caused by even slight exertion, cyanosis and edemas. ECG shows additional excitations of heart ventricles. Name this type of rhythm disturbance:
Правильний ответ	Tachycardia
B	Flutter
C	Bradycardia
D	Extrasystole
E	Fibrillation
№	krok 2019
Тема	Violations of digestion in the gastro-intestinal tract.
Текст завдання	A 30-year-old woman complains of intense thirst and dryness of the mouth that developed after a severe emotional shock. Laboratory analysis revealed increase of the patient's blood sugar level up to 10 mmol/L. What endocrine gland is affected in the patient?
Правильний ответ	Pancreas
B	Gonads

С	Pineal gland
D	Thyroid gland
E	Adrenal glands
№	krok 2019
Тема	Fever.
Текст завдання	A 40-year-old woman is being treated at the therapeutics department. Her temperature chart shows cyclic fevers alternating with periods of temperature normalization that last for several days. What type of temperature profile is it?
Правильний відповідь	Febris recurrens
B	Febris intermittent
С	Febris continua
D	Febris remittens
E	-
№	krok 2019
Тема	Pathophysiology of acid-base metabolism: acidosis, alkalosis.
Текст завдання	A patient presents with disturbed patency of the airways at the level of small and medium bronchial tubes. What acid- base imbalance can the patient develop?
Правильний відповідь	Metabolic alkalosis
B	Metabolic acidosis'
С	Respiratory acidosis
D	Respiratory alkalosis
E	Acid-base balance remains unchanged
№	krok 2019
Тема	Pathophysiology of the liver. Hepatic insufficiency. Coma. Jaundice.
Текст завдання	A 72-year-old man with hepatocirrhosis developed hepatic coma. Its development is caused by the substances, that are being neutralized in the liver, entering into general circulation through portacaval shunts (portal hypertension syndrome) and necrosis of hepatic cells. What type of hepatic coma is characterized by these presentations?
Правильний відповідь	Hepatocellular
B	Shunt
С	Parenchymatous
D	Mixed

Е	Ketoacidotic
№	krok 2019
Тема	Pathophysiology of systemic circulation. Heart failure.
Текст завдання	A patient with heatstroke was delivered to the admission room. What compensatory reactions develop in the patient's body in such case?
Правильний відповідь	Increased heart rate
В	Peripheral vasodilatation
С	Coronary vasospasm
Д	Peripheral vasoconstriction
Е	Persistent hyperglycemia
№	krok 2019
Тема	Anemia.
Текст завдання	A patient with glossitis presents with disappearance of lingual papillae, reddening and burning pain in the tongue. Blood test: erythrocytes $2.2 \cdot 10^{12}/l$, hemoglobin -103 g/l, color index -1.4. What type of anemia is it?
Правильний відповідь	a-thalassemia
В	<i>B12</i> folate-deficiency-
С	Iron refractory
Д	β -thalassemia
Е	Iron deficiency
№	krok 2019
Тема	Pathophysiology of the kidneys.
Текст завдання	A 55-year-old man was diagnosed with acute glomerulonephritis. Name the main mechanism of anemia development in this
Правильний відповідь	case:
В	Renal azotemia
С	Decreased synthesis of renal prostaglandins
Д	Decreased glomerular filtration
Е	Decreased erythropoietin synthesis
№	Decreased tubular reabsorption
Тема	krok 2019
Текст завдання	Pathophysiology of the liver. Hepatic insufficiency. Coma. Jaundice.

Правильный ответ	A patient came to the doctor with complaints of general weakness and sleep disturbances. Objectively the patient's skin is yellow. In blood there is increased concentration of direct bilirubin and bile acids. Acholic stool is observed. What condition can be characterized by these changes?
B	Familial nonhemolytic (Gilbert's) syndrome
C	Mechanical jaundice
D	Hemolytic jaundice
E	Chronic cholecystitis
№	Parenchymatous jaundice
Тема	krok 2019
Текст завдання	Disorders of water-salt metabolism: etiology, pathogenesis. Dyshydria, edema.
Правильный ответ	After a traffic accident a man presents with severe blood loss, consciousness disturbance, low blood pressure, as well as compensatory activation of the renin- angiotensin system, which results in:
B	Intensification of heart contractions
C	Increased blood coagulation
D	Intensification of erythropoiesis
E	Hyperproduction of aldosterone
№	Hyperproduction of vasopressin
Тема	krok 2019
Текст завдання	Pathophysiology of the energy and protein metabolism.
Правильный ответ	At the end of winter a student, who had been lately in the state of nervous tension, developed a case of URTI after overexposure to cold. What is the cause of this disease?
B	Improper diet
C	Pathogenic agent
D	Nervous stress
E	Hypovitaminosis
№	Overexposure to cold,
Тема	krok 2019
Текст завдання	Pathophysiology of the energy and protein metabolism. Erythrocytes of the patient with hemolytic anemia present with significant decrease of pyruvate kinase activity. What metabolic process is disturbed in this case?
Правильный ответ	Glycolysis

B	Pentose-phosphate pathway of glucose oxidation
C	Gluconeogenesis
D	Glycogenolysis
E	Glycogen synthesis
№	krok 2019
Тема	Pathophysiology of the energy and protein metabolism.
Текст завдання	A 42-year-old woman, who has been keeping to a vegetarian diet for a long period of time, consulted a doctor. Examination revealed negative nitrogen balance in the patient. What factor is the most likely cause of such a condition?
Правильний ответ	Insufficient amount of proteins in the diet
B	Insufficient amount of dietary fiber
C	Insufficient amount of fats in the diet
D	Decreased rate of metabolic processes
E	Excessive amount of fats in the diet
№	krok 2019
Тема	Hypoxia.
Текст завдання	A 13-year-old girl is an in-patient at the hematology department of the regional children's hospital. She was diagnosed with iron-deficiency anemia. What type of hypoxia does this patient have?
Правильний ответ	Circulatory
B	Hemic
C	Respiratory
D	Mixed
E	Tissue
№	krok 2019
Тема	Pathophysiology of tissue growth. Tumors.
Текст завдання	In Western Europe nearly half of all congenital malformations occur in the children conceived in the period, when pesticides were used extensively in the region. Those congenital conditions result from the following influence:
Правильний ответ	Carcinogenic
B	Mutagenic
C	Teratogenic
D	Mechanical

Е	Malignization
№	krok 2019
Тема	Pathophysiology of systemic circulation. Heart failure.
Текст завдання	A patient on the 2nd day after cardiac infarction presents with acute decrease of systolic blood pressure down to 60 mm Hg with tachycardia 140/min., dyspnea, loss of consciousness. What mechanism is essential in the pathogenesis of shock developed in this case?
Правильний ответ	Decreased circulating blood volume
В	Decreased cardiac output
С	Development of anaphylactic reaction to myocardial proteins
Д	Development of paroxysmal tachycardia
Е	Increased myocardial excitability caused by products of necrotic disintegration
№	krok 2019
Тема	Pathophysiology of the energy and protein metabolism.
Текст завдання	A 16-year-old girl, who has been starving herself for a long time to lose weight, developed an edema. This phenomenon is mainly caused by:
Правильний ответ	Hypoproteinemia due to protein synthesis disturbance
В	Venous congestion and increased venous pressure
С	Hypoglycemia due to glycogen synthesis disturbance
Д	Deceleration of glomerular filtration rate
Е	Decreased production of vasopressin in the hypothalamus
№	krok 2019
Тема	Pathophysiology of external respiration . Respiratory failure.
Текст завдання	A 45-year-old man with a history of left-sided croupous pneumonia died of multiple traumas received as the result of a car accident. On autopsy in the lower lobe of his left lung its posterolateral wall is attached to the chest wall with fibrous adhesions. The lobe is diminished, dense, fleshy on section, grayish-pink in color; its pieces sink, when placed in water. Histological analysis reveals diffuse excessive growth of fibrous connective tissue in these areas. Name this complication of croupous pneumonia:
Правильний ответ	Emphysema
В	Carneous degeneration
С	Atelectasis
Д	Abscess

Е	Gangrene
№	krok 2020
Тема	Pathophysiology of acid-base metabolism: acidosis, alkalosis.
Текст завдання	A pregnant woman developed severe toxemia with exhausting recurrent vomiting throughout a day. By the end of the day she developed tetanic convulsions and dehydration. The described changes were caused by the following type of acid-base imbalance:
Правильний ответ	Nongaseous metabolic acidosis
В	Gaseous alkalosis
С	Nongaseous excretory acidosis
Д	Gaseous acidosis
Е	Nongaseous excretory alkalosis
№	krok 2020
Тема	Disorders of water-salt metabolism: etiology, pathogenesis. Dyshydria, edema.
Текст завдання	A 16-year-old girl, who has been starving herself for a long time to lose weight, developed an edema. This phenomenon is mainly caused by:
Правильний ответ	Hypoproteinemia due to protein synthesis disturbance
В	Decreased production of vasopressin in the hypothalamus
С	Hypoglycemia due to glycogen synthesis disturbance
Д	Venous congestion and increased venous pressure
Е	Deceleration of glomerular filtration rate
№	krok 2020
Тема	Pathophysiology of the hemostasis system. Hemorrhagic syndrome: thrombosis and DIC.
Текст завдання	A 43-year-old woman against the background of septic shock presents with thrombocytopenia, decreased fibrinogen levels, fibrin degradation products appearing in the blood, and petechial hemorrhages. Specify the cause of these changes:
Правильний ответ	Disseminated intravascular coagulation
В	Autoimmune thrombocytopenia
С	Disturbed platelet production
Д	Exogenous intoxication
Е	Hemorrhagic diathesis
№	krok 2021
Тема	Inflammation.

Текст завдання	A patient with chronic caries of tooth 36 did not visit a dentist for a long time. The patient developed a sharp pain in the lower jaw and a cheek swelling. His body temperature increased up to 38.7. What changes in the blood test findings should be expected in this case?
Правильний відповідь	Neutrophilia
B	Eosinophilia
C	Anemia
D	Monocytosis
E	Leukopenia
№	krok 2021
Тема	Leukocytosis and leucopenia. Leukemia.
Текст завдання	A child is diagnosed with a helminthic invasion. What changes in the leukogram should be expected in this case?
Правильний відповідь	Increased number of eosinophils
B	Increased number of erythrocytes
C	Increased number of lymphocytes
D	Increased number of neutrophils
E	Increased number of monocytes
№	krok 2021
Тема	Inflammation.
Текст завдання	A patient developed a keloid scar in the area of a purulent skin inflammation (carbuncle). At what stage of inflammation does it occur?
Правильний відповідь	Proliferation
B	Primary alteration
C	Exudation
D	Secondary alteration
E	–
№	krok 2021
Тема	Pathophysiology of the hemostasis system. Hemorrhagic syndrome: thrombosis and DIC.
Текст завдання	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:
Правильний відповідь	Platelets

B	Erythrocytes
C	Lymphocytes
D	Neutropls
E	Monocytes
№	krok 2021
Тема	Pathophysiology of the energy and protein metabolism.
Текст завдання	A 42-year-old woman, who has been keeping to a vegetarian diet for a long period of time, consulted a doctor. Examination revealed negative nitrogen balance in the patient. What factor is the most likely cause of such a condition?
Правильний ответ	Insufficient amount of proteins in the diet
B	Insufficient amount of dietary fiber
C	Excessive amount of fats in the diet
D	Decreased rate of metabolic processes
E	Insufficient amount of fats in the diet
№	krok 2021
Тема	Typical disorders of the peripheral blood circulation and microcirculation
Текст завдання	Lower limbs of a patient with varicose veins were examined. The patient's legs are cyanotic and pastose, skin temperature is low, single petechiae are observed. What disturbance of hemodynamics is it?
Правильний ответ	Venous hyperemia
B	Compression ischemia
C	Arterial hyperemia
D	Thromboembolism
E	Obstruction ischemia
№	krok 2021
Тема	Allergy: Allergic reactions of I-IV types.
Текст завдання	After anaesthetic application during tooth extraction the patient developed marked soft tissue edema of the upper and lower jaw, skin rash on the face, reddening, and itching. What pathological process results in such reaction to the anaesthetic?
Правильний ответ	Allergy
B	Circulatory deficiency
C	Inflammation
D	Disturbed lymph drainage

Е	Toxic action of a drug
№	krok 2021
Тема	pathophysiology
Текст завдання	Trying to lose weight, a woman has limited the amount of products in her diet. Three months later she developed edema and increased urine output, which indicates that her diet is low on the following type of nutrients:
Правильний ответ	Minerals
В	Vitamins
С	Proteins
Д	Lipids
Е	Carbohydrates
№	krok 2021
Тема	pathophysiology
Текст завдання	A lab rat received a subcutaneous injection of mercury(II) chloride in the dosage of 5 mg per 1 kg of body mass. 24 hours later, the creatinine levels in the animal's blood plasma increased several times. What mechanism of retention azotemia is observed in this case?
Правильний ответ	Increased glomerular filtration
В	Increased creatinine secretion in the renal tubules
С	Decreased glomerular filtration
Д	Increased creatinine reabsorption
Е	Increased creatinine production in the muscles
№	krok 2021
Тема	pathophysiology
Текст завдання	A 35-year-old woman is brought to the physician because of a 4-month history of progressive weakness of both lower limbs. She notes difficulty climbing stairs and complains of lethargy and loss of muscle bulk. Her diet consists primarily of "polished" rice. A diagnosis of dry beriberi is suspected. Deficiency of which of the following vitamins is most likely to be detected in her blood?
Правильний ответ	Vitamin B6 (pyridoxine)
В	Vitamin B1 (thiamine)
С	Vitamin B3 (niacin)
Д	Vitamin C (ascorbic acid)
Е	Vitamin B2 (riboflavin)

№	krok 2021
Тема	pathophysiology
Текст завдання	A man with a cardiovascular pathology presents with overproduction of angiotensin II. What enzyme takes part in angiotensin II synthesis?
Правильний відповідь	Kininase
B	Kallikrein
C	Angiotensin converting enzyme
D	Cyclooxygenase
E	Urokinase
№	krok 2021
Тема	pathophysiology
Текст завдання	A patient complaining of polydipsia, polyphagia, and polyuria excretes glucose with urine. What disease can be suspected?
Правильний відповідь	Diabetes insipidus
B	Acromegalia
C	Insulinoma
D	Addison disease
E	Diabetes mellitus
№	krok 2021
Тема	pathophysiology
Текст завдання	A patient presents with disturbed patency of the respiratory tracts at the level of small and medium bronchi. What acid-base imbalance is likely to be detected in the patient's blood in this case?
Правильний відповідь	Metabolic acidosis
B	Respiratory alkalosis
C	Metabolic alkalosis
D	Respiratory acidosis
E	krok 2022
№	pathophysiology
Тема	A patient came to the dentist for tooth extraction. After the tooth had been extracted, the bleeding from the socket persisted for 15 minutes. The patient has a history of active chronic hepatitis. What is the likely cause of the prolonged bleeding time?
Текст завдання	Hypocalcemia

Правильный ответ	Thrombocytopenia
B	Decreased albumin blood count
C	Decreased blood level of fibrinogen
D	Increased activity of anticoagulation system
E	krok 2022
№	pathophysiology
Тема	A 67-year-old man was delivered to a cardiology department with complaints of periodical pains in his heart, dyspnea caused by even slight exertion, cyanosis and edemas. ECG shows additional excitations of heart ventricles. Name this type of rhythm disturbance:
Текст завдання	Extrasystole
Правильный ответ	Tachycardia
B	Bradycardia
C	Flutter
D	Fibrillation
E	-
№	krok 2022
Тема	pathophysiology
Текст завдання	A patient with alcoholism has hepatic cirrhosis. Within the last half a year he developed varicose abdominal veins, splenomegaly, and ascites (portal hypertension syndrome). What complication is the most likely cause of the patient's death?
Правильный ответ	Hypoproteinemia
B	Hemorrhage from the gastrointestinal varices
C	Accelerated hemolysis
D	Hepatolienal syndrome
E	Hepatic encephalopathy
№	krok 2022
Тема	pathophysiology
Текст завдання	A child has a congenital immunodeficiency. The cell-mediated immunity is affected, causing frequent viral infections. It is likely to be caused by a disorder of the following organ:
Правильный ответ	Spleen
B	Red bone marrow

C	Lymph nodes
D	Palatine tonsils
E	Thymus gland
№	krok 2022
Тема	pathophysiology
Текст завдання	A 57-year-old man with chronic pyelonephritis developed arterial hypertension. What is the main mechanism of arterial pressure increase in this case?
Правильний відповідь	Increased renin secretion in the kidneys
B	Stimulation of the cerebral cortex
C	Stimulation of sinocarotid baroreceptors
D	Stimulation of hypothalamic vegetative centers
E	Increased blood levels of catecholamines
№	krok 2022
Тема	pathophysiology
Текст завдання	Mutation in the gene that controls the synthesis of beta chain results in formation of abnormal hemoglobin forms. Select the mutant hemoglobin:
Правильний відповідь	HbS
B	HbA
C	HbF
D	HbA2
E	HbA1
№	krok 2022
Тема	pathophysiology
Текст завдання	A mother with a 6-year-old child came to a local pediatrician. She complains that her child has sore throat and problems with breathing. The doctor suspects laryngeal diphtheria. What external breathing disorder can develop with such localization of the disease?
Правильний відповідь	Slow, deep, with labored expiration
B	Slow, deep, with labored inspiration
C	Biot respiration
D	Rapid, shallow

Е	Cheyne-Stokes respiration
№	krok 2022
Тема	pathophysiology
Текст завдання	A 25-year-old man has an appointment with the dentist. Several minutes after his oral cavity was lavaged with furacilin (nitrofurazone) the patient developed significant labial edema. What type of allergic reaction is observed in this case?
Правильный ответ	Stimulated
В	Immune complex
С	Anaphylactic
Д	Cytolytic
Е	Delayed-type hypersensitivity
№	krok 2022
Тема	pathophysiology
Текст завдання	During the blooming season a 45- year-old woman developed an acute inflammatory disease of her upper airways and eyes with hyperemia, edema, and mucous discharge. What type of leukocytosis is the most characteristic in this case?
Правильный ответ	Neutrophilia
В	Monocytosis
С	Lymphocytosis
Д	Basophilia
Е	Eosinophilia
№	krok 2022
Тема	pathophysiology
Текст завдання	A 50-year-old patient in a poor condition was brought to the hospital. Objectively, the skin and visible mucosa are cyanotic, arterial blood saturation - 88%, NiBP - 90/60 mm Hg, pulse is 117/min., respiratory rate is 22/min. The patient has a history of chronic heart failure. Which of the following types of hypoxia is most likely to develop in this case?
Правильный ответ	Tissue
В	Circulatory
С	Hypoxic
Д	Anemic
Е	Hemic
№	krok 2022

Тема	pathophysiology
Текст завдання	During a surgery, narcosis overdose caused signs of acute hypoxia, indicated by increased heart rate of 124/min. and tachypnea. What type of hypoxia is observed in this case?
Правильний ответ	Hypoxic
B	Mixed
C	Circulatory
D	Respiratory
E	-
№	krok 2022
Тема	pathophysiology
Текст завдання	Activation of lipid peroxidation is one of the mechanisms that damage biostructures and cause development of a cellular pathology. Name the compound that takes part in neutralization of organic peroxides:
Правильний ответ	Glutathione
B	Taurine
C	Methionine
D	Glycine
E	Alanin
№	krok 2022
Тема	pathophysiology
Текст завдання	A child with type 1 diabetes mellitus made an insulin injection on an empty stomach. 15 minutes later the child developed acute hunger, tremor, excessive sweating, and dizziness. What caused this condition in the child?
Правильний ответ	Hyperglycemia
B	Hypoglycemia
C	Ketoncmia
D	Hyperlipemia
E	Glucosuria
№	KROK 2022
Topic	
Task	Blood sample was obtained for analysis. 30% of erythrocytes in the sample are abnormally shaped. Name this phenomenon:
Correct answer	Pathological poikilocytosis

B	Physiological poikilocytosis
C	Anisocytosis
D	Microcytosis
E	Macrocytosis
№	KROK 2022
Topic	
Task	Bacteria that enter the body are being phagocytized by macrophages. What is the role of macrophages in cooperation of immunocompetent cells during the first phase of immune response?
Correct answer	Activate T killer cells
B	Ensure antigen processing and presentation to T helper cells
C	Activate NK cells
D	Ensure antigen processing and presentation to T killer cells
E	Produce immunoglobulins
№	KROK 2022
Topic	
Task	After a traumatic brain injury the patient developed a urinary system dysfunction — polyuria. What hormone secretion was disturbed, resulting in polyuria in this patient?
Correct answer	Vasopressin
B	Insulin
C	Adrenaline
D	Mineralocorticoids
E	ACTH
№	KROK 2022
Topic	
Task	In an experiment, the vagus nerve was severed in a test animal. As the result, the animal developed elevated blood glucose due to:
Correct answer	Decreased secretion of insulin
B	Increased secretion of insulin
C	Increased secretion of glucagon
D	Decreased secretion of glucagon
E	Increased secretion of somatostatin

№	KROK 2022
Topic	
Task	Laboratory analysis confirmed the patient's diagnosis of gout. What analysis was conducted to make this diagnosis?
Correct answer	Measuring uric acid levels in the blood and urine
B	Measuring urine ammonia levels
C	Measuring residual nitrogen in the blood
D	Measuring urine creatinine levels
E	Measuring urea levels in the blood and urine.
№	KROK 2022
Topic	
Task	.During a regular check-up with the dentist, a patient diagnosed with chronic gingivitis presents with no inflammatory changes in the gingival mucosa. This condition of the patient can be characterized as:
Correct answer	Remission
B	Complication
C	Pathologic reaction
D	Pathologic process
E	Recurrence
№	KROK 2022
Topic	
Task	A patient has a history of chronic heart failure. Which of the following hemodynamic parameters is a major symptom of cardiac decompensation development?
Correct answer	Increased peripheral vascular resistance
B	Decreased stroke volume
C	Tachycardia development
D	Tonogenic dilatation
E	Increased central venous pressure
№	KROK 2022
Topic	
Task	Deficiency of a certain vitamin can result in a group of symptoms called pellagra. Dermatitis, diarrhea, and dementia are the three main symptoms in such cases. Name the deficient vitamin:

Correct answer	Vitamin <i>PP</i>
B	Vitamin <i>C</i>
C	Vitamin <i>B2</i>
D	Vitamin <i>Bi</i>
E	Vitamin <i>A</i>
№	KROK 2022
Topic	
Task	A patient diagnosed with atherosclerosis, ischemic heart disease, and rest angina pectoris was hospitalized into the cardiology department. Laboratory analysis shows high lipid levels in his blood plasma. What class of plasma lipids plays the main role in pathogenesis of atherosclerosis?
Correct answer	Low-density lipoproteins
B	High-density lipoproteins
C	Fatty acid-albumin complexes
D	Chylomicrons
E	a-lipoproteins
№	KROK 2022
Topic	
Task	A patient is diagnosed with parathyroid tumor. He presents with generalized fibrous osteodystrophy and periodical renal colic attacks. US detects small nephroliths in the kidneys. What is the most likely cause of nephrolithiasis in this case?
Correct answer	Hypercalcemia
B	Hypocalcemia
C	Hyperphosphatemia
D	Hyperuricemia
E	Hypercholesterolemia
№	KROK 2022
Topic	
Task	Examination of a person with an extremely short stature (dwarfism) detects childish facial features, normal body proportions, and underdeveloped secondary sexual characters. This person has low hormonal activity in the:
Correct answer	Anterior lobe of pituitary gland
B	Thymus

C	Middle lobe of pituitary gland
D	Posterior lobe of pituitary gland
E	Thyroid gland
№	KROK 2022
Topic	
Task	.A child with a point mutation presents with absence of glucose 6-phosphatase, hypoglycemia, and hepatomegaly. These signs are characteristic of:
Correct answer	Von Gierke disease (glycogen storage disease type I)
B	Parkinson disease
C	Addison disease (primary adrenal insufficiency)
D	McArdle disease (glycogen storage disease type V)
E	Gaucher disease
№	KROK 2022
Topic	
Task	Prior to tooth extraction the patient was given a local anesthetic, lidocaine. What is the mechanism of anesthetic action of this drug?
Correct answer	Sodium channels block
B	Stimulation of GABA receptors
C	Block of H1-histamine receptors
D	Stimulation of muscarinic acetylcholine receptors
E	Block of β_2 -adrenergic receptors
№	KROK 2022
Topic	
Task	A patient is in a state of hypoglycemic coma. What hormone can cause this condition if overdosed?
Correct answer	Insulin
B	Progesterone
C	Cortisol
D	Somatotropin
E	Corticotropin
№	KROK 2022
Topic	

Task	A 30-year-old patient hospitalized with diagnosis of acute glomerulonephritis presents with proteinuria. What disturbance has caused this phenomenon?
Correct answer	Increased permeability of glomerular membrane
B	Delayed excretion of nitrogen metabolism products
C	Decreased oncotic blood pressure
D	Increased hydrostatic pressure on the capillary walls
E	Decreased number of functional nephrons
№	KROK 2022
Topic	
Task	To improve digestion of fatty food, the patient was prescribed a bile-containing preparation. What components of this preparation take part in emulsification of fats?
Correct answer	Bile acids
B	Cholesterol and its ethers
C	Higher fatty acids
D	Bilirubin glucuronides
E	Diglycerides
№	KROK 2022
Topic	
Task	A patient presents to a hospital with complaints about quick fatigability and significant muscle weakness. Examination reveals an autoimmune disease that causes functional disorder of receptors in the neuromuscular synapses. This will result in the disturbed activity of the following mediator:
Correct answer	Acetylcholine
B	Noradrenaline
C	Dopamine
D	Serotonin
E	Glycine
№	KROK 2022
Topic	
Task	.The third heart sound can be detected via phonocardiogram only in adult non- asthenic patients. It occurs during the following phase of a cardiac cycle:

Correct answer	Rapid filling
B	Isovolumetric relaxation
C	Reduced filling
D	Rapid ejection
E	Asynchronous contraction
№	KROK 2022
Topic	
Task	.Prior to a complex surgery the patient developed skin pallor, rapid heart rate and respiration rate, elevated blood pressure, and dry mouth. These signs appeared due to activation of:
Correct answer	Sympathetic nervous system
B	Somatic nervous system
C	Metasympathetic nervous system
D	Parasympathetic nervous system
E	-
№	KROK 2022
Topic	
Task	In an experiment, cerebral neurons of a test animal were electrostimulated, which resulted in hypophagia (refusal to eat food). Where in the brain were the electrodes placed?
Correct answer	Hypothalamus
B	Adenohypophysis
C	Red nucleus
D	Neurohypophysis
E	Thalamus
№	KROK 2022
Topic	
Task	.A 27-year-old patient with neck wound has lost over 30% of blood volume. The patient is in severe condition: blood pressure — 60/40 mm Hg, heart rate — 140/min., respirations — 30/min., conscious. Characterize the patient's condition:
Correct answer	Hypovolemic shock
B	Arterial hypertension
C	Coma

D	Cardiogenic shock
E	Collapse
№	KROK 2022
Topic	
Task	Sodium citrate is used to preserve donor blood. What should be added to this blood to induce its coagulation?
Correct answer	Calcium ions
B	Sodium ions
C	Fibrinogen
D	Vitamin K
E	Prothrombin
№	KROK 2022
Topic	
Task	.A 43-year-old man complains of sudden skin edema and redness with vesicles and itching. He developed these signs after eating shrimps. Such local signs are characteristic of the following type of hypersensitivity:
Correct answer	Local signs of type I hypersensitivity
B	Local signs of type II hypersensitivity
C	Local signs of type IV hypersensitivity
D	-
E	Type III hypersensitivity reaction
№	KROK 2022
Topic	
Task	.A patient suffers from diabetes mellitus with fasting hyperglycemia over 7.2 mmol/L. What blood plasma protein would allow to assess the patient's glycemia level retrospectively (4-8 weeks prior to examination)?
Correct answer	Glycated hemoglobin
B	C-reactive protein
C	Fibrinogen
D	Ceruloplasmin
E	Albumin
№	KROK 2022
Topic	

Task	30 minutes after dental treatment the patient developed red itching spots on the face and oral mucosa. The patient was diagnosed with urticaria. What bioactive substance with vasodilating and pruriginous effect is produced in this type of allergic reaction?
Correct answer	Histamine
B	Bradykinin
C	Prostaglandin E2
D	Leukotriene B4
E	Interleukin-1
№	KROK 2022
Topic	
Task	.A patient with essential hypertension presents with significant increase in left ventricular myocardial mass. It is likely to be caused by:
Correct answer	Increased number of cardiomyocytes
B	Myocardial fluid retention
C	Proliferation of connective tissue
D	Increased volume of cardiomyocytes
E	Fatty infiltration of the myocardium
№	KROK 2022
Topic	
Task	.Presence of citrulline and high ammonia levels are detected in the urine of a newborn. This child is likely to present with disturbed production of the following substance:
Correct answer	Ammonia
B	Creatinine
C	Creatine
D	Urea
E	Uric acid
№	KROK 2022
Topic	
Task	.A newborn failed to take his first breath. Autopsy revealed that despite unobstructed airways the lungs of the newborn were unable to stretch. What is the most likely cause of this condition?
Correct answer	Absence of surfactant

B	Pleural thickening
C	Alveolar enlargement
D	Bronchial rupture
E	Bronchial narrowing
№	KROK 2022
Topic	
Task	.A patient, who works in underground mining, developed pulmonary fibrosis. In this case spirometry shows the following:
Correct answer	Decreased vital capacity of lungs
B	Increased vital capacity of lungs
C	Normal airway resistance
D	Decreased airway resistance
E	Increased airway resistance
№	KROK 2022
Topic	
Task	.In what organ does biotransformation (metabolic transformation) of most medicinal agents occur upon their introduction into an organism?
Correct answer	Liver
B	Kidneys
C	Intestine
D	Skin
E	Lungs
№	KROK 2022
Topic	
Task	.A diet must include fats. Fats perform plastic function in an organism due to their inclusion in:
Correct answer	Glycocalyx
B	Cell end-organs
C	Cell ion pumps
D	Cell membranes
E	Cell ion channels
№	KROK 2022

Topic	
Task	Examination of a patient shows base metabolism increased by 50%. This change is caused by increased secretion of the following hormone:
Correct answer	Thyroxine
B	Prolactin
C	Growth hormone
D	Parathormone
E	Insulin
№	KROK 2022
Topic	
Task	A 26-year-old man presents with anemia against the background of chronic gastritis with intrinsic Castle factor deficiency. What type of anemia is characteristic of such cases?
Correct answer	<i>B12</i> and folate deficiency
B	Thalassemia
C	Chronic posthemorrhagic
D	Iron-deficiency
E	Hypoplastic
№	KROK 2022
Topic	
Task	.Erythrocyte needs energy in the form of ATP for its vital functions. What process supplies erythrocytes with necessary amount of ATP?
Correct answer	Aerobic oxidation of glucose
B	/3-oxidation of fatty acids
C	Pentose phosphate pathway
D	Tricarboxylic acid cycle
E	Anaerobic glycolysis
№	KROK 2022
Topic	

Task	.A 28-year-old patient had been diagnosed with multifragmental fracture of the right hip. On the third day after the injury he began to complain of pain in the right side of chest, difficult respiration. A day later the death occurred against the background of progressive heart and respiratory failure. Histological study of pulmonary and cerebral blood vessels revealed orange sudanophilic droplets that completely obstructed the vessels of microvasculature. What complication caused the death of the patient?
Correct answer	Fat embolism
B	Thromboembolism
C	Gas embolism
D	Microbial embolism
E	Drug-induced embolism
№	KROK 2022
Topic	.A 14-year-old patient presents with disturbed twilight vision. What vitamin is deficient in the body of this patient?
Task	A
Correct answer	B₁₂
B	Be
C	B_x
D	C
E	
№	KROK 2022
Topic	
Task	.A patient with wrist wound started to develop an edema. At what stage of local circulatory disturbance does it usually occur?
Correct answer	Venous hyperemia
B	Arterial hyperemia
C	Stasis
D	Arteriolar spasm
E	Prestasis
№	KROK 2022
Topic	
Task	A patient on examination presents with prolonged I heart sound. This heart sound occurs as the result of:
Correct answer	Closing of the atrioventricular valves

B	Closing of the pulmonary valve
C	Opening of the mitral valve
D	Opening of the tricuspid valve
E	Closing of the aortic valve
№	KROK 2022
Topic	
Task	A 36-year-old patient with diabetes mellitus developed seizures with loss of consciousness after an insulin injection. What was the result of blood glucose test?
Correct answer	2.5 mmol/L
B	5.5 mmol/L
C	8.0 mmol/L
D	3.3 mmol/L
E	10 mmol/L
№	KROK 2022
Topic	
Task	A fixed-run taxi passenger has a severe attack of tachycardia. A doctor travelling by the same taxi has managed to slow down his heart rate by pressing upon the eyeballs and thus inducing the following reflex:
Correct answer	Frank-Starling mechanism
B	Holtz reflex
C	Bainbridge reflex
D	Hering-Breuer reflex
E	Aschner-Dagnini reflex
№	KROK 2022
Topic	
Task	.A person develops alimentary (nutritional) hyperglycemia after eating, which stimulates secretion of the following hormone:
Correct answer	Insulin
B	Glucagon
C	Adrenaline
D	Noradrenaline
E	Cortisol

№	KROK 2022
Topic	
Task	An 84-year-old patient suffers from parkinsonism. One of the pathogenetic development elements of this disease is deficiency of a certain mediator in some of the brain structures. Name this mediator:
Correct answer	Dopamine
B	Histamine
C	Acetylcholine
D	Noradrenaline
E	Adrenaline
№	KROK 2022
Topic	
Task	A 28-year-old patient complains of frequent gingival hemorrhages. Blood test revealed the clotting factor II (prothrombin) deficiency. What phase of blood coagulation is impaired in this patient?
Correct answer	Thrombin generation
B	-
C	Clot retraction
D	Vascular-platelet hemostasis
E	Fibrinolysis
№	KROK 2022
Topic	
Task	What immunoglobulins produced in salivary glands ensure local immunity of oral mucosa?
Correct answer	IgA
B	IgM
C	IgD
D	IgE
E	IgG
№	KROK 2022
Topic	
Task	A 12-year-old boy has tetanic convulsions. What gland is likely to be functionally impaired in this case?
Correct answer	<i>Glandulae parathyroidae</i>

B	<i>Hypophysis</i>
C	<i>Glandula pinealis</i>
D	<i>Glandula thyroidea</i>
E	<i>Thymus</i>
№	KROK 2022
Topic	
Task	A patient presents with osteoporosis. Hypercalcemia and hypophosphatemia are observed in the patient's blood. What is the cause of this condition?
Correct answer	Increased parathormone secretion
B	Increased thyroxin secretion
C	Inhibited parathormone secretion
D	Increased corticosteroid secretion
E	Inhibited corticosteroid secretion
№	KROK 2022
Topic	
Task	Blood test for diabetes mellitus shows lactic acid levels of 2.5 mmol/L. What complication is it?
Correct answer	Lactacidemic coma
B	Hypoglycemic coma
C	Hyperketonemic coma
D	Hyperosmolar coma
E	Hyperglycemic coma
№	KROK 2022
Topic	
Task	A 50-year-old man declined anesthesia during dental manipulations. Due to severe pain he developed anuria caused by acute increase in production of:
Correct answer	Renin
B	Thyroxin
C	Thymosin
D	Adrenaline
E	Glucagon

№	KROK 2022
Topic	
Task	.A man after a traffic accident was brought in a severe condition to the intensive care unit. The patient's condition can be described as a severe pathologic process accompanied by exhaustion of vital functions that brings the body to the brink of death due to critical decrease of capillary circulation in the affected organs. Name the patient's condition:
Correct answer	Coma
B	Agony
C	Collapse
D	Shock
E	Preagony
№	KROK 2022
Topic	
Task	A patient came to the doctor with complaints of general weakness and sleep disturbances. Objectively the patient's skin is yellow. In blood there is increased concentration of direct bilirubin and bile acids. Acholic stool is observed. What condition can be characterized by these changes?
Correct answer	Mechanical jaundice
B	Parenchymatous jaundice
C	Hemolytic jaundice
D	Familial nonhemolytic (Gilbert's) syndrome
E	Chronic cholecystitis