№	krok 2023
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?
Правильна відповідь	Acute left-ventricular failure
B	Chronic right-ventricular failure
C	Chronic left-ventricular failure
D	Collapse
E	Cardiac tamponade
№	krok 2023
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?
Правильна відповідь	Neuroparalytic
B	Neurotonic
C	Metabolic
D	Functional
E	Reactive
№	krok 2023
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?
Правильна відповідь	Vasopressin

B	Cortisol
C	Thyroxin
D	Oxytocin
E	Insulin
№	krok 2023
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?
Правильна відповідь	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 2023
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?
Правильна відповідь	Intracranial pressure rise
B	α -adrenoreceptor block
C	Phosphodiesterase block
D	Reduced accumulation of calcium ions
E	Inhibited formation of mediators in brain
№	krok 2023
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?
Правильна відповідь	Absolute hypoalbuminemia
B	Absolute hyperalbuminemia
C	Absolute hyperfibrinogenemia
D	Protein rate in blood will stay unchanged
E	Absolute hyperglobulinemia
№	krok 2023
Тема	ENDOCRINAL PATHOPHYSIOLOGY
Текст завдання	It is known that patients with diabetes mellitus are more subject to inflammative processes, they have low regeneration and slower wound healing. What is the reason for this?
Правильна відповідь	Decrease in protheosynthesis
B	Increase in lipolysis
C	Accelerated gluconeogenesis
D	Decrease in lipolysis
E	Intensification of catabolism
№	krok 2023
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?
Правильна відповідь	Hypo-osmolar dehydration
B	Isoosmolar dehydration
C	Hyperosmolar dehydration
D	Hypo-osmolar hyperdehydration
E	Hyper-osmolar hyperdehydration

№	krok 2023
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:
Правильна відповідь	Thrombocytopenia
B	Leukocytosis
C	Thrombocytosis
D	Agranulocytosis
E	Leukopenia
№	krok 2023
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. Cardiostumulator assumed the function of the following heart part:
Правильна відповідь	Sinoatrial node
B	Atrioventricular node
C	His’ bundle branches
D	His’ bundle fibers
E	Purkinje’s fibers
№	krok 2023
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?
Правильна відповідь	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 2023
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?
Правильна відповідь	Metabolic acidosis
B	Gaseous acidosis
C	Nongaseous acidosis
D	Gaseous alkalosis
E	Metabolic alkalosis
№	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	allergy
Текст завдання	The development of both immune and allergic reactions is based upon the same mechanisms of the immune system response to an antigen. What is the main difference between the immune and allergic reactions?
Правильна відповідь	Development of tissue lesion
B	Amount of released antigen
C	Antigen structure
D	Routes by which antigens are delivered into the body
E	Hereditary predisposition
№	krok 2023
Тема	PATHOPHYSIOLOGY of cns

Текст завдання	After a craniocerebral injury a patient is unable to recognize objects by touch. What part of brain has been damaged?
Правильна відповідь	Postcentral gyrus
B	Occipital lobe
C	Temporal lobe
D	Precentral gyrus
E	Cerebellum
№	krok 2023
Тема	PATHOPHYSIOLOGY of cns
Текст завдання	As a result of a craniocerebral injury, a patient has a decreased skin sensitivity. What area of the cerebral cortex is likely to be damaged?
Правильна відповідь	Posterior central gyrus
B	Occipital region
C	Cingulate gyrus
D	Frontal cortex
E	Anterior central gyrus
№	krok 2023
Тема	endocrine PATHOPHYSIOLOGY
Текст завдання	Diabetic nephropathy with uremia has developed in a patient with pancreatic diabetes. The velocity of glomerular filtration is 9 ml/min. What mechanism of a decrease in glomerular filtration velocity and chronic renal failure development is most likely in the case of this patient?
Правильна відповідь	Reduction of active nephron mass
B	Decrease in systemic arterial pressure
C	Obstruction of nephron tubules with hyaline casts
D	Tissue acidosis
E	Arteriolar spasm

№	krok 2017
Topic	Endocine pathophysiology
Task	Parents of a 10-year-old child have made an appointment with an endocrinologist due to complaints of the child's low height. The child's appearance is corresponding with that of a 5-year-old. What hormone causes such changes in physical development, if its secretion is disturbed?
Correct answer	Somatotropic hormone
B	Adrenocorticotropic hormone
C	Thyroxin
D	Testosterone
E	Insulin
№	krok 2017, 2016, 2013
Topic	Microcirculation distyrbance
Task	An injured person exhibits the following signs at the site of trauma: skin redness, throbbing small arteries, elevated local temperature, increased tissue turgor. What local blood circulation disorder are these presentations typical of?
Correct answer	Arterial hyperemia
B	Venous hyperemia
C	Thrombosis
D	Embolism
E	Ischemia
№	krok 2017
Topic	Allergy
Task	A person has been stung by a bee. The stung area developed redness and edema. What is the main mechanism of edema development?
Correct answer	Increased permeability of the capillaries
B	Decreased oncotic blood pressure
C	Increased hydrostatic blood pressure
D	Decreased osmotic blood pressure
E	Disturbed lymphatic efflux

№	krok 2017
Topic	Hypoxia
Task	A patient was delivered into a resuscitation unit with signs of alcohol poisoning. The patient developed hypoxia of the following pathogenesis:
Correct answer	Tissue
B	Hypoxic
C	Hemic
D	Circulatory
E	Mixed
№	krok 2017
Topic	Blood pathophysiology
Task	Prolonged taking of cytostatic agents resulted in development of necrotic tonsillitis in the patient. It can be associated with the following changes in the leukocyte content:
Correct answer	Agranulocytosis
B	Neutrophilic leukocytosis
C	Lymphopenia
D	Eosinopenia
E	Lymphocytosis
№	krok 2017
Topic	endocrina pathophisiology
Task	A patient with type I diabetes mellitus developed hyperketonemic coma. What acid-base imbalance will be observed in the patient?
Correct answer	Nongaseous acidosis
B	Gaseous acidosis
C	Nongaseous alkalosis
D	Gaseous alkalosis
E	There will be no acid-base imbalances
№	krok 2017

Topic	pathophisiology of digestion
Task	Hyperlipemia can be observed in 2-3 hours after eating fatty food. 9 hours later lipid content normalizes again. How can this condition be characterized?
Correct answer	Alimentary hyperlipemia
B	Transport hyperlipemia
C	Hyperplastic obesity
D	Retention hyperlipemia
E	Hypertrophic obesity
№	krok 2017
Topic	jaundice
Task	A patient presents with icteric sclera and mucous tunics; urine is dark; feces are light-colored. Blood content of direct and indirect bilirubin is increased, urine content of direct bilirubin is increased. What pathology can be characterized by these signs?
Correct answer	Obstructive jaundice
B	Hemolytic jaundice
C	Hepatocellular jaundice
D	Jaundice of the newborn
E	Atherosclerosis
№	krok 2017
Topic	cancerogenesis
Task	The patient presents with rapid growth of a tumor node and its progressing malignization. What stage of tumor growth can be characterized by these presentations?
Correct answer	Progression
B	Promotion (activation)
C	Transformation
D	Exudation
E	Inactivation
№	krok 2017

Topic	cardiac pathophisiology
Task	A 55-year-old man, who had been suffering from mitral insufficiency for many years, developed acute heart fai-lure. What pathophysiological type of heart failure can be observed in this case?
Correct answer	Due to cardiac overload
B	Due to hypoxic damage to the heart
C	Due to coronarogenic damage to the heart
D	Due to neurogenic damage to the heart
E	Due to acute cardiac tamponade
№	krok 2017, 2016, 2015
Topic	endocrine pathophisiology
Task	Cataract (lenticular opacity) has developed in a 52-year-old woman with diabetes mellitus. Lenticular opacity was caused by intensification of the following processes:
Correct answer	Protein glycosylation
B	Lipolysis
C	Ketogenesis
D	Protein proteolysis
E	Gluconeogenesis
№	krok 2017
Topic	kidney pathophisiology
Task	A 54-year-old man requested a pharmacist’s advice on drug prescription. The patient has 4-year-long history of chronic glomerulonephritis and 2-year-long history of persistent hypertension. What substance synthesized in the ki-dneys has important role in development of arterial hypertension?
Correct answer	Renin
B	Nitric oxide
C	Aldosterone
D	Histamine
E	Catecholamines
№	krok 2017

Topic	CNS pathophisiology
Task	A patient complains of general weakness, muscle weakness in the extremities (if the patient is asked to make a fist several times in a row, for example, the patient is capable of doing it only once), facial muscles are weak, swallowing is disturbed. Administration of acetylcholinesterase drugs removes these disturbances to a certain degree. Determine the pathology:
Correct answer	Myasthenia
B	Paralysis
C	Paresis
D	Hemiplegia
E	Monoplegia
№	krok 2017
Topic	jaundice
Task	A 71-year-old woman developed mechanical jaundice due to obstruction of the bile duct with a chololith. Decrease of blood pressure and bradycardia are detected. These changes in functioning of the patient’s cardiovascular system are caused by increased blood content of the following substance:
Correct answer	Bile acids
B	Direct bilirubin
C	Indirect bilirubin
D	Urobilin
E	Stercobilin
№	krok 2017
Topic	respiratory pathophisiology
Task	A patient with brain edema presents with respiration that is characteri-zed by periods of several respiratory movements of equal amplitude alternati-ng with periods of apnea. What pathologic respiration is it characteristic of?
Correct answer	Biot’s respiration
B	Gasping respiration
C	Apneustic respiration
D	Cheyne-Stokes’ respiration

E	Kussmaul’s respiration
№	krok 2017, 2016
Topic	respiratory pathophisiology
Task	A patient in the state of ketoacidotic coma presents with loud rapid respiration: labored expiration with tension of expiratory muscles occurs after deep inspiration. Name the type of pathologic respiration:
Correct answer	Kussmaul’s
B	Cheyne-Stokes’
C	Gasping
D	Stenotic
E	Biot’s
№	krok 2017
Topic	allergy
Task	In 9 days after administration of a therapeutic serum the patient developed urticaria, itching, edemas, and lymph nodes enlargement. What type of allergic reaction has occurred in the patient?
Correct answer	Immune complex
B	Cytotoxic
C	Anaphylactic
D	Stimulating
E	Cellular
№	krok 2017
Topic	inflammation
Task	Exudation is characteristic of inflammation. What factors cause exudation and local edema of the inflamed area?
Correct answer	Increased permeability of vessel wall Hyperglycemia
B	Ischemia
C	Leukocyte adhesion to endothelial cells
D	Decreased permeability of vessel wall
E	
№	krok 2017

Topic	etiology, pathogenesis
Task	Increased concentration of active oxygen forms is a mechanism of pathogenesis in a number of diseases. To prevent this process, antioxidants are prescribed. Select an antioxidant from the list below:
Correct answer	Alpha-tocopherol
B	Glucose
C	Calciferol
D	Cobalamine
E	Glicerol
№	krok 2017
Topic	endocrine pathophisiology
Task	A 55-year-old man came to a doctor with complaints of acute pain in his big toes. Meat and wine remain permanently in his diet. The doctor suspects gout. What substance must be measured in the patient’s blood to confirm this diagnosis?
Correct answer	Uric acid
B	Urea
C	Lactate
D	Bilirubin
E	Ketone bodies
№	krok 2017
Topic	cardiac pathophisiology
Task	The patient’s large-focal myocardial infarction is complicated with pulmonary edema. What disturbance of cardi-ohemodynamics contributed to the pulmonary edema development?
Correct answer	Acute left ventricular failure
B	Acute right ventricular failure
C	Autoimmune myocarditis
D	Cardiogenic shock
E	Reperfusion syndrome
№	krok 2016, 2015, 2013

Topic	respiratory pathophisiology
Task	In an emergency situation a scuba diver has quickly risen from the depth to the surface in violation of safety regulations. He is unconscious, presents with respiratory failure and cardiac activity disorder as the result of decompression sickness. What complication can develop in the scuba diver?
Correct answer	Gas embolism
B	Fat embolism
C	Air embolism
D	Cellular embolism
E	Thromboembolism
№	krok 2016
Topic	endocrine pathophisiology
Task	Parents of a 10-year-old child have made an appointment wi-th endocrinologist due to complaints of the child's low height. The child's appearance is correspondi-ng with that of a 5-year-old. What hormone causes such changes in physical development, if its secretion is disrupted?
Correct answer	Somatotropic hormone
B	Adrenocorticotropic hormone
C	Thyroxin
D	Testosterone
E	Insulin
№	krok 2016
Topic	endocrine pathophisiology
Task	A patient complains of tachycardia, insomnia, weight loss, irritability, sweating. Objectively: the patient has goiter and sli-ght exophthalmos. What gland is affected, and what functional di-sorder is it?
Correct answer	Hyperthyroidism
B	Hypothyroidism
C	Hyperparathyroidism
D	Hypoparathyroidism
E	Adrenomedullary hyperfunction

№	krok 2016, 2015
Topic	respiratory pathophisiology
Task	A patient has been hospitalised with pneumonia. What kind of respi-ratory failure does the patient have?
Correct answer	Restrictive
B	Obstructive
C	Central
D	Peripheral
E	Thoracic diaphragm
№	krok 2016
Topic	microcirculation
Task	In the state of fright the following signs can be observed: acute pallor of face, tremor of extremities. What kind of ischemia can be observed in such a condition?
Correct answer	Angiospastic
B	Compression
C	Obstructive (thrombus)
D	Metabolic
E	Obstructive (vascular wall thickening)
№	krok 2016, 2015
Topic	blood pathophisiology
Task	At the sixth month of pregnancy a woman has been diagnosed wi-th severe iron-deficiency anemia. Appearance of the following elements in her blood became the di-agnostic character:
Correct answer	Hypochromic erythrocytes
B	Macrocytes
C	Megalocytes
D	Reticulocytes
E	Erythroblasts
№	krok 2016
Topic	pathophisiology of vessels

Task	A 70-year-old patient presents with cardiac and cerebral atherosclerosis. Examination revealed changes of blood lipid spectre. Increase of the following lipoproteins plays a significant role in atherosclerosis pathogenesis:
Correct answer	Low-density lipoproteins
B	Very low-density lipoproteins
C	Intermediate density lipoproteins
D	High-density lipoproteins
E	Chylomicrons
№	krok 2016, 2015, 2013
Topic	blood pathophisiology
Task	An elderly man exhibits low levels of red blood cells and hemoglobin in blood; however, his color index is 1,3. Blood smear analysis revealed megaloblasts. What type of anemia is observed in this case?
Correct answer	B_{12}-folic acid deficiency
B	Iron-deficiency
C	Acquired hemolytic
D	Hereditary hemolytic
E	Chronic posthemorrhagic
№	krok 2016, 2012
Topic	pathophisiology of liver
Task	A patient with alcoholic cirrhosis complains of general weakness and dyspnea. The following is revealed: decrease of blood pressure, ascites, dilation of superficial vei-ns of the stomach anterior wall, esophageal varicose veins dilatation, splenomegaly. What hemodynamics disorder does the patient suffer from?
Correct answer	Portal hypertension
B	Left ventricular failure
C	Right ventricular failure
D	Cardiac insufficiency
E	Collapse
№	krok 2016, 2015
Topic	jaundice

Task	A patient has icteric skin; unconjugated bilirubin content in blood is high; conjugated bilirubin in urine is not detected. There is significant amount of urobilin in uri-ne and stercobilin in feces. Name the pathology characterized by given symptoms:
Correct answer	Hemolytic jaundice
B	Obstructive jaundice
C	Jaundice of the newborn
D	Hepatocellular jaundice
E	Atherosclerosis
№	krok 2016, 2015, 2011
Topic	cardiac pathophisiology
Task	A 46-year-old patient was found to have hyperactivity of creatine kinase in the blood serum. What pathology can be suspected?
Correct answer	Myocardial infarction
B	Acute pancreatitis
C	Chronic hepatitis
D	Hemolytic anemia
E	Renal failure
№	krok 2016
Topic	immunity
Task	Employees of an enterprise were vaccinated with ”Influvac” for specific prevention of influenza. What type of immunity will develop in those vaccinated?
Correct answer	Artificial active
B	Innate congenital
C	Artificial passive
D	Natural active
E	Natural passive
№	krok 2016
Topic	jaundice

Task	A woman complains of nausea, vomiting, skin itch. She was di-agnosed with mechanical jaundice. What is the possible cause of skin itch in such a condition?
Correct answer	Bile acids accumulating in the blood
B	Increased blood content of indirect bilirubin
C	Cholesterol accumulating in the blood
D	Direct bilirubin appearing in the blood
E	Erythrocyte disintegration products accumulating in the blood
№	krok 2016
Topic	pathophisiology of vessels
Task	During ultrasound investigation a patient has been diagnosed with bilateral stenosis of renal artery with atherosclerotic genesis. Speci-fy the bioactive substance that due to its excessive secretion is the key component of arterial hypertension pathogenesis in the given case:
Correct answer	Renin
B	Cortisol
C	Vasopressin
D	Noradrenaline
E	Thyroxin
№	krok 2015
Topic	kidney pathophisiology
Task	A victim of a traffic accident is hospitalized at a resuscitation unit. Objectively: the patient is unconscious, BP is 90/60 mm Hg, high blood content of creatinine and urea is observed, diurnal diuresis is 80 ml. Characterize the patient’s diurnal diuresis:
Correct answer	Anuria
B	Oliguria
C	Polyuria
D	Pollakiuria
E	Nocturia
№	krok 2015

Topic	blood pathophisiology
Task	A newborn child born from Rh-negative mother in the result of her thi-rd pregnancy presents with gradually worsening jaundice, irritated central nervous system, anemia. What type of jaundice does the infant suffer from?
Correct answer	Hemolytic
B	Hepatocellular
C	Obstructive
D	Parasitic
E	Toxic
№	krok 2015, 2011
Topic	microcirculation
Task	What disorder of local circulation is characterized by pallor, local temperature drop, pain, local sensitivity disorder, reduction of the organ volume?
Correct answer	Ischemia
B	Venostasis
C	Thrombosis
D	Embolism
E	Arterial hyperemia
№	krok 2015
Topic	pathophisiology of vessels
Task	A 22-year-old man was stung by bees; the affected area became hyperemic and edematous. What is the leading mechanism of edema development in this patient?
Correct answer	Increased permeability of the capillaries
B	Decreased hydrostatic blood pressure in the capillaries
C	Increased oncotic pressure of tissue fluid
D	Impaired lymphatic efflux
E	Reduced oncotic pressure of blood
№	krok 2015, 2013, 2012
Topic	pathophisiology of liver

Task	A patient has obstruction of the common bile duct. Which of these substances is usually found in urine in such cases?
Correct answer	Bilirubin
B	Ketone bodies
C	Uric acid
D	Creatinine
E	Glucose
№	krok 2015
Topic	kidney pathophisiology
Task	A patient with systemic lupus erythematosus has developed diffuse affection of kidneys followed by proteinuria, hypoproteinemia, extensive swelli-ng. What mechanism of proteinuria development is the most likely in this case?
Correct answer	Autoimmune disorder of the nephron glomerulus
B	Inflammatory disorder of the nephron tubule
C	Ishemic disorder of the nephron tubule
D	Increased concentration of blood protei-ns
E	Disorder of the urinary tracts
№	krok 2015
Topic	pathophisiology of digestion
Task	A 40-year-old man diagnosed with gastric ulcer has developed the symptoms anew after a long period of dormancy. Such disease course can be characterized as a:
Correct answer	Recurrence
B	Remission
C	Recovery
D	Latency
E	Prodromal phase
№	krok 2015
Topic	pathophisiology of liver

Task	The patient with alcoholic ci-rrhosis complains of general weakness and dyspnea. The following is revealed: decrease of arterial pressure, ascites, dilation of the superficial veins of the stomach anterior wall, esophageal vari-cose veins dilatation, splenomegaly. What haemodynamics disorder does the patient suffer from?
Correct answer	Portal hypertension
B	Left ventricular failure
C	Right ventricular failure
D	Cardiac insufficiency
E	Collapse
№	krok 2015, 2013
Topic	allergy
Task	In response to the administration of protein drugs, a patient developed an allergic reaction. The development of the allergic reaction is caused by the increased synthesis of the following compound:
Correct answer	Histamine
B	Choline
C	Adrenaline
D	Histidine
E	Serotonin
№	krok 2015
Topic	pathophisiology of vessels
Task	During ultrasound investigation a patient was diagnosed with bilateral renal artery stenosis of atherosclerotic genesis. Specify the bioactive substance that due to its excessive secretion is the key component of arterial hypertension pathogenesis in the given case:
Correct answer	Renin
B	Cortisol
C	Vasopressin
D	Noradrenaline
E	Thyroxin
№	krok 2015

Topic	CNS pathophisiology
Task	After ishemic stroke a 67-year-old patient developed reduced mobility of the left leg. Name this condition:
Correct answer	Paresis
B	Paralysis
C	Myasthenia
D	Hyperkinesia
E	Tremor
№	krok 2015
Topic	CNS pathophisiology
Task	A 32-year-old patient with cerebellar tumor was delivered to an admission room of a hospital. The patient presents with ataxia that can be characterized by:
Correct answer	Disrupted coordination of movements
B	Involuntary contraction of skeletal muscles
C	Increased muscle tone
D	Pathological reflexes
E	Irregular force and direction of movements
№	krok 2014
Topic	cardiac pathophisiology
Task	The 55-year-old patient has been hospitalised due to chronic cardiac failure. Objectively: skin and mucosa are cyanotic, tachycardia, tachypnea. What kind of hypoxia does the patient have?
Correct answer	Circulatory
B	Anemic
C	Hemic
D	Tissue
E	Hypoxic
№	krok 2014
Topic	respiratory pathophisiology
Task	The patient has been hospitalised with pneumonia. What kind of respi-ratory failure does the patient have?

Correct answer	Restrictive
B	Obstructive
C	Central
D	Peripheral
E	Thoracic diaphragm
№	krok 2014
Topic	hypoxia
Task	The patient with acute cardiac failure has developed dyspnea, tachycardia and cyanosis during physi-cal exertion. Name the type of hypoxia.
Correct answer	Circulatory
B	Respiratory
C	Hemic
D	Hypoxic
E	Tissue
№	krok 2014
Topic	blood pathophisiology
Task	At the sixth month of pregnancy the female patient has been diagnosed with severe iron-deficiency anemia. Di-agnostic character was the appearance of the following in blood:
Correct answer	Hypochromic erythrocytes
B	Macrocytes
C	Megalocytes
D	Reticulocytes
E	Erythroblasts
№	krok 2014
Topic	pathophisiology of extremal state
Task	1 minute after the patient had been administered penicillin the patient’s arterial pressure sharply dropped, pulse became thready, cold sweating and clonic convulsions began. Name this condition.
Correct answer	Anaphylactic shock

B	Traumatic shock
C	Cardiogenic shock
D	Septic shock
E	Burn shock
№	krok 2014
Topic	respiratory pathophisiology
Task	The patient with acute left ventricular failure has developed edema of lungs. What peripheral circulation disorder taking place in the lungs has caused this complication?
Correct answer	Venous hyperemia
B	Arterial hyperemia
C	Neuroparalytic arterial hyperemia
D	Pulmonary artery thrombosis
E	Ischemia
№	krok 2014
Topic	inflammation
Task	Knee joint enlargement and cutaneous edema has developed in the 46-year-old patient with acute knee joint inflammation on the second day. What stage of inflammati-on progressing are these symptoms usually observed at?
Correct answer	Exudation
B	Alteration
C	Proliferation
D	Regeneration
E	Sclerosis
№	krok 2014
Topic	blood pathophisiology
Task	The alleged diagnosis of the newly-hospitalised in-patient is leukemia. What symptom among those given below is diagnostic character di-fferentiating acute leukemia from chronic leukemia?
Correct answer	Leukemic hiatus
B	Significant increase of leucocytes number

C	Leukosis rate
D	Eosinophil and basophil levelsws
E	Gumprecht’s shado (smudge cells)
№	krok 2014
Topic	endocrine pathophisiology
Task	Tetanic spasms of skeletal muscles occur under low calcium concentration in blood. What endocrine disorder can this condition be associated with?
Correct answer	Hypofunction of parathyroid glands
B	Hyperfunction of adrenal cortex
C	Hypofunction of adrenal cortex
D	Hyperthyroidism
E	Hypothyroidism
№	krok 2014
Topic	jaundice
Task	A newborn infant has hemolytic jaundice caused by rhesus incompati-bility. What bile pigment will be concentrated highest in the blood of this infant?
Correct answer	Unconjugated bilirubin
B	Conjugated bilirubin
C	Urobilinogen
D	Stercobilinogen
E	Bile acids
№	krok 2014
Topic	kidney pathophisiology
Task	The patient with acute cardi-ac insufficiency has decreased urine excretion caused by reduction of fi-ltering taking place in glomerules. What causes this drop in filtration?
Correct answer	Decrease of arterial pressure
B	Increase of hepatic blood flow
C	Exsiccosis

D	Duct lumen obstruction
E	Decrease in number of functioning glomerules
№	krok 2014
Topic	endocrine pathophisiology
Task	The 49-year-old female patient suffering long-term from pancreatic diabetes has developed the following symptoms after administering insulin: weakness, facial pallor, palpitation, anxiety, double vision, numbness of lips and tongue apex. Glucose molar concentration in blood was 2,5 mmol/l. What complication has developed in the patient?
Correct answer	Hypoglycemic coma
B	Hyperosmolar coma
C	Hyperglycemic coma
D	Hyperketonemic coma
E	Uremic coma
№	krok 2014
Topic	pathophisiology of digestion
Task	The 40-year-old patient has been diagnosed with gastric ulcer, disease symptoms making reappearance after prolonged period of dormancy. How can this kind of disease progression be qualified?
Correct answer	Relapse
B	Remission
C	Recovery
D	Latent period
E	Prodromal stage
№	krok 2014
Topic	pathophisiology of digestion
Task	The 55-year-old female pati-ent has developed a case of acute pancreatitis caused by greasy food. What is the main pathogenesis step of this disorder?
Correct answer	Premature activation af enzymes in gland ducts and cells
B	Pancreatic juice deficiency
C	Low bile production in liver

D	Fats digestion disruption
E	Acute bowel obstruction
№	krok 2014
Topic	allergy
Task	As the result of taking herbal medicine the 30-year-old patient has developed anaphylactic allergic reacti-on and blood leukocytosis. What kind of leukocytosis is characteristic of this case?
Correct answer	Eosinophilia
B	Monocytosis
C	Lymphocytosis
D	Basophilia
E	Heutrophilia
№	krok 2014, 2013, 2012
Topic	blood pathophisiology
Task	The 56-year-old patient has developed megaloblastic anemia in the course of alcoholic cirrhosis. What vi-tamin deficiency is the main cause of anemia in this patient?
Correct answer	Folic acid
B	Lipoic acid
C	Biotin
D	Thiamine
E	Pantothenic acid
№	krok 2014
Topic	pathophisiology of liver
Task	The patient with alcoholic cirrhosis complains of general weakness and dyspnea. The following is revealed: decrease of arterial pressure, ascites, dilation of stomach anterior wall superficial veins, esophageal vari-cose veins dilatation, splenomegaly. What haemodynamics disorder does the patient suffer from?
Correct answer	Portal hypertension
B	Left ventricular failure
C	Right ventricular failure

D	Cardiac insufficiency
E	Collapse
№	krok 2014
Topic	endocrine pathophisiology
Task	The 13-year-old female patient having suffered from measles complai-ns of dry mouth, thirst, body weight loss, polyuria, her glucose concentrati-on in blood is 16 mmol/l. What disease can be suspected?
Correct answer	Type I pancreatic diabetes
B	Type II pancreatic diabetes
C	Diabetes insipidus
D	Steroidogenic diabetes
E	Glycogenosis
№	krok 2014
Topic	jaundice
Task	The patient with mushroom poi-soning has developed the following symptoms: yellow coloring of skin and sclera, dark-colored urine. Hemolytic jaundice was diagnosed. What pigment causes such coloring of the patient’s urine?
Correct answer	Stercobilin
B	Conjugated bilirubin
C	Biliverdin
D	Unconjugated bilirubin
E	Verdohemoglobin
№	krok 2014
Topic	jaundice
Task	The patient has icteritous skin; unconjugated bilirubin content in blood is high; conjugated bilirubin in urine is not detected. There is si-gnificant amount of urobilin in urine and stercobilin in feces. Name the pathology characterized by given symptoms.
Correct answer	Hemolytic jaundice
B	Obstructive jaundice
C	Jaundice of the newborn

D	Hepatocellular jaundice
E	Atherosclerosis
№	krok 2014
Topic	kidney pathophisiology
Task	The patient has been admi-tted to the hospital with complai-nts of general fatigue, headache, lumbago, edema of face and extremi-ties. Urine analysis revealed protei-nuria, hematuria and cylindruria. What is the main pathogenetic mechani-sm of edema formation during glomerulonephritis?
Correct answer	Decrease of oncotic blood pressure
B	Increase of vascular permeability
C	Increase of hydrodynamic blood pressure
D	Hormonal disbalance
E	Lymph flow disruption
№	krok 2014
Topic	endocrine pathophisiology
Task	Cataract (lenticular opacity) has developed in the 52-year-old female patient with pancreatic diabetes. What process intensification has caused lenticular opacity?
Correct answer	Protein glycosylation
B	Lipolysis
C	Ketogenesis
D	Protein proteolysis
E	Gluconeogenesis
№	krok 2014
Topic	cancerogenesis
Task	Fluorography examination of the 59-year-old patient has revealed well-defined shadow, which is characteri-stic to tumor, in the lower part of the left lung. What trait is characteristic of benign tumor?
Correct answer	Expansive growth
B	Metastasis
C	Cancer cachexia

D	Invasion in surrounding tissues
E	Infiltrating growth
№	krok 2013, 2012
Topic	hypoxia
Task	A patient has been hospitalized for chronic heart failure. Objectively: skin and mucous membranes are cyanotic, the patient has tachycardia, tachypnea. What type of hypoxia has developed in the pati-ent?
Correct answer	Circulatory
B	Anemic
C	Hemic
D	Tissue
E	Hypoxic
№	krok 2013
Topic	respiratory pathophisiology
Task	A patient with a diagnosis of drug poisoning has been admitted to the resusci-tation department. The patient is in grave condition. Respiration is rapid, superfi-cial, with periods of apnea (Biot's respi-ration). What was the main cause of the development of periodic breathing in the patient?
Correct answer	Inhibition of the respiratory center function
B	Impaired function of spinal cord motoneurons
C	Impaired function of the neuromuscular system
D	Diminished chest mobility
E	Pulmonary dysfunction
№	krok 2013
Topic	pathophisiology of digestion
Task	A patient was found to have a tumor of the pancreatic head, which is accompanied by the impaired patency of the common bile duct. Blood test wi-ll reveal an increase in the following substance level:
Correct answer	Bilirubin
B	Urea
C	Hemoglobin

D	Insulin
E	Adrenaline
№	krok 2013
Topic	inflammation
Task	On the 2nd day after developing acute inflammation of the knee joint, the patient exhibits the joint enlargement, swelling of the skin. At what stage of inflammation are these signs typically observed?
Correct answer	Exudation
B	Alteration
C	Proliferation
D	Regeneration
E	Sclerosis
№	krok 2013
Topic	blood pathophisiology
Task	As a result of an accident (snakebi-te) a male patient has the following blood values: Hb- 80 g/l, RBC- 3, $0 \cdot 10^{12}$/l; WBC-5, $5 \cdot 10^{9}$/l. What type of anemia is observed in this case?
Correct answer	Hemolytic
B	Folic acid-deficiency
C	Posthemorrhagic
D	Aplastic
E	Iron-deficiency
№	krok 2013
Topic	respiratory pathophisiology
Task	A patient had been diagnosed wi-th right lung cancer and administered surgical treatment. After right-sided pulmonectomy the patient developed evident dyspnea. What form of respiratory failure developed in this patient?
Correct answer	Pulmonary restrictive
B	Central
C	Peripheral
D	Pulmonary obstructive

E	Thoracodiaphragmal
№	krok 2013
Topic	allergy
Task	A 22-year-old male was stung by bees, the affected region became hyperemic and edematous. What is the leading mechanism of edema development in this patient?
Correct answer	Increased permeability of the capillaries
B	Decreased hydrostatic blood pressure in the capillaries
C	Increased oncotic pressure of tissue fluid
D	Impaired lymphatic efflux
E	Reduced oncotic pressure of blood
№	krok 2013
Topic	kidney pathophisiology
Task	A patient with chronic renal fai-lure exhibits azotemia, hypo- and isosthenuria. What is the main factor in the pathogenesis of these symptoms in the patient?
Correct answer	Reduction of existing nephrons mass
B	Increase in glomerular filtration rate
C	Reduction of tubular secretion
D	Disturbance of the permeability of the glomerular membrane
E	Decrease in glomerular filtration rate in each nephron
№	krok 2013
Topic	pathophisiology of vessels
Task	A hospital admitted a patient with arterial hypertension induced by renal artery stenosis. The patient complains of persistent nausea and headache. The main element in the pathogenesis of hypertensi-on is the activation of the following system:
Correct answer	Renin-angiotensin
B	Hypothalamic-pituitary
C	Kallikrein-kinin
D	Sympathoadrenal

E	Parasympathetic
№	krok 2013, 2012
Topic	pathophisiology of vessels
Task	Blood pressure is regulated by a number of biologically active compounds. What peptides that enter the bloodstream can affect the vascular tone?
Correct answer	Kinins
B	Leukotrienes
C	Enkephalins
D	Iodothyronines
E	Endorphins
№	krok 2013
Topic	endocrine pathophisiology
Task	Addison’s (bronze) disease is treated with glucocorticoids. Their effect is provi-ded by the potentiation of the following process:
Correct answer	Gluconeogenesis
B	Glycolysis
C	Pentose phosphate cycle
D	Glycogenolysis
E	Ornithine cycle
№	krok 2013
Topic	endocrine pathophisiology
Task	After an insulin injection a 45-year-old female with a long history of di-abetes mellitus has developed weakness, paleness, palpitation, anxiety, double visi-on, numbness of lips and the tip of tongue. Blood glucose is at the rate of 2,5 mmol/l. What complication has developed in the patient?
Correct answer	Hypoglycemic coma
B	Hyperosmolar coma
C	Hyperglycemic coma
D	Hyperketonemic coma

E	Uremic coma
№	krok 2013
Topic	pathophisiology of digestion
Task	A 45-year-old male patient was di-agnosed with stomach ulcer. After the conservative treatment the pain and heartburn disappeared, the function of the gastrointestinal tract was normalized. Endoscopic examination of stomach revealed cicatrization of the ulcer. Qualify this course of the disease:
Correct answer	Remission
B	Relapse
C	Latent period
D	Recovery
E	Prodromal stage
№	krok 2013
Topic	endocrine pathophisiology
Task	A patient was admitted to a hospital in a state of hypoglycemic coma. It occurs at the following level of blood glucose:
Correct answer	2,5 mmol/l or less
B	4,0 mmol/l
C	3,3 mmol/l
D	4,5 mmol/l
E	5,5 mmol/l
№	krok 2013
Topic	pathophisiology of digestion
Task	A patient who had been continuously treated with glucocorticoids was found to have a duodenal ulcer. What mechanism plays a major part in its development?
Correct answer	Increase of gastric juice secretion and acidity
B	Acceleration of histamine inactivation in the stomach
C	Inhibition of gastrin secretion in the stomach
D	Excess production of prostaglandin E

E	Hyperglycemia
№	krok 2013
Topic	etiology and pathogenesis
Task	After a contact with a person having an infectious diseases, the disease pathogens entered the patient's body and started to multiply, but the symptoms of the disease were not yet observable. What period of the disease is this typical for?
Correct answer	Latent
B	Prodromal
C	Manifest illness stage
D	Clinical outcome
E	Relapse
№	krok 2013
Topic	kidney pathophisiology
Task	As a result of hypothermia a male patient developed acute diffuse glomerulonephritis. What type of allergic reaction caused damage to the glomerular capillaries in the patient?
Correct answer	Immunocomplex
B	Anaphylactic
C	Cytotoxic
D	Cell-mediated
E	Stimulating
№	krok 2013
Topic	water-salt exchange imbalance
Task	As a result of an emergency situation (shipwreck) a man had to drink sea (salty) water. What form of water-salt imbalance may occur in this case?
Correct answer	Hyperosmolar hyperhydration
B	Hypoosmolar hyperhydration
C	Hypotonic hyperhydration
D	Isoosmolar hyperhydration

E	Isotonic hyperhydration
№	krok 2012, 2010
Topic	pathophisiology of vessels
Task	Examination of the lower limbs of a 40-year-old patient with coronary artery disease and vascular disease of the lower limbs (obliterating endarteritis) revealed skin pallor and dystrophy, local temperature decrease, sense shock, pain. The patient is likely to have the following disorder of the peripheral blood circulation:
Correct answer	Obstruction ischemia
B	Compression ischemia
C	Angiospastic ischemia
D	Venous hyperaemia
E	Arterial hyperaemia
№	krok 2012
Topic	kidneys pathophisiology
Task	A patient has been found to have sugar in the urine. Blood glucose is normal. Arterial pressure is normal. What is the mechanism of glycosuria development in this case?
Correct answer	Disturbance of glucose reabsorption in the nephron tubules
B	Insulin deficiency
C	Hyperfunction of adrenal medulla
D	Hyperfunction of thyroid gland
E	Hyperfunction of adrenal cortex
№	krok 2012
Topic	jaundice
Task	A newborn born to an Rh-negative mother (3rd pregnancy) presents with progressing jaundice, symptoms of CNS excitation, anemia. What type of jaundice is it?
Correct answer	Hemolytic
B	Parenchymatous
C	Obstructive
D	Parasitic

E	Toxic
№	krok 2012
Topic	respiratory pathophysiology
Task	In an emergency situation a scuba diver has quickly risen from the depths to the surface, which is against the rule. He is unconscious, presents with respiratory failure and cardiac activity disorder as a result of decompression sickness. What complication may develop in the scuba diver?
Correct answer	Gas embolism
B	Fat embolism
C	Air embolism
D	Cellular embolism
E	Thromboembolism
№	krok 2012
Topic	ENDOCRINE PATHOPHYSIOLOGY
Task	A 40-year-old patient has developed polyuria (10-12 liters per day) and polydipsia induced by damage to the hypothalamo-hypophyseal tract. What hormone deficiency causes such disorders?
Correct answer	Vasopressin
B	Oxytocin
C	Corticotropin
D	Somatotropin
E	Thyrotropin
№	krok 2012, 2010
Topic	respiratory pathophysiology
Task	A group of alpinists climbing to the top had their blood tested. The test revealed erythrocytosis and an increase in hemoglobin rate. What type of hypoxia caused the stimulation of erythropoiesis in the bone marrow?
Correct answer	Hypoxic
B	Combined
C	Hemic
D	Circulatory

E	Tissue
№	krok 2012
Topic	respiratory pathophysiology
Task	A patient had been diagnosed with right lung cancer and administered surgical treatment. After right-sided pulmonectomy the patient presented with evident dyspnea. What form of respiratory failure has developed in this patient?
Correct answer	Pulmonary restrictive
B	Central
C	Peripheral
D	Pulmonary obstructive
E	Thoracodiaphragmal
№	krok 2012
Topic	respiratory pathophysiology
Task	A continuous stay in the mountains causes an increase of blood oxygen capacity. What is the possible reason for this phenomenon?
Correct answer	Development of functional erythrocytosis
B	Increase of $P\,O_2$ rate in the air
C	Increase of $P\,CO_2$ rate in the air
D	Decrease in respiratory rate and depth
E	Development of gas acidosis
№	krok 2012
Topic	kidneys pathophysiology
Task	A patient with systemic lupus erythematosus has developed a diffuse renal affection accompanied by proteinuria, hypoproteinemia, massive edema. What is the mechanism of proteinuria development in this case?
Correct answer	Autoimmune affection of glomeruli
B	Inflammation of renal tubules
C	Ischemic affection of tubules
D	Blood protein increase

E	Affection of urinary tracts
№	krok 2012
Topic	pathophysiology of vessels
Task	A hospital admitted a patient with arterial hypertension induced by renal artery stenosis, complaints of persistent nausea and headache. The main element in the pathogenesis of hypertension is the activation of the following system:
Correct answer	Renin-angiotensin
B	Hypothalamic-pituitary
C	Kallikrein-kinin
D	Sympathoadrenal
E	Parasympathetic
№	krok 2012, 2010
Topic	fever
Task	A warmly dressed child has spent a considerably long time out of doors. This resulted in body temperature elevation and general weakness development. What form of thermoregulation disorder is observed in this case?
Correct answer	Exogenous hyperthermia
B	Endogenous hyperthermia
C	Fever
D	Heat shock
E	Centrogenous hyperthermia
№	krok 2012, 2010
Topic	acid-base imbalance
Task	A patient with pneumosclerosis has blood *pH* at the rate of 7,34. Analysis of gas formula of blood showed hypercapnia. Urine analysis revealed an acidity increase. What form of acid-base disbalance is the case?
Correct answer	Gaseous acidosis
B	Secretory alkalosis
C	Gaseous alkalosis
D	Non-gaseous alkalosis
E	Non-gaseous acidosis

№	krok 2012
Topic	pathophysiology of vessels
Task	A 70-year-old patient has been found to have atherosclerosis of heart and brain vessels. Examination revealed the changes in the lipid profile. Pathogenesis of atherosclerosis is greatly influenced by an increase in the following lipoproteins rate:
Correct answer	Low-density lipoprotein
B	Very-low-density lipoproteins
C	Intermediate-density lipoproteins
D	High-density lipoprotein
E	Chylomicrons
№	krok 2012
Topic	allergy
Task	After eating strawberries a child presented with itchy red spots on the skin (hives). According to the classification of Coombs and Jell this reaction relates to the following type of allergic reactions:
Correct answer	Reagin (anaphylactic)
B	Cytotoxic
C	Immunocomplex
D	Cell-mediated
E	Stimulating
№	krok 2012
Topic	endocrine pathophysiology
Task	After an insulin injection a 45-year-old woman with a long history of diabetes mellitus has developed weakness, paleness, palpitation, anxiety, double vision, numbness of lips and the tip of tongue. Blood glucose is at the rate of 2,5 mmol/l. What complication has developed in the patient?
Correct answer	Hypoglycemic coma
B	Hyperosmolar coma
C	Hyperglycemic coma
D	Hyperketonemic coma

E	Uremic coma
№	krok 2012
Topic	respiratory pathophysiology
Task	A patient has developed an attack of bronchial asthma: he has laboured respiration with the frequency of 24-26/min., inspirations take turns with prolonged expirations involving participation of expiratory muscles. What form of respiratory failure has developed in the patient?
Correct answer	Expiratory dyspnea
B	Cheyne-Stokes
C	Biot’s
D	Inspiratory dyspnea
E	Apneustic respiration
№	krok 2012
Topic	microcirculation
Task	A 58-year-old male patient was found to have a peripheral circulation disorder with a restricted arterial inflow, paleness of the respective region, drop of partial oxygen pressure in it. This disorder is called:
Correct answer	Ischemia
B	Arterial hyperemia
C	Thrombosis
D	Venostasis
E	Reperfusion syndrome
№	krok 2011, 2008
Topic	CNS pathophysiology
Task	A patient had cerebral haemorrhage that made impossible active motions of left arm and leg. Muscle tone of these limbs is increased, their spinal reflexes are intensified, reflex zones are increased. What type of CNS disorder is it?
Correct answer	Central paralysis
B	Peripheral paralysis
C	Spinal shock
D	Atonic paralysis

E	Reflex paralysis
№	krok 2011
Topic	respiratory pathophysiology
Task	Depressurization of the cabin at an altitude of 19 km led to instantaneous death of pilots. What is its cause?
Correct answer	Explosive decompression
B	Hematencephalon
C	Myocardial infarction
D	Bleeding
E	Respiratory centre paralysis
№	krok 2011
Topic	kidneys pathophysiology
Task	After a girl had accidentally eaten inedible mushrooms she was admitted to the resuscitation unit with symptoms of impaired consciousness, arterial hypotension, anuria, hyperazotemia. What kind of renal dysfunction is it?
Correct answer	Acute renal failure
B	Acute glomerulonephritis
C	Acute pyelonephritis
D	Urolithiasis
E	Urine acid diathesis
№	krok 2011, 2008
Topic	pathophysiology of digestion
Task	Gastric juice of a patient has decreased concentration of enzymes. What secretory cells of stomach display disfunction?
Correct answer	Chief cells of glands
B	Parietal cells of glands
C	Gland mucocytes
D	Cells of tegumental epithelium
E	G-cells
№	krok 2011

Topic	inflammation
Task	Cellular and plasma mediators play an important part in the pathogenesis of secondary alteration during inflammation. What mediators are produced in the blood plasma?
Correct answer	Bradykinin
B	Histamine
C	Leukotrienes
D	Prostaglandins
E	Lysosomal factors
№	krok 2011
Topic	microcirculation
Task	A 73-year-old patient had been admitted to a hospital with closed fracture of his right femur. Suddenly his condition deteriorated, the patient was diagnosed with vascular embolism. What type of embolism is observed most often in patients with the fractures of tubular bones?
Correct answer	Fatty
B	Air
C	Tissue
D	Retrograde
E	Gas
№	krok 2011
Topic	blood pathophysiology
Task	A 45-year-old woman has frequent uterine haemorrhages, she presents with general weakness, dyspnea, tachycardia, cardiac pain. In blood: erythrocytes - $3 \cdot 10^9$/l, Hb- 70 g/l, colour index - 0,7. The smear contains mostly hypochromic erythrocytes, microcytes. Specify the type of anaemia accrding to its mechanism of development:
Correct answer	Iron-deficiency
B	B_{12}-folate-deficiency
C	Haemolytic
D	Minkowsky-Shauffard disease
E	Protein-deficiency

№	krok 2011, 2010
Topic	etology and pathogenesis
Task	After a 5-year-old child has been brought home from the kindergarten he presented with weakness, headache, body temperature rise up to 37, $5^{o}C$. What period of disease develompent is the case?
Correct answer	Prodromal
B	Latent
C	Incubative
D	Recovery
E	Fastigium
№	krok 2011
Topic	endocrine pathophysiology
Task	A 56 year-old patient complains about limitation of movements and pain in hand joints, mainly at night. Objectively: there is a disfiguring painful swelling of affected joints. Blood and urine have high concentration of uric acid. What disease has developed?
Correct answer	Gout
B	Pellagra
C	Phenylketonuria
D	Alkaptonuria
E	Tyrosinosis
№	krok 2011, 2010
Topic	allergy
Task	Every year during the plant blossoming a female patient develops acute catarrhal inflammation of conjunctiva and nasal mucosa that is the clinical presentation of an allergy. These symptoms relate to the following type of allergic reactions:
Correct answer	Anaphylactic
B	Cytotoxic
C	Immune complex
D	Cell-mediated

E	Cellular dysfunction
№	krok 2011, 2009
Topic	microcirculation
Task	A female patient consulted a doctor about leg pain that arises usually toward the evening; feet and shins edemata. Objectively: leg skin is cyanotic, cold to the touch. What type of peripheral circulation disorder does the patient present with?
Correct answer	Venous hyperaemia
B	Arterial hyperaemia
C	Ischaemia
D	Stasis
E	Thrombosis
№	krok 2011, 2010, 2009
Topic	pathophysiology of liver
Task	Inflammatory processes in the gall bladder exert negative influence on the colloidal properties of bile. This may lead to gallstone formation. One of the causes of their formation is the crystallization of the following substance:
Correct answer	Cholesterol
B	Albumine
C	Haemoglobin
D	Urates
E	Oxalates
№	krok 2011, 2010, 2009
Topic	respiratory pathophysiology
Task	A 37-year-old man was admitted to a hospital with an attack of bronchial asthma. What respiration type will be observed in this patient?
Correct answer	Expiratory dyspnea
B	Inspiratory dyspnea
C	Apnoea
D	Gasping respiration

E	Hyperpnoea
№	krok 2011, 2010
Topic	pathophysiology of digestion
Task	It is required to measure the nitrogen metabolism in a person under observation who is recovering from continuous starvation. What result is most likely to be expected?
Correct answer	Decrease in nitrogen secretion
B	Nitrogen equilibrium
C	Negative nitrogen balance
D	Acetonemia
E	-
№	krok 2011, 2007
Topic	respiratory pathophysiology
Task	A patient was diagnosed with right lung cancer and doctors administered him surgical treatment. After rightsided pulmonectomy the patient began to suffer from evident dyspnea. What form of respiratory failure is it?
Correct answer	Pulmonary restrictive
B	Central
C	Peripheral
D	Pulmonary obstructive
E	Thoracodiaphragmal
№	krok 2011, 2009
Topic	endocrine pathophysiology
Task	A patient complains about an increase in heart rate, hyperperspiration, irritability, sleeplessness. He has been presenting with these symptoms for the latest six months. They indicate the hyperfunction of the following endocrine gland:
Correct answer	Thyroid gland
B	Pancreas
C	Adrenal glands
D	Sexual glands

E	Thymus
№	krok 2011
Topic	endocrine pathophysiology
Task	A woman in labour has been given a drug that activates contractions of the smooth muscles of uterus. Which hormone is a part of this drug?
Correct answer	Oxytocin
B	Gastrin
C	Secretin
D	Angiotensin
E	Bradykinin
№	krok 2011
Topic	cardiac pathophysiology
Task	A 50-year-old patient complains of having dyspnea under a considerable physical stress, leg edemata. Examination reveals chronic myocarditis and circulatory failure. What is the evidence of cardiac decompensation in the patient?
Correct answer	Decreased cardiac output
B	Increased blood flow velocity
C	Increased vascular resistance
D	Decreased venous pressure
E	Increased hydrostatic pressure in the lumen of blood vessels
№	krok 2011
Topic	endocrine pathophysiology
Task	Pheochromocytoma provokes hypersecretion of adrenaline and noradrenaline. The concentration of free fatty acids is higher than normal. In this case hyperlipidemia is caused by activation of the following enzyme:
Correct answer	Triglyceride lipase
B	Phospholipase *C*
C	Phospholipase A_2
D	Phospholipase A_1
E	Glycogen phosphorylase

№	krok 2011
Topic	endocrine pathophysiology
Task	Parents of a 11-year-old boy noticed that he is far behind his peers in the physical development. After the X-ray an endocrinologist revealed that the growth zones of tubular bones had already closed. Under these conditions, the intake of growth hormone can result in the development of:
Correct answer	Acromegaly
B	Gigantism
C	Dwarfism
D	Cretinism
E	Myxedema
№	krok 2011
Topic	jaundice
Task	A patient with obstructive jaundice presents with bradycardia, low arterial pressure, itching, irritability, asthenia. What is the cause of these presentations?
Correct answer	Cholemia
B	Anacholia
C	Hypercholesterolemia
D	Hypocholesterolemia
E	Hyperbilirubinemia
№	krok 2011
Topic	immunity
Task	Humoral immune response to an antigen results in generation of antibodies produced by plasmacytes. Plasmacytes arise as a result of immunostimulated division from the following cells of immune system:
Correct answer	B-lymphocytes
B	Monocytes
C	Granulocytes
D	T-helpers
E	T-killers

№	krok 2010
Topic	CNS pathophysiology
Task	As a result of spine injury a female patient has no voluntary movements of her lower limbs. This disorder is called:
Correct answer	Paraplegia
B	Tetraplegia
C	Monoplegia
D	Hemiplegia
E	Paraparesis
№	krok 2010, 2009, 2008
Topic	endocrine pathophysiology
Task	A patient has bradycardia, moderate hypotension, decrease of basal metabolism, edemata. What disorder can induce such syndrome?
Correct answer	Thyroid hypofunction
B	Parathyroid hypofunction
C	Thyroid hyperfunction
D	Parathyroid hyperfunction
E	Adrenal hypofunction
№	krok 2010
Topic	blood pathophysiology
Task	A 45-year-old woman has frequent uterine haemorrhages, she presents with general weakness, dyspnea, tachycardia, cardiac pain. In blood: erythrocytes - $3 \cdot 10^9$/l, haemoglobin - 70 g/l, colour index - 0,7. The smear contains mostly hypochromic erythrocytes, microcytes. Specify the type of anaemia accrding to its mechanism of development:
Correct answer	Iron-deficiency
B	B_{12}-folate-deficiency
C	Haemolytic
D	Minkowsky-Shauffard disease
E	Protein-deficiency
№	krok 2010

Topic	inflammation
Task	A patient diagnosed with acute abdomen was delivered to the hospital. A doctor suspected acute appendicitis and ordered urgent blood test. What factor would be the evidence of acute inflammation in this patient?
Correct answer	Leukocytosis
B	Leukopenia
C	Eosinophilia
D	Erythrocytosis
E	Erythropenia
№	krok 2010
Topic	cancerogenesis
Task	A 57-year-old worker at an asphalt plant complains of weakness, cough with blood-streaked sputum, chest pain. He has been diagnosed with lung cancer. What is the first stage of carcinogenesis?
Correct answer	Transformation
B	Promotion
C	Activization
D	Progression
E	Induction
№	krok 2010
Topic	respiratory pathophysiology
Task	As a result of hyperventilation a student has developed dizziness. What blood changes are the primary cause of this effect?
Correct answer	Decrease in CO_2 concentration
B	pH increase
C	Increase in CO_2 concentration
D	Increase in O_2 concentration
E	Decrease in O_2 concentration
№	krok 2010

Topic	jaundice
Task	A Rh-positive child of a Rh-negative woman (secundapara) has yellow skin, pathologic reflexes, convulsions. The child has an increased rate of indirect bilirubin in blood. What type of jaundice is it?
Correct answer	Haemolytic
B	Hepatic with violation of bilirubin capture
C	Hepatic with violation of bilirubin conjugation
D	Hepatic with violation of bilirubin excretion
E	Mechanic
№	krok 2010
Topic	kidney pathophysiology
Task	After a road accident a patient has the arterial pressure at the rate of 70/40 mm Hg and daily diuresis at the rate of about 300 ml. What is the mechanism of oliguria development in this case?
Correct answer	Decrease in glomerular filtration
B	Increase in glomerular filtration
C	Decrease in tubular reabsorption
D	Increase in tubular reabsorption
E	Decrease in tubular secretion
№	krok 2009
Topic	endocrine pathophysiology
Task	An adult presents with systemic arterial pressure at the rate of 160/100 mm Hg. This might be caused by the increased concentration of the following hormone in blood:
Correct answer	Adrenalin
B	Aldosterone
C	Glucagon
D	Cortisol
E	Thyroxin
№	krok 2009
Topic	blood pathophysiology

Task	After a stomach resection a patient presented with weakness, skin pallor, face puffiness, enlargement of liver and spleen. Analysis of the peripheral blood revealed megaloblasts and megalocytes; hyperchromatism (colour index - 1,3). What type of anaemia is observed in this patient?
Correct answer	B_{12}-deficient
B	Haemolytic
C	Hypoplastic
D	Iron-deficient
E	Toxic
№	krok 2009
Topic	pathophysiology of vessels
Task	A patient suffers from the cerebral atherosclerosis. Blood count showed hyperlipoproteinemia. You will most likely observe increase in the concentration of the following plasma lipoprotein class:
Correct answer	Low-density lipoproteins
B	High-density lipoproteins
C	Chylomicrons
D	Globulin complexes with steroid hormones
E	Fatty acid complexes with albumines
№	krok 2009
Topic	kidney pathophysiology
Task	A 55-year-old woman with renal failure has arterial pressure at the rate of 170/100 mm Hg. Stable pressure rise is caused by hyperactivity of the following system:
Correct answer	Renin-angiotensin-aldosterone
B	Sympathoadrenal
C	Hypothalamo-pituitary
D	Central nervous
E	Kallikrein-kinin
№	krok 2009
Topic	CNS pathophysiology

Task	After a birth trauma a newborn presents with limited movements of the right upper extremity, hyporeflexia, myatrophy. These changes relate to the following type of motor dysfunctions:
Correct answer	Peripheric (atonic) paralysis
B	Central paralysis
C	Myasthenia
D	Bulbar paralysis
E	Neuritis
№	krok 2009
Topic	allergy
Task	Immediate-type allergies are characterized by degranulation of the tissue basophils that secrete biologically active substances. One of such substances is:
Correct answer	Histamine
B	Acetylcholine
C	Plasminogen
D	Hageman’s factor
E	Thromboxane
№	krok 2009
Topic	pathophysiology of extremal state
Task	A patient present’s with Kussmaul’s respiration, acetone smell from the mouth; low tonus of eyeballs, myotic pupils, dry skin, polyuria, glycosuria, hyperglycemia. Such symptom complex is typical for the following coma:
Correct answer	Diabetic
B	Hepatic
C	Alimentary dystrophic
D	Hypoglycemic
E	Adrenal
№	krok 2009
Topic	jaundice

Task	A patient was found to have an increase in total bilirubin concentration in plasma at the expense of indirect bilirubin; high rate of stercobilin in feces and urine; normal rate of direct bilirubin. What jaundice is it?
Correct answer	Haemolytic
B	Mechanic
C	Gilbert’s syndrome
D	Parenchymatous
E	Physiological
№	krok 2009
Topic	hypoxia
Task	A 47-year-old patient with an arm injury was delivered to a hospital in pain shock condition. Objectively: the patient is in grave condition, with mental confusion; integuments are moist, pale, acrocyanotic. There are also tachypnea, fall in the arterial pressure, tachycardia. What type of hypoxia is prevailing in this patient?
Correct answer	Circulatory
B	Haemic
C	Tissue
D	Respiratory
E	Substrate
№	krok 2009, 2008
Topic	endocrine pathophysiology
Task	A patient has been suffering from diabetes mellitus for 10 years. He was delivered to a hospital in grave condition. On the 2nd day of treatment his condition grew significantly worse: he lapsed into a coma, there appeared noisy deep breathing. Deep inspirations took turns with forced expirations with assistance of expiratory muscles. What form of respiration disorder is it?
Correct answer	Kussmaul’s respiration
B	Stenotic respiration
C	Tachypnea
D	Cheyne-Stokes respiration
E	Biot’s respiration

№	krok 2008
Topic	kidney pathophysiology
Task	A female patient suffers from chronic glomerulonephritis. Urine analysis revealed proteinuria, hematuria, leukocyturia. Proteinuria indicates disturbance of the following process in kidneys:
Correct answer	Glomerular filtration
B	Tubular secretion
C	Tubular reabsorption
D	Tubular secretion and reabsorption
E	Renal blood flow
№	krok 2008
Topic	blood pathophysiology
Task	A 40 year old woman has been suffering from profuse uterine bleedings for a long time. Blood count: Hb- 90 g/l, erythrocytes - 3, $9 \cdot 10^{12}$/l, colour index - 0,6. What is the main cause of hypochromic anemia?
Correct answer	Iron loss with blood
B	Increased consumption of iron
C	Nonassimilability of iron
D	Deficiency of vitamin B_{12}
E	Insufficient iron content in food ration
№	krok 2008
Topic	endocrine pathophysiology
Task	As a result of reduced water reabsorption in nephron tubules daily diuresis of a patient has increased up to 10 litres. This might be caused by reduced secretion of the following hormone:
Correct answer	Vasopressin
B	Aldosterone
C	Parathormone
D	Thyrocalcitonin
E	Insulin
№	krok 2008

Topic	endocrine pathophysiology
Task	What disorders are possible as a result of thyroid insufficiency during infancy?
Correct answer	Cretinism
B	Nanism
C	Gigantism
D	Basedow’s disease
E	Itsenko-Cushing syndrome
№	krok 2008
Topic	jaundice
Task	A patient suffers from jaundice. Examination revealed that blood plasm had high concentration of indirect reacting (free) bilirubin, feces and urine had high concentration of stercobilin, concentration of direct reacting (conjugated) bilirubin was normal. What type of jaundice is it?
Correct answer	Hemolytic
B	Neonatal jaundice
C	Parenchymatous
D	Gilbert’s disease
E	Obstructive
№	krok 2008
Topic	allergy
Task	A few minutes afer repeated introduction of penicillin a patient got dyspnea, tongue numbness, hyperemia and then skin pallor. The patient also lost consciousness. What is the cause of such a grave condition?
Correct answer	Anaphylactic shock
B	Serum sickness
C	Hemolytic anemia
D	Acute glomerulonephritis
E	Bronchial asthma
№	krok 2008
Topic	pathophysiology of liver

Task	A 38 year old patient had hepatitis but didn't give up alcohol. There appeared symptoms of hepatocirrhosis along with ascites and edemata of his lower limbs. What changes in blood are main factor of edemata development?
Correct answer	Hypoalbuminemia
B	Hypoglobulinemia
C	Hypocholesterolemia
D	Hypokalemia
E	Hypoglycemia
№	krok 2008
Topic	pathophysiology of liver
Task	Introduction of glucocorticoids induces strengthening of glucose concentration in blood. Which of the following processes will be activated in liver?
Correct answer	Gluconeogenesis
B	Glycogenolysis
C	Oxidation of fatty acids
D	Ketogenesis
E	Glycolysis
№	krok 2008
Topic	pathophysiology of terminal state
Task	What form of hypoxia develops during shock and collapse?
Correct answer	Circulatory
B	Respiratory
C	Hypoxic
D	Hemic
E	Tissue
№	krok 2008
Topic	endocrine pathophysiology
Task	A boy is 4 year old. Glucose concentration in blood plasma is 12 millimole/l. This might be caused by deficiency of the following hormone:

Correct answer	Insulin
B	Glucagon
C	Cortisol
D	Somatotropin
E	Adrenocorticotropin
№	krok 2008
Topic	hypoxia
Task	A 40 year old patient complains about general weakness, headache, body temperature rise, cough with sputum, dyspnea. After examination his illness was diagnosed as focal pneumonia. What type of hypoxia is observed?
Correct answer	Respiratory
B	Circulatory
C	Hemic
D	Tissue
E	Hypoxic
№	krok 2008
Topic	microcirculation
Task	A child got burn on his hand caused by hot water. Burn skin is bright red. What disturbance of local blood circulation is it?
Correct answer	Arterial hyperemia
B	Venous hyperemia
C	Stasis
D	Thrombosis
E	Embolism
№	krok 2008
Topic	microcirculation
Task	A patient is 54 year old. After intense emotional stress he felt strong pain behind his breastbone irradiating to his left arm and left part of his neck. He felt also death anxiety and broke into a cold sweat. Nitroglycerine relieved pain. Name a disturbamce of local blood circulation in heart that has developed in this case:

Correct answer	Ischemia
B	Thrombosis
C	Embolism
D	Arterial hyperemia
E	Venous hyperemia
№	krok 2007
Topic	blood pathophysiology
Task	A 54 y.o. patient with stomach ulcer complains about great weakness, dyspnea caused by the slightest physical exercise. Blood count: erythrocytes - 1, 44 · 10^{12}/l, Hb- 66 g/l, colour index - 1,4. What anemia are these changes of peripheral blood count typical for?
Correct answer	B_{12}-deficiency
B	Iron-deficiency
C	Acute posthemorrhagic
D	Acquired hemolytic
E	Chronic posthemorrhagic
№	krok 2007
Topic	cardiac pathophysiology
Task	What intracardiac compensation mechanism is actuated under conditions of cardiac insufficiency and causes blood volume overload?
Correct answer	Heterometric
B	Tachycardia
C	Homeometric
D	Myocardium hypertrophy
E	Increase of respiratory rate
№	krok 2007
Topic	blood pathophysiology
Task	What disease of blood coagulation system is based upon abrupt deceleration of blood coagulation due to disturbed formation of plasma thromboplastin (VIII factor deficit)?

Correct answer	Hemophilia
B	Thrombocytopenic purpura
C	Hemorrhagic vasculitis
D	Symptomatic thrombocytopenia
E	Hemorrhagic purpura
№	krok 2007
Topic	allergy
Task	In order to estimate antibiotic susceptibility of a patient doctors introduced him intracutaneously 0,2 ml of penicilline solution. Ten minutes after introduction there appeared hyperemy and edema. What type does this reaction relate to (according to Coomb's and Gell's classi-fication)?
Correct answer	Anaphylactic reaction
B	Cytotoxic reaction
C	Reaction of Arthus phenomenon type
D	Delayed-type hypersensitivity
E	Tuberculine reaction
№	krok 2007
Topic	blood pathophysiology
Task	What classification criterion incorporates the following types of anemias: posthemorrhagic, hemolytic and anemia induced by disturbed hematogenesis?
Correct answer	Pathogenesis
B	Etiology
C	Hematogenesis type
D	Bone marrow regenerability
E	Colour index
№	krok 2007
Topic	pathophysiology of terminal state
Task	What form of hypoxia can result from shock and collapse?
Correct answer	Circulatory

B	Respiratory
C	Hypoxic
D	Hemic
E	Histic
№	krok 2007
Topic	endocrine pathophysiology
Task	A patient ill with pheochromocytoma has high secretion of the following hormone:
Correct answer	Adrenaline
B	Glucagon
C	Insulin
D	Thyroxin
E	Somatotropin
№	krok 2007
Topic	endocrine pathophysiology
Task	Preventive examination of a woman revealed enlargement of her thyroid gland, exophthalmos, high body temperature, increase of heart rate up to 110 times per minute. It is advisable to determine content of the following hormone in blood:
Correct answer	Thyroxine
B	Noradrenaline
C	Adrenaline
D	Insulin
E	Cortisol
№	krok 2007
Topic	inflammation
Task	Examination of a patient revealed neutrophilic leukocytosis with shift of leukogram to the right. It is typical for:
Correct answer	Acute inflammatory process
B	Chronic inflmmatory process
C	Autoimmune process

D	Allergy
E	Rheumatism
№	krok 2007
Topic	respiratory pathophysiology
Task	A patient has been suffering from di-abetes mellitus for 10 years. He was deli-vered to the hospital in grave condition. On the 2nd day of staying at the hospital his condition has become abruptly worse: he lapsed into a coma, there appeared noi-sy deep breathing when deep inspirations took turns with forced expirations with participation of expiratory muscles. What form of respiratory impairment is it?
Correct answer	Kussmaul's respiration
B	Stenotic respiration
C	Tachypnea
D	Cheyne-Stokes respiration
E	Biot's respiration
№	krok 2007
Topic	endocrine pathophysiology
Task	A woman in labour was given a preparation that activates contractions of smooth uterine muscles. What hormone is contained in this preparation?
Correct answer	Oxytocin
B	Gastrin
C	Secretin
D	Angiotensin
E	Bradykinin
№	krok 2007
Topic	endocrine pathophysiology
Task	Introduction of a hormone into a man's organism resulted in increased water reabsorption in kidneys, high vascular tone, rise of arterial pressure. What hormone was introduced?
Correct answer	Vasopressin
B	Adrenaline

C	Thyroxine
D	Aldosterone
E	Noradrenaline
№	krok 2021
Topic	pathophysiology
Task	A patient has cardiac rhythm disturbance. ECG shows heart rate of 60/min., prolongation of PQ interval, and periodical loss of QRS complex. What cardiac rhythm disturbance is it?
Correct answer	First-degree incomplete AV block
B	His' right bundle branch block
C	Complete AV block
D	Sick sinus syndrome
E	Second-degree incomplete AV block
№	krok 2021
Topic	pathophysiology
Task	A child has signs of delayed physical and mental development (cretinism). This condition is caused by deficiency of the following hormone:
Correct answer	Thyroxine
B	Calcitonin
C	Somatotropin
D	Insulin
E	Testosterone
№	krok 2021
Topic	pathophysiology
Task	A man with tetanus developed acute respiratory failure. What type of respiratory failure develops in such cases?
Correct answer	Restrictive disorder of alveolar ventilation
B	Dysregulatory disorder of alveolar ventilation
C	Diffusion abnormality
D	Perfusion abnormality

E	Obstructive disorder of alveolar ventilation
№	krok 2021
Topic	pathophysiology
Task	A woman with enteritis accompanied by severe diarrhea presents with loss of water in the extracellular space, increased water content in the cells, and decreased blood osmolarity. Name this type of water- electrolyte imbalance:
Correct answer	Isoosmolar hypohydration
B	Hyperosmolar hyperhydration
C	Hypoosmolar hyperhydration
D	Hypoosmolar hypohydration
E	Hyperosmolar hypohydration
№	krok 2021
Topic	pathophysiology
Task	ECG of the patient shows increased duration of the QRS complex. What is the most likely cause?
Correct answer	Disturbed conduction in the atrioventricular node
B	Increased atrial excitability
C	Increased period of ventricular excitation
D	Increased atrial and ventricular excitability
E	Increased period of atrial excitation
№	krok 2021
Topic	pathophysiology
Task	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:
Correct answer	Disseminated intravascular coagulation»
B	Disturbed platelet production
C	Autoimmune thrombocytopenia
D	Hemorrhagic diathesis
E	Exogenous intoxication

№	krok 2021
Topic	pathophysiology
Task	A patient with a many-year-long history of mandibular osteomyelitis developed edema, massive proteinuria, and hyperlipidemia. What condition is the most likely in this patient?
Correct answer	Chronic kidney disease
B	Nephrotic syndrome
C	Pyelonephritis
D	Nephritis
E	Urolithiasis
№	krok 2021
Topic	pathophysiology
Task	On clinical examination a woman presents with excessive sweating, tachycardia, loss of weight, and tremor. What endocrine pathology can cause these signs?
Correct answer	Hyperthyroidism
B	Hypoaldosteronism
C	Hypothyroidism
D	Hypergonadism
E	Hypogonadism
№	krok 2021
Topic	pathophysiology
Task	After a prolonged isoniazid treatment, the patient developed polyneuritis, paresthesia, memory disorders, and convulsions. What is the likely mechanism of the described isoniazid side-effects?
Correct answer	Disruption of cell membrane synthesis
B	Inhibition of RNA synthesis
C	Inhibition of pyridoxal phosphate formation &
D	Para-aminobenzoic acid antagonism
E	Inhibition of protein synthesis
№	krok 2021

Topic	pathophysiology
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	Familial nonhemolytic (Gilbert's) syndrome
B	Chronic cholecystitis
C	Mechanical jaundice
D	Hemolytic jaundice
E	Parenchymatous jaundice
№	krok 2021
Topic	pathophysiology
Task	Increased levels of high-density lipoproteins lead to decreased risk of atherosclerosis. What is the mechanism of anti-atherosclerotic effect of high-density lipoproteins?
Correct answer	They extract cholesterol from tissues
B	They supply tissues with cholesterol
C	They facilitate cholesterol absorption in the intestine
D	They activate cholesterol transformation into bile acids
E	They take part in cholesterol breakdown
№	krok 2021
Topic	pathophysiology
Task	Dental implants were installed in a patient. Three weeks later, implant rejection occurred. What blood cells play the largest role in this pathological process?
Correct answer	T lymphocytes
B	B lymphocytes
C	Immunoglobulins E
D	Immunoglobulins M
E	Plasmacytes
№	krok 2021

Topic	pathophysiology
Task	A 58-year-old man with acute heart failure developed decreased daily diuresis - oliguria. What is the mechanism of this phenomenon?
Correct answer	Decreased permeability of membrane glomeruli
B	Decreased oncotic blood pressure
C	Decreased glomerular filtration
D	Decreased number of functional glomeruli
E	Increased hydrostatic pressure on the capillary wall
№	krok 2021
Topic	pathophysiology
Task	After a cerebral hemorrhage, the patient developed a significant loss of gustatory sensitivity. What cerebral structure is likely to be damaged in this case?
Correct answer	Hypothalamus
B	Amygdala
C	Substantia nigra
D	Hippocampus
E	Postcentral gyrus
№	krok 2021
Topic	pathophysiology
Task	A patient with heatstroke was delivered to the admission room. What compensatory reactions develop in the patient’s body in such case?
Correct answer	Coronary vasospasm
B	Peripherial vasodilatation
C	Increased heart rate
D	Peripheral vasoconstriction
E	Persistent hyperglycemia
№	krok 2021
Topic	pathophysiology

Task	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:
Correct answer	Venous congestion and increased venous pressure
B	Deceleration of glomerular filtration rate
C	Hypoproteinemia due to protein synthesis disturbance
D	Hypoglycemia due to glycogen synthesis disturbance
E	Decreased production of vasopressin in the hypothalamus
№	krok 2021
Topic	pathophysiology
Task	Phenylketonuria belongs to the following group of molecular metabolic diseases:
Correct answer	Hereditary disorders of lipid metabolism
B	Amino acid metabolism disorders
C	Carbohydrate metabolism disorders
D	Hereditary disorders of connective tissue metabolism
E	Mineral metabolism disorders
№	krok 2021
Topic	pathophysiology
Task	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:
Correct answer	Minerals
B	Vitamins
C	Proteins
D	Lipids
E	Carbohydrates
№	krok 2021
Topic	pathophysiology

Task	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?
Correct answer	Increased glomerular filtration
B	Increased creatinine secretion in the renal tubules
C	Decreased glomerular filtration
D	Increased creatinine reabsorption
E	Increased creatinine production in the muscles
№	krok 2021
Topic	pathophysiology
Task	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?
Correct answer	Vitamin B6 (pyridoxine)
B	Vitamin B1 (thiamine)
C	Vitamin B3 (niacin)
D	Vitamin C (ascorbic acid)
E	Vitamin B2 (riboflavin)
№	krok 2022
Тема	pathophysiology
Текст завдання	On clinical examination a woman presents with excessive sweating, tachycardia, loss of weight, and tremor. What endocrine pathology can cause these signs?
Правильна відповідь	Hyperthyroidism
B	Hypoaldosteronism
C	Hypothyroidism
D	Hypergonadism

E	Hypogonadism
№	krok 2022
Тема	pathophysiology
Текст завдання	After a prolonged isoniazid treatment, the patient developed polyneuritis, paresthesia, memory disorders, and convulsions. What is the likely mechanism of the described isoniazid side-effects?
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B	Inhibition of RNA synthesis
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Правильна відповідь	Familial nonhemolytic (Gilbert’s) syndrome
B	Chronic cholecystitis
C	Mechanical jaundice
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Тема	pathophysiology
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C	They facilitate cholesterol absorption in the intestine
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№	krok 2022
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Текст завдання	A 58-year-old man with acute heart failure developed decreased daily diuresis - oliguria. What is the mechanism of this phenomenon?
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B	Decreased oncotic blood pressure
C	Decreased glomerular filtration
D	Decreased number of functional glomeruli
E	Increased hydrostatic pressure on the capillary wall
№	krok 2022
Тема	pathophysiology
Текст завдання	After a cerebral hemorrhage, the patient developed a significant loss of gustatory sensitivity. What cerebral structure is likely to be damaged in this case?

Правильна відповідь	Hypothalamus
B	Amygdala
C	Substantia nigra
D	Hippocampus
E	Postcentral gyrus
№	krok 2022
Тема	pathophysiology
Текст завдання	A patient with heatstroke was delivered to the admission room. What compensatory reactions develop in the patient’s body in such case?
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B	Peripherial vasodilatation
C	Increased heart rate
D	Peripheral vasoconstriction
E	Persistent hyperglycemia
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Тема	pathophysiology
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:
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B	Deceleration of glomerular filtration rate
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Тема	pathophysiology

Текст завдання	Phenylketonuria belongs to the following group of molecular metabolic diseases:
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C	Carbohydrate metabolism disorders
D	Hereditary disorders of connective tissue metabolism
E	Mineral metabolism disorders
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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:
Правильна відповідь	Minerals
B	Vitamins
C	Proteins
D	Lipids
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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?
Правильна відповідь	Increased glomerular filtration
B	Increased creatinine secretion in the renal tubules
C	Decreased glomerular filtration
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