№	крок 2023
Topic	physiology of hormones
Task	A 50-year-old patient was diagnosed with myxedema. The development of this pathology is caused by disturbed production of certain hormones. Name these hormones.
Correct answer	Thyroxine and triiodothyronine
B	Insulin and glucagon
C	Cortisol and aldosterone
D	ACTH and growth hormone
E	B. Oxytocin and vasopressin
№	крок 2023
Topic	physiology of the heart
Task	The physiological properties of human cardiac muscle include all of the listed below except:
Correct answer	Elasticity
B	Conductivity
C	Automaticity
D	Excitability
E	Contractility
№	крок 2023
Topic	physiology of hormones
Task	Indirect calorimetry shows that the basal metabolic rate of a person is 40% lower than the norm. What endocrine gland does not function properly in this person, causing this condition?
Correct answer	Thyroid gland
B	Pineal gland
C	Pancreas
D	Adrenal gland
E	Thymus
№	крок 2023

Topic	physiology of hormones
Task	A 30-year-old woman complains of intense thirst and dry mouth after a severe emotional shock. Laboratory testing shows elevated blood sugar levels of 10 mmol/L. What endocrine gland is affected in the patient, causing her condition?
Correct answer	Pancreas
B	Pineal gland
C	Gonads
D	Thyroid gland
E	Adrenal glands
№	крок 2023
Topic	physiology of hormones
Task	A man complains of weight loss, rapid physical and mental fatigability, decreased appetite, arterial hypotension, and hyperpigmentation of the skin. Examination allowed diagnosing him with Addison's disease. What endocrine gland is hypofunctional in this case, causing this condition in the patient?
Correct answer	Adrenal glands
B	Thyroid gland
C	Pituitary gland
D	Gonads
E	Parathyroid gland
№	крок 2023
Topic	physiology of the central nervous system
Task	In an experiment, a dog was trained to develop a conditioned reflex in response to a flash of light. For this reflex to occur, a certain part of the cerebral cortex must be intact. What part of the cerebral cortex is it?
Correct answer	Occipital lobe
B	Frontal lobe
C	Postcentral gyrus

D	Temporal lobe
E	Precentral gyrus
№	крок 2023
Topic	physiology of breathing
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	Bronchial rupture
D	Alveolar enlargement
E	Bronchial narrowing
№	крок 2023
Topic	physiology of the heart
Task	Premature excitation that occurrs in the ventricular myocardium
Correct answer	Reduces the speed of excitation conduction throughworking cardiomyocytes
B	Increases the speed of excitation
C	Has no effect on the automaticity of the sinoatrial node
D	Reduces the automaticity of the sinoatrial node
E	Increases the automaticity of the sinoatrial node
№	крок 2023
Topic	physiology of breathing
Task	What receptors respond to changes in gas composition of the blood that enters the brain?
Correct answer	All of the listed
B	Carotid sinus receptors
C	Aortic receptors
D	Bulbar receptors
E	

№	крок 2023
Topic	physiology of hormones
Task	A patient has high body temperature, increased basal metabolic rate, and tachycardia at rest, which can be caused by hyperfunction of the:
Correct answer	Thyroid gland
B	Pancreas
C	Neurohypophysis
D	Adrenal cortex
E	Gonads
№	крок 2023
Topic	physiology of excretion
Task	A woman has edemas and high levels of urine protein. What nephron segment is dysfunctional in this case, as indicated by these signs?
Correct answer	Renal corpuscle
B	Distal convoluted tubule
C	Ascending limb of the loop of Henle
D	Proximal convoluted tubule
E	Descending limb of the loop of Henle
№	крок 2023
Topic	physiology of the central nervous system
Task	In an experiment, a test animal had a part of its brain destroyed, which caused the animal to change from a homeothermic to a poikilothermic state. What part of the brain was destroyed in this case
Correct answer	Hypothalamus
B	Medulla oblongata
C	Mesencephalon
D	Pineal gland
E	Pituitary

№	крок 2023
Topic	physiology of digestion
Task	In an experiment, the processes of food and water hydrolysis products absorption were studied. It was determined that these processes mainly occur in the following gastrointestinal segment:
Correct answer	Small intestine
B	Oral cavity
C	Rectum
D	Large intestine
E	Stomach
№	крок 2023
Topic	physiology of hormones
Task	A patient has high levels of vasopressin (antidiuretic hormone) in the blood. What changes in the patient’s diuresis will occur in this case?
Correct answer	Oliguria
B	Anuria
C	Glycosuria
D	Natriuria
E	Polyuria
№	крок 2023
Topic	physiology of the central nervous system
Task	A 59-year-old man was diagnosed with chorea that manifests as involuntary rapid movements accompanied by grimaces. Chorea development is associated with damage to a certain brain structure. Name this brain structure.
Correct answer	Striatum
B	Amygdala
C	N. fasciculi longitudinalis medialis . (Darkshewitch nuclei)
D	Thalamus

E	Claustrum
№	крок 2023
Topic	physiology of blood
Task	During vascular-platelet hemostasis, platelet factor (PF-8) thrombostenin is released from destroyed platelets. What is its function?
Correct answer	Thrombus retraction
B	Erythrocyte agglutination
C	Erythrocyte hemolysis
D	Platelet adhesion
E	Platelet aggregation
№	крок 2023
Topic	physiology of hormones
Task	Membrane-acting protein/peptide hormones regulate metabolism in the cells, using intracellular mediators (messengers) for this purpose. ACTH causes intracellular effects by forming:
Correct answer	Cyclic adenosine monophosphate
B	Inositol trisphosphate
C	Calcium(calmodulin)
D	Cyclic guanosine monophosphate
E	
№	крок 2023
Topic	physiology of the central nervous system
Task	In an experiment, a test animal lost its orienting reflexes after certain structures of its central nervous system had been destroyed. At what level did the damage occur?
Correct answer	Corpora quadrigemina
B	Cerebellum
C	Lateral vestibular nuclei
D	Red nuclei

E	Diencephalon
№	крок 2023
Topic	physiology of excitable tissues
Task	In an experiment, an excitable cell was exposed to tetraethylammonium that blocks potassium-selective ion channels. What effect will it have on the membrane potential of the cell?
Correct answer	Resting potential will disappear
B	Resting potential will increase
C	Action potential will not occur
D	Hyperpolarization will develop
E	Resting potential will remain unchanged
№	крок 2023
Topic	physiology of hormones
Task	A man came to a doctor with complaints of excessive thirst (polydipsia) and frequent urination with a large amount of urine (polyuria). The patient's history states that 4 weeks ago he was diagnosed with necrosis of this posterior lobe of the pituitary gland caused by a craniocerebral injury. What pathology is observed in the patient?
Correct answer	Diabetes insipidus
B	Cushing syndrome
C	Acromegaly
D	Diabetes mellitus
E	Cushing disease
№	крок 2023
Topic	physiology of the heart
Task	Auscultation reveals that in the patient's II intercostal space along the parasternal line on the right the II heart sound can be better heard than the I heart sound. What valve produces the II heart sound when closing?
Correct answer	Aortic semilunar valve

B	Bicuspid and tricuspid valves
C	Left bicuspid valve
D	Right tricuspid valve
E	Pulmonic semilunar valve
№	крок 2023
Topic	physiology of digestion
Task	In an experiment, the common bile duct of a test animal was diverted outwards. What digestive processes become disturbed as a result?
Correct answer	Hydrolysis and absorption of fats
B	Hydrolysis and absorption of fats, proteins, and carbohydrates
C	Water absorption
D	Hydrolysis and absorption of proteins
E	Hydrolysis and absorption of carbohydrates
№	krok 2017
Topic	Digestion
Task	Gastroscopy of a patient revealed the lack of mucus in the coating of the mucous membrane. This can be caused by the dysfunction of the following cells of gastric wall:
Correct answer	Cells of prismatic glandular epithelium
B	Parietal cells of gastric glands
C	Main exocrinocytes
D	Cervical cells
E	Endocrinocytes
№	krok 2017
Topic	CNS
Task	Alcoholic intoxication is accompanied by disturbed motor coordination and equilibrium due to the damage caused to structural elements of the cerebellum. Functional disturbance of the following cells occurs in the first place:

Correct answer	Pyriform cells
B	Basket cells
C	Granule cells
D	Stellate cells
E	Fusiform cells
№	krok 2017
Topic	Digestion
Task	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:
Correct answer	Cholecystokininpancreozymin
B	Somatostatin
C	Secretin
D	Gastric inhibitory polypeptide
E	Vasoactive intestinal peptide
№	krok 2017
Topic	Excitation tissue
Task	Electric current has affected skeletal muscle fiber resulting in depolarisation of the membrane. Depolarisation develops due to the following ions penetrating the membrane:
Correct answer	Na^{+}
B	HCO^{3-}
C	Ca^{2+}
D	Cl^{-}
E	K^{+}
№	krok 2017
Topic	HNA

Task	Psychological evaluation determined that a person is able to quickly adapt to changing situation, has good memory, is emotionally stable, possesses of high working ability. This person is the most likely to be:
Correct answer	Sanguine
B	Choleric
C	Melancholic
D	Phlegmatic
E	Phlegmatic with melancholic traits
№	krok 2017
Topic	Vision
Task	An oculist has detected increased time of darkness adaptation of a patient’s eye. What vitamin deficiency can cause such symptom?
Correct answer	A
B	E
C	C
D	K
E	D
№	krok 2017
Topic	Hormones
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	Albumin
C	Fibrinogen
D	C-reactive protein
E	Ceruloplasmin

№	krok 2017
Topic	Hormones
Task	A patient is in the state of hypoglycemic coma. What hormone can cause this condition if overdosed?
Correct answer	Insulin
B	Progesterone
C	Cortisol
D	Somatotropin
E	Corticotropin
№	krok 2017
Topic	Blood
Task	Along with normal hemoglobin types there can be pathological ones in the body of an adult. Specify one of them:
Correct answer	HbS
B	HbF
C	HbA1
D	HbA2
E	HbO2
№	krok 2017
Topic	Hormones
Task	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:
Correct answer	Vasopressin
B	Oxytocin
C	Corticotropin
D	Somatotropin
E	Thyrotropin

№	krok 2017
Topic	Excretion
Task	A patient with chronic renal failure presents with reduced inulin clearance of ml/min. The following renal function is disturbed:
Correct answer	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
Topic	Respiration
Task	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:
Correct answer	Surfactant
B	Capillary endothelium
C	Endothelial basement membrane
D	Alveolar basement membrane
E	Alveolocytes
№	krok 2017, 2016, 2013
Topic	Heart
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	Decreased stroke volume
B	Tachycardia development
C	Tonogenic dilatation
D	Increased peripheral vascular resistance
E	Increased central venous pressure

№	krok 2017
Topic	Hormones
Task	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:
Correct answer	Calcium
B	Manganese
C	Chlorine
D	Molybdenum
E	Zinc
№	krok 2017
Topic	Hormones
Task	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?
Correct answer	Hypothyroidism
B	Insufficient nutrition
C	Hyperthyroidism
D	Genetic defects
E	Hypopituitarism
№	krok 2017
Topic	Working activity
Task	A 20-year-old young man, who started to train systematically in athletics, has the following restingstate blood values: erythrocytes - 5, $5 \cdot 10^{12}$/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:
Correct answer	Hypoxemia
B	Hypercapnia

C	Physical activity
D	Hyperventilation
E	Hyperglycemia
№	krok 2017, 2016
Topic	HNA
Task	A student, who unexpectedly met his girlfriend, developed an increase in systemic arterial pressure. This pressure change was caused by the intensified realization of the following reflexes:
Correct answer	Conditioned sympathetic
B	Conditioned parasympathetic
C	Conditioned sympathetic and parasympathetic
D	Unconditioned parasympathetic
E	Unconditioned sympathetic
№	krok 2017
Topic	Thermoregulation
Task	During development of a frostbite the exposed skin becomes pale and its temperature drops. What mechanism is the basis of these developments?
Correct answer	Reflex vasoconstriction
B	Dermal and subcutaneous vasodilatation
C	Visceral vasoconstriction
D	Decreased heart rate
E	Closure of arteriovenous anastomoses
№	krok 2017, 2014, 2013
Topic	Hormones
Task	Examination of a patient revealed glycosuria and hyperglycemia. He complains of dry mouth, itchy skin, frequent urination, thirst. He has been diagnosed with diabetes mellitus. What is the cause of polyuria in this patient?
Correct answer	Increased urine osmotic pressure

B	Decreased plasma oncotic pressure
C	Increased filtration pressure
D	Decreased cardiac output
E	Increased plasma oncotic pressure
№	krok 2017
Topic	Blood
Task	A doctor examined a patient, studied the patient's blood analyses and concluded that the peripheral organs of immunogenesis are damaged. What organs are the most likely to be affected?
Correct answer	Tonsils
B	Thymus
C	Kidneys
D	Red bone marrow
E	Yellow bone marrow
№	krok 2017, 2009
Topic	Heart
Task	A patient has been diagnosed with bicuspid valve insufficiency. Where is this valve located?
Correct answer	Between the left atrium and left ventricle
B	Between the right atrium and right ventricle
C	Between the left and right atria
D	Between the left and right ventricles
E	At the aortic orifice
№	krok 2017, 2016
Topic	Excretion
Task	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:
Correct answer	Aldosterone

B	Oxytocin
C	Adrenaline
D	Glucagon
E	Testosterone
№	krok 2017
Topic	Hormones
Task	A 12-year-old boy has tetanic convulsions. What gland can be functionally impaired in this case?
Correct answer	*Glandulae parathyroidae*
B	*Hypophisis*
C	*Glandula thyroidea*
D	*Thymus*
E	*Glandula pinealis*
№	krok 2017, 2016, 2013
Topic	Pain
Task	A patient comp lains 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?
Correct answer	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
Topic	Digestion
Task	The patient’s saliva has been tested for antibacterial activity. What saliva component has antibacterial properties?
Correct answer	Lysozyme
B	Amylase

C	Ceruloplasmin
D	Parotin
E	Cholesterol
№	krok 2017, 2016
Topic	Digestion
Task	A victim of an earthquake has been remaining under debris for 7 days without food or water. What type of starvation is it?
Correct answer	Complete
B	Complete with continued hydration
C	Quantitative
D	Qualitative
E	Incomplete
№	krok 2017
Topic	Respiration
Task	During an experiment aimed as study of respiration regulation processes the peripheral chemoreceptors of test animals were stimulated, which resulted in changed respiratory rate and depth. Where are these receptors localized?
Correct answer	Aortic arch, carotid sinus
B	Capillary bed, aortic arch, carotid sinus
C	Capillary bed, aortic arch
D	Capillary bed, carotid sinus
E	Atria, carotid sinus
№	krok 2017
Topic	Hormones
Task	A 35-year-old man has come to a dentist with complaints of decreased density of the dental tissue and increased brittleness of his teeth during consumption of hard food. Laboratory analysis measured *C a/P* correlation in the enamel sample. What value of *C a/P* indicates increased demineralization?

Correct answer	0,9
B	1,67
C	1,85
D	2,5
E	1,5
№	krok 2017
Topic	Metabolism
Task	Normal metabolic rate and energy expenditure should be taken into account when actual basal metabolic rate of a patient is being determied by means of indirect calorimetry. Normal metabolic rate can be determined most accurately based on the patient's:
Correct answer	Sex, age, height and weight
B	Body surface area and weight
C	Respiratory coefficient and body surface area
D	Height and respiratory coefficient
E	Respiratory coefficient and caloric coefficient of oxygen
№	krok 2017
Topic	Metabolism
Task	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?
Correct answer	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 2017
Topic	CNS

Task	A patient presents with dysfunction of the cerebral cortex accompanied by epileptic seizures. He has been administered a biogenic amine synthetized from glutamate and responsible for central inhibition. What substance is it?
Correct answer	γ -aminobutyric acid
B	Serotonin
C	Dopamine
D	Acetylcholine
E	Histamine
№	krok 2017, 2016
Topic	Digestion
Task	A 40-year-old patient suffers from intolerance of dairy products. This condition has likely developed due to insufficiency of the following digestive enzyme:
Correct answer	Lactase
B	Lipase
C	Maltase
D	Invertase
E	Amylase
№	krok 2017
Topic	Digestion
Task	After examining a patient a doctor recommended him to exclude rich meat and vegetable broths, spices, and smoked products from the diet, since the patient was found to have:
Correct answer	Increased secretion of hydrochloric acid by the stomach glands
B	Reduced secretion of hydrochloric acid by the stomach glands
C	Reduced motility of the gastrointestinal tract
D	Reduced salivation
E	Biliary dyskinesia
№	krok 2017, 2016, 2012

Topic	Digestion
Task	Roentgenologically confirmed obstruction of common bile duct resulted in preventing bile from inflowing to the duodenum. What process is likely to be disturbed?
Correct answer	Fat emulgation
B	Protein absorption
C	Carbohydrate hydrolysis
D	Hydrochloric acid secretion in stomach
E	Salivation inhibition
№	krok 2017
Topic	Respiration
Task	A victim of a traffic accident has lost thoracic respiration but retaines diaphragmal. The spinal cord is most likely to be damaged at:
Correct answer	VI-VII cervical segments
B	I-II cervical segments
C	XI-XII cervical segments
D	I-II lumbar segments
E	I-II sacral segments
№	krok 2017
Topic	Haemodynamics
Task	During examination of a patient with a periodontal disease it would be advisable to investigate functional state of blood vessels of the dentomaxillary area. What method can be applied in this case?
Correct answer	Rheography
B	Gnathodynamometry
C	Sphygmography
D	Chronaximetry
E	Electroodontodiagnostics
№	krok 2017

Topic	Metabolism
Task	What factor results in the highest energy expenditure under the normal vital activity conditions?
Correct answer	Action of skeletal muscles
B	Increase of environment temperature
C	Decrease of environment temperature
D	Mental work
E	Food rich in calories
№	krok 2017
Topic	Haemodynamics
Task	During thermal stimulation it is characteristic of oral cavity blood vessels to:
Correct answer	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 2017
Topic	CNS
Task	After the cerebral hemorrhage a patient developed aphasia - lost the ability to articulate words. The hemorrhage is localized in the:
Correct answer	Inferior frontal gyrus
B	Superior frontal gyrus
C	Middle frontal gyrus
D	First temporal convolution
E	Second temporal convolution
№	krok 2017
Topic	HEART

Task	In the course of an experiment researchers stimulate a branch of the sympathetic nerve that innervates heart. What alterations of cardiac activity should be registered?
Correct answer	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 2017
Topic	Blood
Task	During tooth brushing it is not uncommon for oral mucosa to be injured. However, bleeding quickly stops on its own. What substances in saliva quickly staunch the flow of blood during minor oral injuries?
Correct answer	Procoagulants
B	Lipolytic enzymes
C	Amylolytic enzymes
D	Mineral substances
E	Lysozyme and mucin
№	krok 2017
Topic	CNS
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	Adrenaline
C	Noradrenaline
D	Histamine
E	Acetylcholine
№	krok 2017

Topic	Respiration
Task	High-altitude dwellers typically demonstrate chronically intensified respiration and decreased $pC\ O2$ value of blood. What mechanism is leading in the compensation of their asid-base imbalance?
Correct answer	Desreased renal reabsorption of bicarbonate
B	Increased ammonia excretion with urine
C	Decreased pulmonary ventilation
D	Increased pulmonary ventilation
E	-
№	krok 2017
Topic	Excitation tissue
Task	A young man has been performing physical exercises, holding a weight for a long time. What kind of muscle contraction is the most characteristic of these exercises?
Correct answer	Isometric
B	Isotonic
C	Single
D	Asynchronous
E	Isovolumetric
№	krok 2017
Topic	HEART
Task	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?
Correct answer	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
Topic	CNS
Task	During a brain surgery stimulation of the cerebral cortex resulted in tactile and thermal sensations in the patient. What gyrus was stimulated?
Correct answer	Postcentral gyrus
B	Cingulate convolution
C	Parahippocampal gyrus
D	Superior temporal gyrus
E	Precentral gyrus
№	krok 2017
Topic	CNS
Task	A 33-year-old man presents with disturbed pain and thermal sensitivity after a spinal cord trauma. The following ascending tract is injured:
Correct answer	Spinothalamic
B	Lateral corticospinal
C	Anterior corticospinal
D	Ventral spinocerebellar
E	Dorsal spinocerebellar
№	krok 2017
Topic	Digestion
Task	A patient is diagnosed with pancreatitis. Starch decomposition disturbance occurs in the patient’s intestine due to deficiency of the following pancreatic enzyme:
Correct answer	Amylase
B	Tripsin
C	Chymotrypsin
D	Lipase
E	Carboxypeptidase

№	krok 2017
Topic	CNS
Task	To test teeth sensitivity they are sprayed with cold or hot water. What structure of cerebral cortex provides subjective estimation of this thermal test?
Correct answer	Posterior central gyrus
B	First temporal convolution
C	Precentral gyrus
D	Middle frontal gyrus
E	Central fissure
№	krok 2016, 2013
Topic	BLOOD
Task	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:
Correct answer	Platelets
B	Eosinophils
C	Monocytes
D	Lymphocytes
E	
№	krok 2016
Topic	Digestion
Task	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:
Correct answer	Gastrin
B	Secretin
C	Cholecystokinin
D	Somatostatin

E	Neurotensin
№	krok 2016, 2014
Topic	Hormones
Task	A 49-year-old patient was found to have a disproportionate enlargement of hands, feet, nose, ears, superciliary arches and cheek bones. Blood test revealed hyperglycemia, impaired glucose tolerance. What is the most likely cause of this pathology development?
Correct answer	Hypersecretion of growth hormone
B	Posterior pituitary hormone hypersecretion
C	Insulin hyposecretion
D	Vasopressin hyposecretion
E	Glucocorticoid hypersecretion
№	krok 2016
Topic	BLOOD
Task	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:
Correct answer	HbS
B	HbA
C	HbF
D	HbA1
E	Bart-Hb
№	krok 2016
Topic	BLOOD

Task	A patient, who had suffered severe blood loss three days ago, underwent blood test. The following data was obtained in leukogram: leukocytes -12 · 10^9/l, basophils - 0, eosinophils - 3, myelocytes - 0, juvenile - 3, stab neutrophils - 12, segmented neutrophi-ls - 62, lymphocytes - 16, monocytes - What change of leukocyte content occurred in this case?
Correct answer	Neutrophilia with regenerative left-shift
B	Neutrophilia with degenerative left-shift
C	Neutrophilia with right-shift
D	Absolute lymphopenia
E	Absolute monocytopenia
№	krok 2016
Topic	Respiration
Task	A patient has sustained a traumatic injury of the greater pectoral muscle. This resulted in the decrease of:
Correct answer	Inspiratory reserve volume
B	Expiratory reserve volume
C	Tidal volume
D	Residual volume
E	Functional residual lung capacity
№	krok 2016, 2015, 2013
Topic	Hormones
Task	A woman presents with ovarian hyperaemia, increased permeability of the blood-follicle barrier with development of edema, infiltration of the follicle wall with segmental leukocytes. The follicle is large in volume. Its wall is thickened. The described situation is typical for the following period of the sex cycle:
Correct answer	Preovulatory stage
B	Ovulation
C	Menstrual period

D	Postmenstrual period
E	Period of relative rest
№	krok 2016
Topic	VESSELS
Task	What factor results in maximal dilation of the gemomicrocirculatory pahtway vessels and their increased permeability?
Correct answer	Histamine
B	Endothelin
C	Vasopressin
D	Noradrenaline
E	Serotonin
№	krok 2016, 2015
Topic	Hormones
Task	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:
Correct answer	Thyroxine
B	Somatotropin
C	Corticotropin
D	Insulin
E	Aldosterone
№	krok 2016
Topic	Digestion
Task	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?
Correct answer	Conjugated bilirubin

B	Ketone bodies
C	Unconjugated bilrubin
D	Stercobilin
E	Bilirubin glucuronides
№	krok 2016
Topic	ANS
Task	Pupil dilation occurs when a person steps from a light room into a dark one. What reflex causes such reaction?
Correct answer	Sympathetic unconditioned reflex
B	Sympathetic conditioned reflex
C	Metasympathetic reflex
D	Parasympathetic unconditioned reflex
E	Parasympathetic conditioned reflex
№	krok 2016
Topic	cns
Task	A person with dental disease cannot always pinpoint the location of the affected tooth. What principle of excitatory diffusion in nerve centers causes such phenomenon?
Correct answer	Irradiation
B	Reverberation
C	Occlusion
D	Dominant
E	Divergence
№	krok 2016
Topic	HEART
Task	A patient during examination presents with prolongation of the II heart sound. The II heart sound occurs due to:
Correct answer	Closure of semilunar valve

B	Opening of semilunar valve
C	Opening of mitral valve
D	Opening of tricuspid valve
E	Closure of tricuspid valve
№	krok 2016
Topic	Hormones
Task	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?
Correct answer	Vasopressin
B	Aldosterone
C	Natriuretic hormone
D	Insulin
E	Angiotensin I
№	krok 2016
Topic	BLOOD
Task	During AB0 blood grouping by using zoliclons (diagnostic monoclonal antibodies), hemagglutination did not occur with any of the zoliclons. What is the blood group of the patient under examination?
Correct answer	0 (I)
B	A (II)
C	B (III)
D	AB (IV)
E	-
№	krok 2016
Topic	tHERMOREGULATION
Task	A man submerged into the ice-cold water and died soon as a result of abrupt exposure to cold. In such cases an organism loses heat most intensively by the way of:
Correct answer	Heat conduction

B	Radiation
C	Convection Convection
D	Heat conduction and radiation
E	No correct answer
№	krok 2016
Topic	Excitation tissue
Task	A person performs flexionextention movements of the forearm with the elbow resting on a table. What type of muscle contraction occurs in the *m.biceps brachii* ?
Correct answer	Isotonic
B	Auxotonic
C	Isometric
D	Smooth muscle tetanus
E	Serrated muscle tetanus
№	krok 2016, 2015, 2012
Topic	Excitation tissue
Task	Microelectrode technique allowed to register a potential following ”allor-none” law and capable of undecremental spreading. Specify this potential:
Correct answer	Action potential
B	Excitatory postsynaptic potential
C	Rest potential
D	Inhibitory postsynaptic potential
E	Receptor potential
№	krok 2016, 2014
Topic	Respiration
Task	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:
Correct answer	Respiratory alkalosis

B	Carbon dioxide acidosis
C	Erythropenia
D	Polycythemia
E	Reduced oxygen capacity of blood
№	krok 2016
Topic	Respiration
Task	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?
Correct answer	Hypoxemia
B	Hypokalemia
C	Hypothermia
D	Erythropenia
E	Leucopenia
№	krok 2016
Topic	BLOOD
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	Vascular-platelet haemostasis
C	-
D	Fibrinolysis
E	Clot retraction
№	krok 2016
Topic	HEART

Task	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:
Correct answer	Potassium
B	Sodium
C	Chlorine
D	Magnesium
E	Calcium
№	krok 2016
Topic	BLOOD
Task	Which of the named below is the substrate of activated Christmas factor that takes part in blood coagulation?
Correct answer	Factor X
B	Vitamin K
C	Fibrinogen
D	Fibrin
E	Thrombin
№	krok 2016
Topic	Respiration
Task	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:
Correct answer	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

Topic	CNS
Task	Parkinson’s disease is caused by disrupted dopamine synthesis. What brain structure synthesizes this neurotransmitter?
Correct answer	Substantia nigra
B	Pallidum
C	Quadrigeminal plate
D	Red nuclei
E	Hypothalamus
№	krok 2016
Topic	Metabolism
Task	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?
Correct answer	Mountain
B	Temperate
C	Arctic
D	Tropical
E	Subtropical
№	krok 2015, 2014
Topic	Digestion
Task	Stimulation of the peripheral segment of *chorda tympani* in an experimenal animal resulted in the discharge of the following secretion from the parotid salivary fistula:
Correct answer	A lot of liquid saliva
B	A small amount of liquid saliva
C	There is no saliva
D	A small amount of viscous saliva
E	A lot of viscous saliva

№	krok 2015
Topic	Hormones
Task	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:
Correct answer	Catecholamine
B	Cortisol
C	Aldosterone
D	Somatotropin
E	Vasopressin
№	krok 2015
Topic	BLOOD
Task	A 38-year-old female patient has been brought into admission room with uterine bleeding. What will be revealed by blood test?
Correct answer	Decrease of packed cell volume
B	Eosinophilia
C	Decreased erythrocyte sedimentatio rate
D	Leukocytosis
E	Increased color index of blood
№	krok 2015
Topic	EXCRETION
Task	There is high content of proteine and erythrocytes in urine. This can be caused by increased:
Correct answer	Permeability of renal filter permeability
B	Effective filtration pressure
C	Hydrostatic blood pressure in glomerular capillaries
D	Hydrostatic pressure of primary urine in capsule
E	Oncotic pressure of blood plasma
№	krok 2015

Topic	BLOOD
Task	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?
Correct answer	Neutrophil
B	Eosinophil
C	Lymphocyte
D	Erythrocyte
E	Basocyte
№	krok 2015
Topic	EXCRETION
Task	A patient has oliguria caused by acute renal failure. What daily amount of urine corresponds with this symptom?
Correct answer	100-500 ml
B	1500-2000 ml
C	1000-1500 ml
D	500-1000 ml
E	50-100 ml
№	krok 2015
Topic	HIGHER NERVOUS ACTIVITY
Task	Denture installation has caused excessive salivation in patient. It is caused by the following reflexes:
Correct answer	Unconditioned
B	Conditioned
C	Conditioned and unconditioned
D	Local
E	-
№	krok 2015, 2014, 2012

Topic	Hormones
Task	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:
Correct answer	Thyroxine
B	Insulin
C	Cortisol
D	Somatotropin
E	Glucagon
№	krok 2015, 2013
Topic	BLOOD
Task	Tooth extraction in a patient with chronic persistent hepatitis was complicated by a prolonged bleeding. What is the cause of hemorrhagic syndrome?
Correct answer	Decreased production of thrombin
B	Increased production of thromboplastin
C	Decreased production of fibrin
D	Increased synthesis of fibrinogen
E	Increased fibrinolysis
№	krok 2015
Topic	CnS
Task	A patient has been hospitalized with skull trauma. His examination established absence of volitional movements of his head and neck muscles. What part of brain can cause this effect if damaged?
Correct answer	Lower part of precentral gyrus
B	Lower part of postcentral gyrus
C	Upper part of precentral gyrus
D	Upper part of postcentral gyrus
E	Inferior frontal (Broca’s) gyrus
№	krok 2015, 2013

Topic	Hormones
Task	A 12-year-old male patient has tetanic convulsions. Which gland function may be impaired in this case?
Correct answer	*Glandulae parathyroidae*
B	*Hypophisis*
C	*Glandula thyroidea*
D	*Thymus*
E	*Glandula pinealis*
№	krok 2015, 2013, 2010
Topic	Digestion
Task	A patient has secretory dysfunction of the submandibular salivary galnd. Which nerve is responsible for its vegetative innervation?
Correct answer	*Chorda tympani*
B	*N.auriculotemporalis*
C	*N.mandibularis*
D	*N.petrosus major*
E	*N.petrosus minor*
№	krok 2015
Topic	Excitation tissue
Task	A patient complains of decreased abilty to produce proper pressure with his masticatory muscles. What method of study allows checking the patient’s complaint?
Correct answer	Gnathodynamometry
B	Dynamometry
C	Electromyography
D	Sphygmography
E	Masticatiography
№	krok 2015
Topic	CNS

Task	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:
Correct answer	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
Topic	Hormones
Task	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?
Correct answer	Vasopressin
B	Aldosterone
C	Natriuretic hormone
D	Insulin
E	Angiotensin I
№	krok 2015, 2014
Topic	BLOOD
Task	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?
Correct answer	0 (I)
B	A (II)
C	B (III)
D	AB (IV)
E	-
№	krok 2015, 2014
Topic	Metabolism

Task	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?
Correct answer	Adaptation
B	Tolerance
C	Tachyphylaxis
D	Stress
E	Reparation
№	krok 2015
Topic	BLOOD
Task	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?
Correct answer	Interleukin 1
B	Pseudomonas polysaccharide (Piromen)
C	Histamine
D	Bradykinin
E	Immunoglobulin
№	krok 2015, 2013
Topic	Digestion
Task	After examining the patient the doctor recommended him to eliminate rich meat and vegetable broth, spices, smoked products from the diet, since the patient was found to have:
Correct answer	Increased secretion of hydrochloric acid by the stomach glands
B	Reduced secretion of hydrochloric acid by the stomach glands
C	Reduced motility of the gastrointestinal tract
D	Reduced salivation
E	Biliary dyskinesia

№	krok 2015, 2014
Topic	CnS
Task	A 36-year-old patient had had a traumatic brain injury which caused a swallowing impairment. Which part of brain was affected?
Correct answer	Medulla oblongata
B	Mesencephalon
C	Diencephalon
D	Reticular formation
E	Thalamus
№	krok 2015
Topic	BLOOD
Task	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?
Correct answer	Basocytes
B	Neutrophils
C	Eosinophils
D	T-lymphocytes
E	B-lymphocytes
№	krok 2015, 2012
Topic	heart
Task	In course of an experiment researchers stimulate a branch of a sympathetic nerve that innervates heart. What changes in cardiac activity should be registered?
Correct answer	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
Topic	heart
Task	An isolated heart of a mammal has had diastolic arrest in the process of perfusion with an ion-rich solution. Solution had excess of the following ions:
Correct answer	Potassium
B	Sodium
C	Chlorine
D	Magnesium
E	Calcium
№	krok 2015
Topic	CNS
Task	A patient with inflammation of tongue mucosa (glossitis) complains of taste sensitivity disorder in the two anterior thirds of his tongue. This is caused by the damage of the following nerve:
Correct answer	Tympanichord
B	Tympanic
C	Lesser petrosal
D	Lingual
E	Glossopharyngeal
№	krok 2015
Topic	Heart
Task	Physical activity caused an increase in the cardiac output in a patient with a transplanted heart. What regulative mechanism is responsible for these changes?
Correct answer	Catecholamines
B	Sympathetic unconditioned reflexes
C	Parasympathetic unconditioned reflexes
D	Sympathetic conditioned reflexes

E	Parasympathetic conditioned reflexes
№	krok 2015
Topic	Digestion
Task	An animal has been given a weak solution of hydrochloric acid introduced into the duodenum through a tube. Which hormone concentration will increase in the animal?
Correct answer	Secretin
B	Cholecystokinin (pancreozymin)
C	Gastrin
D	Glucagon
E	Neurotensin
№	krok 2015
Topic	CNS
Task	Examination of a patient with a brain cortex injury revealed that he had lost the tactile sensitivity. What part of the cerebral cortex is damaged?
Correct answer	Posterior central gyrus
B	Occipital lobe
C	Parietal lobe
D	Frontal lobe
E	Anterior central gyrus
№	krok 2015
Topic	Excitation tissue
Task	In the experiment, the permeability of cell membrane for potassium ions has been increased. What changes can be expected in the membrane state?
Correct answer	Hyperpolarization
B	Depolarization
C	Action potential
D	Local response

E	There will be no changes
№	krok 2014
Topic	Digestion
Task	A 36-year-old male patient has malabsorption of sodium ions from the intestinal lumen into lood. At the same time, absorption of the following substances **REMAINS UNCHANGED**:
Correct answer	Fats
B	Carbohydrates
C	Proteins
D	Water
E	Chlorides
№	krok 2014
Topic	Hormones
Task	A 36-year-old patient with diabetes mellitus had seizures with loss of consciousness after an insulin injection. What was the result of blood glucose test?
Correct answer	2,5 mmol/l
B	3,3 mmol/l
C	8,0 mmol/l
D	10 mmol/l
E	5,5 mmol/l
№	krok 2014
Topic	Hormones
Task	Following thyroid surgery, a 47-year-old female patient had fibrillary twitching of muscles in the arms, legs and face. These disorders can be treated by the introduction of the following hormone:
Correct answer	Parathyroid hormone
B	Triiodothyronine
C	Thyrotropin
D	Thyroxine

E	Thyroid-stimulating hormone
№	krok 2014
Topic	ANS
Task	When students pass an exam, they often complain of having "dry mouth". The mechanism underlying the development of this condition is the activation of the following processes:
Correct answer	Conditioned sympathetic
B	Unconditioned parasympathetic
C	Conditioned parasympathetic
D	Unconditioned sympathetic
E	Unconditioned peripheral
№	krok 2014
Topic	Respiration
Task	An injury to the occipital region resulted in apnoea. What could be the immediate cause of apnoea?
Correct answer	Medulla oblongata injury
B	Cerebellum injury
C	Rapture between the mesencephalon and medulla oblongata
D	Spinal cord rapture below the 5th vertebra
E	Traumatic shock
№	krok 2014
Topic	BLOOD
Task	A female with Rh-negative blood of A (II) type has a child with AB (IV) type who has been diagnosed with hemolytic disease resulting from Rh-conflict. What blood type may the baby’s father have?
Correct answer	III (B), Rh-positive
B	I (0), Rh-positive
C	II (A), Rh-positive
D	IV (AB), Rh-negative
E	III (B), Rh-negative

№	krok 2014
Topic	EXCRETION
Task	A 39-year-old patient with pyelonephritis has been found to have hyposthenuria combined with polyuria. According to this data, what process is most likely to be disrupted?
Correct answer	Tubular reabsorption
B	Glomerular filtration
C	Tubular secretion
D	Tubular excretion
E	-
№	krok 2014
Topic	Hormones
Task	A 43-year-old female 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:
Correct answer	Thyroxine
B	Somatotropin
C	Corticotropin
D	Insulin
E	Aldosterone
№	krok 2014
Topic	EXCRETION
Task	A 23-year-old patient with diabetes has hyperglycemia at the rate of 19 mmol/l which is clinically manifested by glucosuria, polyuria, polydipsia. Which of the listed below mechanisms is responsible for the development of glycosuria?
Correct answer	Exceedence of glucose renal threshold
B	Non-enzymatic glycosylation of proteins
C	Polyuria

D	Polydipsia
E	Tissue dehydration
№	krok 2014
Topic	ANS
Task	Experimental stimulation of the peripheral segment of the vagus nerve of a cat will result in the following changes:
Correct answer	Decreased heart rate
B	Increased heart rate
C	Dilated pupils
D	Increased respiratory rate
E	Bronchiectasis
№	krok 2014
Topic	BLOOD
Task	Arterial pH is 7,4; primary urine - 7,4; final urine - 5,8. Decrease in the pH of final urine is the result of the secretion of the following ions in the nephron tubules:
Correct answer	Hydrogen ions
B	Potassium ions
C	Hydrogen carbonate ions
D	Urea
E	Creatinine
№	krok 2014
Topic	Digestion
Task	Alterations in protein digestion in the small intestine are induced by the impairment of trypsin and chymotrypsin activity. What enzyme deficiency may be the cause of this impairment?
Correct answer	Enterokinase
B	Pepsin
C	Amylase

D	Maltase
E	Lipase
№	krok 2014
Topic	Digestion
Task	A 36-year-old female patient who has been limiting the number of foodstuffs in her diet for 3 months presents with a decrease in body weight, deterioration of physical and mental health, face edemata. These changes may be caused by the deficiency of the following nutrients:
Correct answer	Proteins
B	Vitamins
C	Fats
D	Carbohydrates
E	Micronutrients
№	krok 2014
Topic	hna
Task	A patient under examination is in a stage of rapid eye movement sleep. This is confirmed by the following waves registered by EEG:
Correct answer	Beta waves
B	Alpha waves
C	Delta waves
D	Theta waves
E	Alpha spindles
№	krok 2014
Topic	Metabolism
Task	In a hot weather, the microcli-mate in hot rooms is often normalized by fans. At the same time heat radiation from the human body increases through:
Correct answer	Convection
B	Heat conduction

C	Conduction
D	Radiation
E	Evaporation
№	krok 2014
Topic	VISUAL ANALISER
Task	A 23-year-old patient consulted an oculist about vision impairment. Visual activity was corrected by means of lenticular lenses. Specify the type of dysfunction of the visual analyzer in this patient:
Correct answer	Hyperopia
B	Myopia
C	Daltonism
D	Night-blindness
E	Astigmatism
№	krok 2014
Topic	Hormones
Task	A severe injury in a 36-year-old patient resulted in a significant blood loss which was accompanied by a blood pressure drop. What hormones provide rapid recovery of blood pressure after the blood loss?
Correct answer	Adrenalin, vasopressin
B	Cortisol
C	Sex hormones
D	Oxytocin
E	Aldosterone
№	krok 2014
Topic	heart
Task	In the solution being used for perfusing the isolated heart of rat, the K^+ concentration has been increased to 8 mmol/L. What changes in the heart are to be expected?
Correct answer	Diastolic arrest

B	Systolic arrest
C	Heart force increase
D	Heart rate increase
E	There will be no changes
№	krok 2014
Topic	heart
Task	ECG of a 46-year-old patient shows an increase in the QRS duration. This might be caused by:
Correct answer	Increased ventricular activation time
B	Conduction disturbances in the AV node
C	Increased atrial excitability
D	Increased atrial and ventricular excitability
E	Increased atrial activation time
№	krok 2013
Topic	CNS
Task	In the experiment, an animal had its brain stem cut, which caused a rapid increase of extensor muscle tone (decerebrate rigidity). This condition arose because the muscles were no more under the control of the following brain structure:
Correct answer	Red nucleus
B	Blue spot
C	Black substance
D	Striatum
E	Gray tuber
№	krok 2013
Topic	heart
Task	Functioning of certain structures of the isolated heart was stopped by means of cooling. What structure was cooled providing that the heart first stopped contractions and then resumed them with a frequency twice lower than the initial one?

Correct answer	Sinoatrial node
B	Atrioventricular node
C	His’ bundle
D	His’ bundle branches
E	Purkinje’s fibers
№	krok 2013
Topic	Metabolism
Task	Following the estimation of a person’s energy expenditures it was established that the respiratory quotient was equal to 1,0. This means that the compound that is mainly oxidized in the cells is:
Correct answer	Carbohydrates
B	Proteins
C	Fats
D	Proteins and carbohydrates
E	Carbohydrates and fats
№	krok 2013
Topic	Metabolism
Task	A patient has enamel erosion. What vitamin should be administered for its treatment?
Correct answer	D_3
B	C
C	K
D	B_1
E	$P\,P$
№	krok 2013
Topic	blood

Task	A pregnant women 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:
Correct answer	Nongaseous excretory alkalosis
B	Gaseous alkalosis
C	Gaseous acidosis
D	Nongaseous metabolic acidosis
E	Nongaseous excretory acidosis
№	krok 2013
Topic	Respiration
Task	After a diver had dived to a depth of 60 meters he got the following symptoms of CNS dysfunction: anxiety, euphoria, lack of attention, professional errors. These symptoms are associated with neurons being under a toxic effect of:
Correct answer	Nitrogen
B	Oxygen
C	Carbon dioxide
D	Ammonia
E	Lactate
№	krok 2013
Topic	Respiration
Task	A patient with a craniocerebral injury presents with respiration characterized by progressively deeper respiratory movements followed by a gradual decrease that results in a temporary stop in breathing. What pattern of abnormal respiration are these features typical for?
Correct answer	Cheyne-Stokes
B	Biot’s
C	Kussmaul’s
D	Gasping

E	Apneustic
№	krok 2013
Topic	ENDOCRINE SYSTEM
Task	A patient with rheumatoid arthritis has been given hydrocortisone for a long time. He has developed hyperglycemia, polyuria, glycosuria, thirst. These complications of treatment result from the activation of the following process:
Correct answer	Gluconeogenesis
B	Glycogenolysis
C	Glycogenesis
D	Glycolysis
E	Lipolysis
№	krok 2013
Topic	HIGHER NERVOUS ACTIVITY
Task	The patient’s mobile phone rang during EEG recording. What changes will be observed on the EEG?
Correct answer	Alpha rhythm will change into beta rhythm
B	Alpha rhythm will increase **C.** Beta rhythm will increase
C	Beta rhythm will change into alpha rhythm
D	Alpha rhythm will change into delta rhythm
E	-
№	krok 2013
Topic	aNS
Task	A student who unexpectedly met his girlfriend developed an increase in systemic arterial pressure. This pressure change was caused by the intensified realization of the following reflexes:
Correct answer	Conditional sympathetic
B	Conditional parasympathetic
C	Conditional sympathetic and parasympathetic
D	Unconditional parasympathetic

E	Unconditional sympathetic
№	krok 2013
Topic	ANS
Task	An attack of tachycardia was stopped by pressing on the eyeballs. Which of the following reflexes underlies this phenomenon?
Correct answer	Aschner reflex
B	Holtz reflex
C	Bainbridge reflex
D	Hering reflex
E	Bernard reflex
№	krok 2013
Topic	EXCITABLE TISSUES
Task	Curarelike substances (dithylinum) make it impossible for skeletal muscles to contract because they block:
Correct answer	Neuromuscular synapses
B	Central synapses
C	Ganglionic synapses
D	Membrane conduction of excitement
E	Proprioceptors
№	krok 2013
Topic	EXCITABLE TISSUES
Task	It was established that the conduction velocity in the nerve fibers was equal to m/sec. Specify these fibers:
Correct answer	Motoneuron axons
B	Preganglionic sympathetic
C	Preganglionic parasympathetic
D	Postganglionic sympathetic

E	Postganglionic parasympathetic
№	krok 2013
Topic	ENDOCRINE SYSTEM
Task	A 37-year-old patient has has lost 5 kg in weight over the past three months, he complains of hand tremor, excessive sweating, exophthalmos, tachycardia. These changes might have been caused by the increased secretion of the following hormone:
Correct answer	Thyroxine
B	Cortisol
C	Insulin
D	Glucagon
E	Thyrocalcitonin
№	krok 2013
Topic	ANS
Task	Experimenters irritate the peripheral segment of the intersected sympathetic nerve of an experimental dog. Which of the following changes will be observed?
Correct answer	Bronchiectasis
B	Heart force decrease
C	Pupil constriction
D	Heart rate decrease
E	Increased gastric and intestinal motility
№	krok 2013
Topic	ENDOCRINE SYSTEM
Task	After a person had drunk 1,5 liters of water, the amount of urine increased significantly, and its relative density decreased to 1,001. These changes are a result of decreased water reabsorption in the distal nephron portion due to reduced secretion of:
Correct answer	Vasopressin
B	Aldosterone

C	Angiotensin II
D	Renin
E	Prostaglandins
№	krok 2013
Topic	EXCITABLE TISSUES
Task	A patient has been prescribed the saltfree diet. What changes to the salt taste sensitivity threshold should be expected?
Correct answer	Decrease
B	No changes
C	Little change
D	Increase
E	Increase followed by a decrease
№	krok 2013
Topic	ENDOCRINE SYSTEM
Task	Degeneration of glycogen in liver is stimulated by glucagon. What secondary messenger (mediator) is thus formed in the cell?
Correct answer	c-AMP
B	c-GMP
C	CO
D	NO
E	Triacylglycerol
№	krok 2013
Topic	ANS
Task	A patient is 59 years old and works as director of a private enterprise. After the inspection by tax authorities he developed intense burning retrosternal pain radiating to the left arm. After 15 minutes the patient returned to normal. What is the leading mechanism for the development of stenocardia in this patient?

Correct answer	Increased level of blood catecholamines
B	Coronary atherosclerosis
C	Intravascular aggregation of blood corpuscles
D	Coronary thrombosis
E	Functional overload of heart
№	krok 2013
Topic	METABOLISM
Task	In a hot weather, the microclimate in hot rooms is often normalized by fans. At the same time heat radiation from the human body increases through:
Correct answer	Convection
B	Heat conduction
C	Conduction
D	Radiation
E	Evaporation
№	krok 2013
Topic	RESPIRATORY SYSTEM
Task	A patient has a history of chronic obstructive bronchitis. Blood gas analysis revealed the development of hypoxemia and hypercapnia on the background of dyspnea, tachycardia and cyanosis. What disorder of external respiration is observed in the patient?
Correct answer	Hypoventilation
B	Hypoperfusion
C	Hyperperfusion
D	Hyperdiffusion
E	Hyperventilation
№	krok 2013
Topic	DIGESTIVE SYSTEM

Task	Some proteins of saliva have a protective function. Which of them protects the oral mucosa from the mechanical damage?
Correct answer	Mucin
B	Lysozyme
C	Catalase
D	Peroxidase
E	Renin
№	krok 2013
Topic	ENDOCRINE SYSTEM
Task	After a severe stress a patient was found to have eosinopenia. A decrease in the eosinophil number can be explained by the changed concentration of the following hormones:
Correct answer	Glucocorticoids
B	Adrenaline
C	Insulin
D	Mineralocorticoids
E	Vasopressin
№	krok 2013
Topic	EXCITABLE TISSUES
Task	In the dental practice, the vitality of tooth tissues is estimated by electric pulp test. What parameter is assessed?
Correct answer	Threshold stimulus intensity
B	Chronaxie
C	Productive time
D	Accommodation
E	Lability
№	krok 2013
Topic	BLOOD

Task	Platelet adhesion at the site of vascular injury is of great importance for the mechanisms of primary hemostasis. Which factor plays a major part in this process?
Correct answer	Willebrand's
B	Fitzgerald's
C	Fletcher's
D	Hageman's
E	Rosenthal's
№	krok 2013
Topic	PAIN
Task	Before an exam a student complained of acute dental pain which grew less during the exam. What inhibition caused the pain abatement?
Correct answer	External
B	Protective
C	Declining
D	Differentiating
E	Delayed
№	krok 2012, 2007
Topic	ENDOCRINE SYSTEM
Task	Examination of a 32-year-old patient revealed disproportional skeleton size, enlargement of superciliary arches, nose, lips, tongue, jaw bones, feet. What gland's function was disturbed?
Correct answer	Hypophysis
B	Epiphysis
C	Pancreas
D	Thyroid
E	Suprarenal
№	krok 2012, 2007
Topic	CNS

Task	A 60-year-old patient has problems with formation and moving of food mass, it disturbs eating process. His tongue is stiff, speaking is impossible. What nerve is damaged?
Correct answer	XII
B	V
C	IX
D	XI
E	VII
№	krok 2012, 2007
Topic	ANS
Task	While a 24-year-old woman was waiting for tooth extraction, tonus of sympathetic part of autonomic nervous system rose. What reaction will the patient display?
Correct answer	Increased frequency of heartbeat
B	Hyperperistalsis
C	Hypersecretion of digestive juices
D	Bronchus constriction
E	Miotic pupils
№	krok 2012, 2007
Topic	ENDOCRINE SYSTEM
Task	A month after surgical constriction of rabbit's renal artery the considerable increase of systematic arterial pressure was observed. What of the following regulation mechanisms caused the animal's pressure change?
Correct answer	Angiotensin-II
B	Vasopressin
C	Adrenaline
D	Noradrenaline
E	Serotonin
№	krok 2012, 2011, 2010, 2009

Topic	ENDOCRINE SYSTEM
Task	A child has abnormal formation of tooth enamel and dentin as a result of low concentration of calcium ions in blood. Such abnormalities might be caused by deficiency of the following hormone:
Correct answer	Parathormone
B	Thyrocalcitonin
C	Thyroxin
D	Somatotropic hormone
E	Triiodothyronine
№	krok 2012
Topic	BLOOD
Task	A man permanently lives high in the mountains. What changes of blood characteristics can be found in his organism?
Correct answer	Increase of erythrocytes number
B	Decrease of hemoglobin content
C	Erythroblasts in blood
D	Decrease of reticulocytes number
E	Decrease of colour index of blood
№	krok 2012, 2007
Topic	CNS
Task	A sportsman was examined after an intensive physical activity. The examination revealed disorder of movement coordination but the force of muscle contractions remained the same. It can be explained by retarded speed of excitement conduction through:
Correct answer	Central synapses
B	Neuromuscular synapses
C	Efferent nerves
D	Afferent nerves
E	Conduction tracts

№	krok 2012, 2011
Topic	BLOOD
Task	After a tourniquet application a patient was found to have petechial haemorrhages. The reason for it is the dysfunction of the following cells:
Correct answer	Platelets
B	Eosinophils
C	Monocytes
D	Lymphocytes
E	Neutrophils
№	krok 2012, 2011
Topic	BLOOD
Task	A patient under test was subjected to a moderate physical stress. His minute blood volume amounted 10 l/min. What blood volume was pumped through his lung vessels every minute?
Correct answer	10 l/min
B	5 l/min
C	4 l/min
D	6 l/min
E	7 l/min
№	krok 2012, 2011
Topic	CNS
Task	A patient presents with the following motor activity disturbances: tremor, ataxia and asynergia movements, dysarthria. The disturbances are most likely to be localized in:
Correct answer	Cerebellum
B	Basal ganglions
C	Limbic system
D	Brainstem
E	Medulla oblongata

№	krok 2012
Topic	METABOLISM
Task	The value of basal metabolism of a man under examination exceeds the due value by 8%. This means that the man has the following intensity of energy metabolism processes:
Correct answer	Normal
B	Moderately increased
C	Moderately decreased
D	Considerably increased
E	Considerably decreased
№	krok 2012, 2011
Topic	ENDOCRINE SYSTEM
Task	A man has a considerable decrease in diuresis as a result of 1,5 l blood loss. The primary cause of such diuresis disorder is the hypersecretion of the following hormone:
Correct answer	Vasopressin
B	Corticotropin
C	Natriuretic
D	Cortisol
E	Parathormone
№	krok 2012, 2011, 2010
Topic	RESPIRATORY SYSTEM
Task	A man is in the state of rest. He has been forcing himself to breath deeply and frequently for 3-4 minutes. What effect will it have upon acid-bace balance of the organism?
Correct answer	Respiratory alkalosis
B	Respiratory acidosis
C	Metabolic alkalosis
D	Metabolic acidosis
E	There will be no change in acid-base balance

№	krok 2012
Topic	ENDOCRINE SYSTEM
Task	Before the cells can utilize the glucoze, it is first transported from the extracellular space through the plasmatic membrane inside theml. This process is stimulated by the following hormone:
Correct answer	Insulin
B	Glucagon
C	Thyroxin
D	Aldosterone
E	Adrenalin
№	krok 2012, 2011, 2010
Topic	ENDOCRINE SYSTEM
Task	Parodontitis is treated with calcium preparations and a hormone that stimulates tooth mineralization and inhibits tissue resorption. What hormone is it?
Correct answer	Calcitonin
B	Parathormone
C	Adrenalin
D	Aldosterone
E	Thyroxine
№	krok 2012
Topic	BLOOD
Task	After implantation of a cardiac valve a young man constantly takes indirect anticoagulants. His state was complicated by hemorrhage. What substance content has decreased in blood?
Correct answer	Prothrombin
B	Haptoglobin
C	Heparin
D	Creatin
E	Ceruloplasmin

№	krok 2012, 2007
Topic	ENDOCRINE SYSTEM
Task	Chronic overdosage of glucocorticoids leads to the development of hyperglycemia. What process of carbohydrate metabolism is responsible for this effect?
Correct answer	Gluconeogenesis
B	Glycogenolysis
C	Aerobic glycolisis
D	Pentose-phosphate cycle
E	Glycogenesis
№	krok 2012, 2011
Topic	WORKING ACTIVITY
Task	After prolonged exercising people usually experience intense muscle pain. What is its most likely cause
Correct answer	Accumulation of lactic acid in muscles
B	Intensified disintegration of muscle proteins
C	Accumulation of creatinine in muscles
D	Increased muscle excitability
E	Increased concentratioon of ADP in muscles
№	krok 2012
Topic	RESPIRATORY SYSTEM
Task	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?
Correct answer	Cheyne-Stokes
B	Kussmaul’s
C	Biot’s
D	Gasping
E	Apneustic

№	krok 2012
Topic	cns
Task	As a result of a trauma a patient has damaged anterior roots of spinal cord. What structures have been affected?
Correct answer	Axons of motoneurons and axons of neurons of lateral horns
B	Central processes of sensitive neurons of spinal ganglions
C	Peripheral processes of sensitive spinal ganglions
D	Axons of neurons of lateral horns
E	Dendrites of neurons of spinal ganglions
№	krok 2012
Topic	BLOOD
Task	A blood sample of a pregnant woman was typed. Erythrocyteagglutination reaction was present with standard sera 0α, $\beta(I\ )$, $B\alpha(I\ I\ I\ )$, reaction was absent with the serum $A\beta(I\ I\ )$. The blood under examination relates to the following group:
Correct answer	$A\beta(I\ I\ )$
B	$B\alpha(I\ I\ I\ )$
C	$0\alpha, \beta(I\ )$
D	$AB(I\ V\ )$
E	-
№	krok 2012, 2011
Topic	RESPIRATORY SYSTEM
Task	There is a strict time limit for people to stay at a height of 8000 m above sea level without oxigen cyllinders. Specify the life-limiting factor in this case:
Correct answer	Partial pressure of oxygen in air
B	Rate of ultraviolet radiation
C	Humidity rate
D	Temperature

E	Earth gravity
№	krok 2012, 2009
Topic	ENDOCRINE SYSTEM
Task	Microscopic study of an endocrine gland revealed that its parenchyma consisted of follicular structures. Their wall was formed by monolayer cubic epithelium, and their cavity was filled up with oxyphilic substance. What hormon is secreted by this gland?
Correct answer	Thyroxin
B	Aldosterone
C	Cortisol
D	Parathyrin
E	Oxytocin
№	krok 2012
Topic	Digestion
Task	A 60-year-old patient was found to have a dysfunction of main digestive enzyme of saliva. This causes the disturbance of primary hydrolysis of:
Correct answer	Carbohydrates
B	Fats
C	Proteins
D	Cellulose
E	Lactose
№	krok 2012, 2011, 2010
Topic	ENDOCRINE SYSTEM
Task	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:
Correct answer	Hypoparathyroidism
B	Hyperparathyroidism

C	Hyperaldosteronism
D	Hypoaldosteronism
E	Hypothyroidism
№	krok 2012
Topic	BLOOD
Task	A 46-year-old female patient needs a surgery in the maxillofacial region. It is known that the patient is disposed to increased hemocoagulation. What natural anticoagulant can be used in order to prevent thrombosis?
Correct answer	Heparin
B	Hirudin
C	Sodium citrate
D	Fibrinolysin
E	None of the listed drugs
№	krok 2012
Topic	METABOLISM
Task	A man got into ice-cold water and died soon as a result of abrupt exposure to cold. In such cases an organism loses heat most intensively by the way of:
Correct answer	Heat conduction
B	Radiation
C	Convection
D	Heat conduction and radiation
E	-
№	krok 2012
Topic	HEART
Task	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:
Correct answer	Extrasystole

B	Bradycardia
C	Tachycardia
D	Flutter
E	Fibrillation
№	krok 2012
Topic	cns
Task	A patient presents with dysfunction of cerebral cortex accompanied by epileptic seizures. He has been administered a biogenic amine synthetized from glutamate and responsible for central inhibition. What substance is it?
Correct answer	Gamma-amino butyric acid
B	Serotonin
C	Dopamine
D	Acetylcholine
E	Histamine
№	krok 2011, 2010
Topic	DIGESTIVE SYSTEM
Task	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:
Correct answer	Cholecystokininpancreozymin
B	Somatostatin
C	Secretin
D	Gastro-inhibiting peptide
E	Vaso-intestinal peptide
№	krok 2011, 2010
Topic	RESPIRATORY SYSTEM

Task	It is known that people who permanently live in highland have an increased concentration of erythrocytes per each blood volume unit. Owing to this fact blood can optimally fulfil the following function:
Correct answer	Gas transport
B	Amino acid transport
C	Haemostasis participation
D	Maintenance of acid-base balance
E	Maintenance of ionic equilibrium
№	krok 2011
Topic	BLOOD
Task	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:
Correct answer	Prothrombinase generation
B	Thrombin generation
C	Fibrin generation
D	Thrombocyte adhesion
E	Thrombocyte aggregation
№	krok 2011
Topic	RESPIRATORY SYSTEM
Task	A patient has a trauma of sternocleidomastoid muscle. This caused a decrease in value of the following indicator of external respiration:
Correct answer	Inspiratory reserve volume
B	Expiratory reserve volume
C	Respiratory capacity
D	Residual volume
E	Functional residual lung capacity

№	krok 2011
Topic	DIGESTIVE SYSTEM
Task	During an acute experiment some of diluted solution of hydrochloric acid was injected into the duodenal cavity of an experimental animal. This will result in hypersecretion of the following hormone:
Correct answer	Secretin
B	Gastrin
C	Motilin
D	Neurotensin
E	Histamine
№	krok 2011
Topic	cns
Task	During a brain surgery it was noticed that stimulation of certain zones of cerebral cortex caused tactile and thermal sensations in patient. Which zone was being stimulated?
Correct answer	Postcentral gyrus
B	Precentral gyrus
C	Superior lateral gyrus
D	Cingulate gyrus
E	Parahippocampal gyrus
№	krok 2011
Topic	HEART
Task	Heart rate of an adult man is 40/min. This rate is possible due to the following element of the cardiac conduction system:
Correct answer	Atrioventricular node
B	Sinoatrial node
C	Purkinje’s fibers
D	His’ bundle
E	His’ bundle branches

№	krok 2011
Topic	cns
Task	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:
Correct answer	Red nuclei
B	Vestibular nuclei
C	Quadrigeminal plate
D	Black substance
E	Reticular formation
№	krok 2011
Topic	CNS
Task	After a long training session a sportsman has developed fatigue accompanied by abrupt performance decrement. What link of the reflex arch was the fatigue initiated in?
Correct answer	Nerve centres
B	Afferent conductor
C	Receptors
D	Efferent conductor
E	Muscles
№	krok 2011
Topic	ENDOCRINE SYSTEM
Task	A child presents with symptoms of psychic and physical retardation (cretinism). It is usually associated with the following hormone deficiency:
Correct answer	Thyroxin
B	Somatotropic
C	Calcitonin
D	Insulin

E	Testosterone
№	krok 2011
Topic	ENDOCRINE SYSTEM
Task	A man is eating dry food. Which salivary glands secrete the largest amount of saliva in this case?
Correct answer	Parotid
B	Buccal
C	Submandibular
D	Sublingual
E	Palatine
№	krok 2011
Topic	ENDOCRINE SYSTEM
Task	Indirect calorimetry allowed to establish that a 30-year-old male patient had a 30% decrease in basal metabolic rate. This might be caused by the reduced concentration of the following hormones in blood plasma:
Correct answer	Triiodothyronine, tetraiodothyronine
B	Thyrocalcitonin, parathormone
C	Glucocorticoids
D	Catecholamines
E	Somatoliberin, somatostatin
№	krok 2011
Topic	cns
Task	A patient lost consciousness as a result of a cerebral trauma. This might be caused by damaging the following zones of cerebral cortex:
Correct answer	Occipital
B	Temporal
C	Frontal
D	Parietal

E	Temporal and parietal
№	krok 2011
Topic	METABOLISM
Task	Power inputs of a man are being measured on an empty stomach, in the lying position, at physical and psychic rest, under comfortable temperature. The highest power inputs will be ovserved in the following daypart:
Correct answer	5-6 p.m.
B	7-8 a.m.
C	10-12 a.m.
D	8-12 p.m.
E	3-4 a.m.
№	krok 2011
Topic	Hormones
Task	Before the cells can utilize the glucoze, it is first transported from the extracellular space through the plasmatic membrane inside theml. This process is stimulated by the following hormone:
Correct answer	Insulin
B	Glucagon
C	Thyroxin
D	Aldosterone
E	Adrenalin
№	krok 2011
Topic	Hormones
Task	A 35-year-old female patient with a chronic renal disease has developed osteoporosis. The cause of this complication is the deficiency of the following substance:
Correct answer	1,25-dihydroxy-D_3
B	25-hydroxy-D_3

C	D_3
D	D_2
E	Cholesterol
№	krok 2011
Topic	Metabolism
Task	Examination of a 45-year-old man who had kept to a vegeterian diet for a long time revealed negative nitrogen balance. Which peculiarity of his diet is the cause of this phenomenon?
Correct answer	Lack of proteins
B	Lack of fats
C	Excess of water
D	Excess of carbohydrates
E	Lack of vitamins
№	krok 2011
Topic	BLOOD
Task	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 monooxide?
Correct answer	Carboxyhemoglobin
B	Methemoglobin
C	Carbhemoglobin
D	Sulfhemoglobin
E	Oxyhemoglobin
№	krok 2011
Topic	Hormones

Task	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?
Correct answer	Itsenko-Cushing syndrome
B	Pheochromocytoma
C	Conn’s syndrome
D	Primary aldosteronism
E	Secondary aldosteronism
№	krok 2011
Topic	HEART
Task	A patient has a first-degree atrioventricular block accompanied by the prolongation of P-Q interval up to 0,25 s. Under such conditions the following myocardial function will be disturbed:
Correct answer	Conduction
B	Automatism
C	Excitability
D	Contractibility
E	-
№	krok 2011
Topic	METABOLISM
Task	In course of parallel experiments some rats were being subjected to continuous direct solar irradiation and some were being irradiated while placed into a glass box. The animals that received a doze of direct irradiation got tumours on parts of their skin not coated with hair. This phenomenon is associated with the influence of the following factor:
Correct answer	Ultraviolet radiation
B	Endogenous chemical carcinogens
C	Biological carcinogens
D	Exogenous chemical carcinogens

E	Infrared radiation
№	krok 2011
Topic	BLOOD
Task	After an attack of bronchial asthma a patient had his peripheral blood tested. What changes can be expected?
Correct answer	Eosinophilia
B	Leukopenia
C	Lymphocytosis
D	Thrombocytopenia
E	Erythrocytosis-
№	krok 2011
Topic	DIGESTIVE SYSTEM
Task	In order to administer general healthimproving therapy a parodontist intends to study factors of nonspecific resistance of saliva and mucous secretion. Which of the following factors of nonspecific resistance should be studied in the first line?
Correct answer	Lysozyme
B	Secretory IgA
C	Properdin
D	Interferon
E	Complement
№	krok 2011
Topic	Hormones
Task	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?
Correct answer	Vasopressin
B	Cortisol

C	Thyroxin
D	Oxytocin
E	Insulin
№	krok 2011
Topic	Excitation tissue
Task	Curarelike substances (dithylinum) make it impossible for skeletal muscles to contract because they block:
Correct answer	Neuromuscular synapses
B	Central synapses
C	Ganglionic synapses
D	Membrane conduction of excitement
E	Proprioceptors
№	krok 2011
Topic	aNs
Task	A patient has a spasm of smoot muscles of bronchi. As the first aid it would be physiologically appropriate to inject the patient the antagonists of the following receptors:
Correct answer	*M* -cholinoreceptors
B	*/alpha* -adrenoreceptors
C	*N* -cholinoreceptors
D	*/beta* -adrenoreceptors
E	Adenosine receptors
№	krok 2011, 2010
Topic	BLOOD
Task	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?
Correct answer	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, 2010
Topic	cns
Task	In course of an experiment thalamocortical tracts of an experimental animal were cut through. The animal didn't lose the following sensations:
Correct answer	Olfactory
B	Auditory
C	Exteroceptive
D	Visual
E	Nociceptive
№	krok 2010
Topic	blood
Task	Blood analysis of a 16-year-old girl suffering from the autoimmune inflammation of thyroid gland revealed multiple plasmatic cells. Such increase in plasmocyte number is caused by proliferation and differentiation of the following blood cells:
Correct answer	B-lymphocytes
B	T-helpers
C	Tissue basophils
D	T-killers
E	T-supressors
№	krok 2010
Topic	Metabolism
Task	A lightly dressed man is standing in a room; air temperature is $+14^{o}C$. Windows and doors are closed. In what way does he loose heat most of all?

Correct answer	Heat radiation
B	Heat conduction
C	Convection
D	Evaporation
E	Perspiration
№	krok 2010
Topic	HEART
Task	ECG of a patient shows that T-waves in the second standard extremity lead are positive, their amplitude and duration are normal. It would be true that the following pocess is taking its normal course in the cardiac ventricles:
Correct answer	Repolarization
B	Depolarization
C	Excitement
D	Contraction
E	Relaxation
№	krok 2010
Topic	CNS
Task	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:
Correct answer	Red nuclei
B	Vestibular nuclei
C	Quadrigeminal plate
D	Black substance
E	Reticular formation
№	krok 2010
Topic	ANS

Task	A patient who takes a blocker of membrane cytoreceptors of efferent conductor synapses of autonomic nervous system complains about dry mouth. What receptors are blocked?
Correct answer	Muscarinic cholinoreceptors
B	Nicotinic cholinoreceptors
C	H_2-receptors
D	α-adrenoreceptors
E	β-adrenoreceptors
№	krok 2010, 2009
Topic	HEART
Task	ECG of a patient showed that *RR* interval equaled 1,5 s, heart rate equaled b pm. What is the cardiac pacemaker?
Correct answer	Atrioventricular node
B	Sinus node
C	His' bundle
D	Left branch of His' bundle
E	Right branch of His' bundle
№	krok 2010
Topic	HNA
Task	Examination of a patient revealed that he had a strong, balanced, inert type of higher nervous activity according to Pavlov's classification. What temperament has this patient according to Hippocrate?
Correct answer	Phlegmatic
B	Sanguine
C	Choleric
D	Melancholic
E	-
№	krok 2010

Topic	Hormones
Task	Glucose concentration in a patient’s blood is 15 millimole/l (reabsorption threshold is 10 millimole/l). What effect can be expected?
Correct answer	Glucosuria
B	Diuresis reduction
C	Reduced glucose reabsorption
D	Reduced vasopressin secretion
E	Reduced aldosterone secretion
№	krok 2010
Topic	cns
Task	After destruction of CNS structure an animal lost its orientative reflexes. What exactly was destroyed?
Correct answer	Quadrigeminal plate
B	Red nuclei
C	Lateral vestibular nuclei
D	Black substance
E	Medial reticular nuclei
№	krok 2010
Topic	Metabolism
Task	It was determined that basal metabolic rate of a patient under study increased due value by 8%. This means that the intensity of energetic metabolism processes in this patient is:
Correct answer	Normal
B	Moderately increased
C	Moderately inhibited
D	Essentially inhibited
E	Essentially increased
№	krok 2010
Topic	Respiration

Task	A newborn didn’t take his first breath. Autopsy revealed that in spite of unobstructed respiratory tracts the baby’s lungs didn’t expand. What might be the cause of it?
Correct answer	Surfactant absence
B	Bronchostenosis
C	Bronchi rupture
D	Apical cap of lung
E	Alveole enlargement
№	krok 2010
Topic	RESPIRATORY SYSTEM
Task	The air in a room has increased concentration of carbonic acid. What respiratory changes (depth and rate) will be observed in a person after entering this room?
Correct answer	Increase in depth and rate
B	Decrease in depth
C	Increase in depth
D	Decrease in rate
E	Increase in rate
№	krok 2010
Topic	Pain
Task	During physical exercise people are less sensitive to pain. The reason for it is the activation of:
Correct answer	Antinociceptive system
B	Nociceptive system
C	Thyroid gland functions
D	Sympathoadrenal system
E	Adrenal gland functions
№	krok 2010
Topic	Pain

Task	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?
Correct answer	Pain
B	Internal haemorrhage
C	Internal plasm loss
D	Intoxication
E	Internal organs dysfunction
№	krok 2010, 2009
Topic	Hormones
Task	Clinical examination of a female patient revealed reduction of basal metabolism by 40%, gain in body mass, drop of body temperature, face puffiness, sexual disfunctions, inertness and apathy, lowered intelligence. These symptoms are caused by dysfunction of the following endocrine gland:
Correct answer	Hypofunction of thyroid gland
B	Hypofunction of parathyroid glands
C	Hypophysis hyperfunction
D	Epiphysis hypofunction
E	Hyperfunction of thyroid gland
№	krok 2010
Topic	cns
Task	Examination of a patient with an interbrain injury revealed the hearing impairment. What structures must be damaged?
Correct answer	Medial geniculate bodies of thalamus
B	Lateral geniculate bodies of thalamus
C	Intralaminar nuclei of hypothalamus
D	Frontal nuclei of hypothalamus
E	Medial nuclei of hypothalamus

№	krok 2010
Topic	blood
Task	Before an operation a 30-year-old male patient had his blood typed. It turned out to be Rh-positive. Erythrocytes were not agglutinated by standard sera of 0(I), A(II), B(III) groups. According to the AB0 blood group system this blood is of the following type:
Correct answer	0(I)
B	A(II)
C	B(III)
D	AB(IV)
E	-
№	krok 2010
Topic	blood
Task	In hemotransfusions it is recommended to transfuse only phenotype-matched blood. According to the AB0 system, blood group is determined by:
Correct answer	Carbohydrate determinants of erythrocyte membranes
B	Proteins of blood serum
C	Protein determinants of erythrocyte membranes
D	Protein-polysaccharide components of leukocytes
E	Carbohydrate determinants of leukocyte membranes
№	krok 2010, 2009
Topic	Respiration
Task	A 35 year old man got a trauma that resulted in complete rupture of spinal cord at a level of the first cervical segment. What changes of respiration will be observed?
Correct answer	Respiration will come to a standstill
B	Respiration won’t change
C	Respiration will become diaphragmatic
D	Respiration will become frequent and shallow

E	Respiration will become infrequent and deep
№	krok 2010, 2008
Topic	HEART
Task	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:
Correct answer	Sinoatrial node
B	Atrioventricular node
C	His' bundle branches
D	His' bundle fibers
E	Purkinje's fibers
№	krok 2010
Topic	DIGESTIVE SYSTEM
Task	A 60-year-old female patient presents with hypoactivity of the principal digestive enzyme of saliva. This is usually accompanied by disturbed primary hydrolysis of:
Correct answer	Carbohydrates
B	Fats
C	Proteins
D	Cellulose
E	Lactose
№	krok 2010, 2008
Topic	RESPIRATORY SYSTEM
Task	A man who has been staying in a stuffy room for a long time lost consciousness. He regained consciousnes after inhalation of ammonia spirit vapour. This substance's effect is connected with direct influence upon the following structures:
Correct answer	Receptors of upper airways
B	Vasculomotor centre
C	Respiratory centre

D	Resistive vessels
E	Capacitive vessels
№	krok 2010
Topic	Hormones
Task	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?
Correct answer	Vasopressin hyposecretion
B	Glucocorticoid hypersecretion
C	Vasopressin hypersecretion
D	Relative insulin insufficiency
E	Aldosteron hypersecretion
№	krok 2010
Topic	Excitation tissue
Task	During an experiment it is required to estimate the rate of cell excitability. For this purpose it would be rational to determine:
Correct answer	Depolarization threshold
B	Rest potential
C	Critical level of depolarization
D	Amplitude of action potential
E	Duration of action potential
№	krok 2010
Topic	topic BLOOD
Task	A mountain climber spent a long time in the mountains. Erythrocyte number has risen from $5,\ 0 \cdot 10^{12}/l$ up to $6,\ 0 \cdot 10^{12}/l$. What factor stimulated erythropoiesis?
Correct answer	Decrease of O_2 in the arterial blood

B	Increase of O_2 in the arterial blood
C	Decrease of O_2 in the venous blood
D	Increase of O_2 in the venous blood
E	Increase of O_2 in the cells
№	krok 2009
Topic	THERMOREGULATION
Task	What factor may cause increase of power inputs of human organism by 100%?
Correct answer	Drop of external temperature
B	Rise of external temperature
C	Consumption of protein food
D	Consumption of carbohydrate food
E	Consumption of fatty food
№	krok 2009
Topic	THERMOREGULATION
Task	A 40 year old European works in a Southeast Asian country. He complains that it is hard to bear high temperature under conditions of high relative humidity. The reason for it is difficult heat emission by way of:
Correct answer	Evaporation
B	Radiation
C	Heat conduction
D	Convection
E	Convection and heat conduction
№	krok 2010
Topic	blood
Task	Examination of a patient who has recently had a hepatic disease revealed low concentration of prothrombin in blood. First of all this will cause disturbance of:

Correct answer	Second phase of coagulation haemostasis
B	First phase of coagulation haemostasis
C	Vasculothrombocytic haemostasis
D	Fibrinolysis
E	Anticoagulative blood properties
№	krok 2009
Topic	HEART
Task	Researchers studied speed of excitement conduction in different areas of an isolated heart. Which area demonstrated the lowest speed?
Correct answer	Atrioventricular node
B	His' bundle
C	Purkinje's fibers
D	Atrial myocardium
E	Ventricular myocardium
№	krok 2009
Topic	ANS
Task	A patient who takes blocker of membrane cytoreceptors of efferent conductor synapses of autonomic nervous system complains about dry mouth. What receptors are blocked?
Correct answer	Muscarinic cholinoreceptors
B	Nicotinic cholinoreceptors
C	H_2-receptors
D	α-adrenoreceptors
E	β-adrenoreceptors
№	krok 2009
Topic	ANS
Task	A student has dry mouth during an exam. This is caused by realization of the following reflexes:

Correct answer	Conditioned sympathetic
B	Conditioned and unconditioned sympathetic
C	Conditioned parasympathetic
D	Unconditioned parasympathetic
E	Unconditioned sympathetic and parasympathetic
№	krok 2009
Topic	Hormones
Task	A patient has hyperkaliemia and hyponatremia. Such changes might be caused by hyposecretion of the following hormone:
Correct answer	Aldosterone
B	Vasopressin
C	Cortisol
D	Parathormone
E	Natriuretic
№	krok 2009
Topic	Excitation tissue
Task	Tissue is being stimulated by electric cathodic impulse with amplitude of 70% of threshold. What changes of membrane potential will be observed?
Correct answer	Partial depolarization
B	Hyperpolarization
C	Action potential
D	No changes
E	-
№	krok 2009
Topic	Hormones
Task	A patient suffering from chronic renal insufficiency has got osteoporosis. Osteoporosis was caused by abnormal synthesis of the following regulator of mineral metabolism in kidneys:

Correct answer	$1,\ 25(OH\ )_2\ D_3$ formation
B	Proline hydroxylation
C	Lysine hydroxylation
D	Glutamate carboxylation
E	Cortisol hydroxylation
№	krok 2009
Topic	EXCITABLE TISSUES
Task	It was necessary to determine absolute gustation thresholds of a healthy man for different substances. The lowest threshold will be observed for the following substance:
Correct answer	Quinine
B	Sodium chloride
C	Glucose
D	Saccharose
E	Citric acid
№	krok 2009
Topic	REGULATION OF HAEMODYNAMICS
Task	Rheography of an 18 year old student during exercise showed redistribution of blood flow between organs. The peak blood flow will be observed in the following vessels:
Correct answer	Skeletal muscles
B	Liver
C	Cerebrum
D	Kidneys
E	Gastrointestinal tract
№	krok 2009
Topic	blood

Task	A blood sample of a pregnant woman was typed. Erythrocyte-agglutination reaction was present with standard sera 0α, β (*I*), $B\alpha$ (*I I I*), reaction was absent with the serum $A\beta$ (*I I*). The blood under examination relates to the following group:
Correct answer	$A\beta$ (*I I*)
B	$B\alpha$ (*I I I*)
C	\ 0α, β (*I*)
D	*AB* (*I V*)
E	-
№	krok 2009
Topic	cns
Task	During a neurosurgical operation the occipital areas of cerebral cortex are stimulated. What sensations will the patient have?
Correct answer	Visual
B	Tactile
C	Auditory
D	Olfactory
E	Gustatory
№	krok 2009
Topic	HEART
Task	What chnges will be observed in an isolated heart after introduction of adrenaline into the perfusion solution?
Correct answer	Increase of heart rate and force
B	Decrease of heart force
C	Increase of heart force
D	Diastolic arrest
E	Increase of heart rate
№	krok 2009

Topic	CNS
Task	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?
Correct answer	Cerebellum
B	Amygdaloid complex
C	Hippocampus
D	Basal ganglions
E	Motor cortex
№	krok 2009
Topic	Excitation tissue
Task	What contraction of upper extremity muscles will be observed during holding (but not moving) a load in a certain position?
Correct answer	Isometric
B	Isotonic
C	Auxotonic
D	Concentric
E	Excentric
№	krok 2009
Topic	Respiration
Task	A young woman has entered a production unit where strongly smelled of paints and varnishes and had bronchospasm. This reflex was provoked by irritation of the following receptors:
Correct answer	Irritant
B	Juxtaglomerular
C	Pleural receptors
D	Central chemoreceptors
E	Peripheral chemoreceptors

№	krok 2009
Topic	Hormones
Task	A patient with Itsenko-Cushing syndrome has persistent hyperglycemia and glycosuria, hypertension, osteoporosis,obesity. Increased synthesis and hypersecretion of the following hormone will be observed in this case:
Correct answer	Cortisol
B	Adrenaline
C	Glucagon
D	Thyroxin
E	Aldosterone
№	krok 2008
Topic	Hormones
Task	A 9 y.o. boy was admitted to the endocrinological department. This boy has already had several fractures of hist extremities due to bone brittlness. The function of the following endocrinal glands (gland) is disturbed:
Correct answer	Parathyroid
B	Thyroid
C	Thymus
D	Adrenal
E	Epiphysis
№	krok 2008
Topic	Metabolism
Task	A lightly dressed man is standing in a room; air temperature is $+14^0C$. Windows and doors are closed. In what way does he loose heat most of all?
Correct answer	Heat radiation
B	Heat conduction

C	Convection
D	Evaporation
E	Perspiration
№	krok 2008, 2007
Topic	HEART
Task	Speed of excitement conduction was studied on different areas of an isolated heart. In what area was the lowest speed registered?
Correct answer	In the atrioventricular node
B	In the His' bundle
C	In Purkinje's fibers
D	In the atrial myocardium
E	In the ventricular myocardium
№	krok 2008
Topic	Hormones
Task	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:
Correct answer	Vasopressin
B	Oxytocin
C	Insulin
D	Triiodothyronine
E	Cortisol
№	krok 2008
Topic	ANS
Task	A student has dry mouth during exampassing. It is caused by realization of the following reflexes:
Correct answer	Sympathetic conditioned
B	Sympathetic conditioned and unconditioned

C	Parasympathetic conditioned
D	Parasympathetic unconditioned
E	Sympathetic and parasympathetic unconditioned
№	krok 2008
Topic	Hormones
Task	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:
Correct answer	Somatotropin
B	Somatostatin
C	Tetraiodothyronine
D	Triiodothyronine
E	Cortisol
№	krok 2008
Topic	Hormones
Task	A patient has disturbed digestion of proteins, fats and carbohydrates. It is most likely to be caused by reduced secretion of the following digestive juice:
Correct answer	Pancreatic
B	Saliva
C	Gastric
D	Bile
E	Intestinal
№	krok 2008
Topic	ANS
Task	In course of an experiment a nerve is being stimulated by electric impulses. As a result of it sublingual and submaxillary glands discharge some dense viscous saliva. What nerve is being stimulated?
Correct answer	*N. sympathicus*

B	*N. glossopharyngeus*
C	*N. facialis*
D	*N. trigeminus*
E	*N. vagus*
№	krok 2008
Topic	CNS
Task	Deglutition of a patient is disturbed as a result of a trauma. The most probable cause of this disturbance is affection of the following part of CNS:
Correct answer	Medulla oblongata
B	Spinal cord , Th II-IV
C	Spinal cord, C V-VI
D	Mesencephalon
E	Hypothalamus
№	krok 2008
Topic	Metabolism
Task	Estimation of heat expenditures of a man's organism by means of inderect calomitery had the following results: the organism consumed 1000 ml of oxygen and emitted 800 ml of carbonic acid per minute. What is the respiratory quotient of a man under examination?
Correct answer	*0,8*
B	*1,25*
C	*0,9*
D	*0,84*
E	*1*
№	krok 2008
Topic	blood
Task	A patient ill with chronic glomerulonephritis has a disturbed incretory function of kidneys. It will result in the deficit of the following blood corpuscles:

Correct answer	Erythrocytes
B	Leukocytes
C	Thrombocytes
D	Leukocytes and thrombocytes
E	Erythrocytes and leukocytes
№	krok 2008
Topic	Hormones
Task	A patient suffering from chronic renal insufficiency felt ill with osteoporosis. It is caused by disturbed synthesis of the following regulator of mineral metabolism:
Correct answer	1, 25( )$_2D_3$ generation
B	Proline hydroxylation
C	Lysine hydroxylation
D	Glutamate carboxylation
E	Cortisol hydroxylation
№	krok 2008
Topic	DIGESTIVE SYSTEM
Task	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 folowing vitamin:
Correct answer	B_{12}
B	B_6
C	*C*
D	*P*
E	*A*
№	krok 2008
Topic	ENDOCRINE SYSTEM

Task	A patient ill with adenoma of glomerular zone of adrenal cortex (Conn's disease) has arterial hypertension, convulsions, polyuria. What is the main factor in the pathogenesis of these disturbances?
Correct answer	Aldosterone hypersecretion
B	Aldosterone hyposecretion
C	Catecholamines hypersecretion
D	Glycocorticoids hypersecretion
E	Glycocorticoids hyposecretion
№	krok 2008
Topic	RESPIRATORY
Task	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:
Correct answer	Respiratory volume
B	Vital lung capacity
C	Functional residual capacity
D	Expiration capacity
E	Respiratory minute volume
№	krok 2008
Topic	HEART
Task	A man's heart rate was measured according to his pulse. It equaled 120 bpm. What is the duration of cardiac cycle?
Correct answer	*0,5 s*
B	*0,7 s*
C	*0,8 s*
D	*0,9 s*
E	*1,0 s*
№	krok 2008
Topic	BLOOD

Task	A patient was stung by a bee. Examination results: his left hand is hot, pink and edematic, there is a big blister on the spot of the sting. What is the leading mechanism of edema development?
Correct answer	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
Topic	Hormones
Task	After a surgical procedure an experimental animal died from intense convulsions. What endocrinal glands were extracted?
Correct answer	Parathyroid
B	Thyroid
C	Adrenal
D	Ovaries
E	Testicles
№	krok 2008
Topic	cns
Task	A patient applied to a doctor complaining about dizziness, memory impairment, periodical convulsions. It was found out that such changes were caused by a product of glutamic acid decarboxylation. What product is meant?
Correct answer	GABA
B	Pyridoxalphosphate
C	Thymidine diphosphate
D	ATP
E	Tetrahydrofolate
№	krok 2008

Topic	CNS
Task	A patient with a craniocerebral trauma has respiratory standstill. What part of cerebrum is most likely to be damaged?
Correct answer	Medulla oblongata
B	Telencephalon
C	Mesencephalon
D	Cerebellum
E	Thalamencephalon
№	krok 2008
Topic	
Task	A man has an accelerated heart rate, mydriatic pupils, dry mouth. It is caused by activation of the following function regulating system:
Correct answer	Sympathetic
B	Parasympathetic
C	Metasympathetic
D	Vagoinsular
E	Hypothalamo-pituitary-adrenal
№	krok 2008
Topic	CNS
Task	After the mouth is closed and teeth are clenched the mouth begins to open reflectory. This reflex is initiated by the following receptors:
Correct answer	Periodont receptors
B	Proprioceptors of muscles that let down the lower jaw
C	Proprioceptors of muscles that lift the lower jaw
D	Gustatory receptors
E	Mechanoreceptors of oral cavity mucous membrane
№	krok 2008

Topic	Hormones
Task	A patient with Itsenko-Cushing syndrome has persistent hyperglycemia and glycosuria, hypertension, osteoporosis, obesity. What hormon's synthesis and secretion are intensified in this case?
Correct answer	Cortisol
B	Adrenaline
C	Glucagon
D	Thyroxin
E	Aldosterone
№	krok 2008
Topic	Respiration
Task	A student has been staying in a badly ventilated room for a long time that resulted in acceleration of respiratory rate. What receptors were the first to react to the increased concentration of carbonic cid in the air?
Correct answer	Central chemoreceptors
B	Vascular chemoreceptors
C	Irritant receptors
D	Juxtaglomerular receptors
E	Olfactory receptors
№	krok 2008
Topic	EXCITABLE TISSUES
Task	An isolated muscle fiber is under experiment. It was ascertained that excitement threshold of a cell was significantly lowered. What might have caused this phenomenon?
Correct answer	Activation of membrane sodium channels
B	Activation of membrane potassium channels
C	Inactivation of membrane sodium channels
D	Inactivation of membrane potassium channels
E	Blockade of energy production in the cell

№	krok 2007
Topic	Hormones
Task	There is a 9 year old boy in endocrinological department, who has already had a few fractures of extremeties caused by fragility of bones. Malfunction of what endocrinous glands (gland) takes place?
Correct answer	Parathyroid glands
B	Thyroid gland
C	Thymus
D	Adrenal glands
E	Epiphysis
№	krok 2007
Topic	Respiration
Task	Premature infants have syndrom of respiratory failure. Failure of what aerohematic barriere component underlies this pathology?
Correct answer	Surfactant
B	Capillary endothelium
C	Basal membrane of endothelium
D	Basal membrane of alveolocytes
E	Alveolocytes
№	krok 2007
Topic	BLOOD
Task	If a mountainclimber stays in the mountains for a long time, quantity of erythrocytes increases from $5,\ 0 \cdot 10^{12}/l$ to $6,\ 0 \cdot 10^{12}/l$. What causes stimulation of erythropoesis?
Correct answer	Decrease of p_2 in arterial blood
B	Increase of p_2 in arterial blood
C	Decrease of p_2 in venous blood
D	Increase of p_2 in venous blood

E	Increase of p_2 in cells
№	krok 2007
Topic	RESPIRATORY SYSTEM
Task	A man has trauma of greater pectoral muscle. What index' decrease will it cause?
Correct answer	Inspiratory reserve volume
B	Expiratory reserve volume
C	Respiratory volume
D	Residual volume
E	Functional residual lung capacity
№	krok 2007
Topic	ANS
Task	While passing an exam a student gets dry mouth. It is caused by realization of such reflexes:
Correct answer	Conditioned sympathetic
B	Conditioned and unconditioned sympathetic
C	Conditioned parasympathetic
D	Unconditioned parasympathetic
E	Unconditioned sympathetic and parasympathetic
№	krok 2007
Topic	cns
Task	Cerebral hemorrhage caused serious disturbance of taste sensibility. What brain structure is most likely to be damged?
Correct answer	Postcentral gyrus
B	Hippocampus
C	Hypothalamus
D	Substantia nigra
E	Amygdaloid body

№	krok 2007
Topic	BLOOD
Task	A man lost consciousness in a car with running engine where he had been waiting for a friend for a long time. What hemoglobin compaund can be found in the blood of the patient?
Correct answer	Carboxyhemoglobin
B	Deoxyhemoglobin
C	Carbhemoglobin
D	Methemoglobin
E	Oxyhemoglobin
№	krok 2007
Topic	ENDOCRINE SYSTEM
Task	A patient has the sudden decrease of Ca^{2+} content in blood. What hormone secretion will increase?
Correct answer	Parathormone
B	Thyrocalcitonin
C	Aldosterone
D	Vasopressin
E	Somatotropin
№	krok 2007
Topic	EXCITABLE TISSUES
Task	It is required to set an experiment on an isolated excitable cell and to achieve increase of membrane rest potential (hyperpolarization). What ion channels should be activated to achieve such a result?
Correct answer	Potassium
B	Sodium
C	Potassium and sodium
D	Calcium
E	Sodium and calcium

№	krok 2007
Topic	DIGESTIVE SYSTEM
Task	A man has considerable disorder of protein, fat and carbohydrate digestion. Reduced secretion of what digestive juice is the most probable cause of this phenomenon?
Correct answer	Pancreatic juice
B	Saliva
C	Gastric juice
D	Bile
E	Intestinal juice
№	krok 2007
Topic	HEART
Task	During phonocardiogram registration it was ascertained that the duration of the first heart sound twice exceeds the norm. It is most likely that patient has the following organ affected:
Correct answer	Atrioventricular valves
B	Semilunar valves
C	Cardiomyocytes of heart atriums
D	Cardiomyocytes of ventricles
E	Cardiomyocytes of atriums
№	krok 2007
Topic	ANS
Task	In the course of an experiment a nerve is being stimulated by electric impulses. It leads to excretion of some quantity of thick viscous saliva by sublingual and submandibular glands. What nerve is being stimulated?
Correct answer	*N.sympathicus*
B	*N.glossopharyngeus*
C	*N.f acialis*
D	*N.trigeminus*

E	*N.vagus*
№	krok 2007
Topic	ENDOCRINE SYSTEM
Task	A patient has hyperkaliemia and hyponatremia. Reduced secretion of what hormone may cause such changes?
Correct answer	Aldosterone
B	Vasopressin
C	Cortosol
D	Parathormone
E	Natriuretic hormone
№	krok 2007
Topic	METABOLISM
Task	A man's energy consumption is measured on an empty stomach, in lying position, under conditions of physical psychical rest, at comfortable temperature. At what time will the energy consuption be the lowest?
Correct answer	At 3-4 o'clock a.m.
B	At 7-8 o'clock a.m.
C	At 10-12 o'clock a.m.
D	At 2-4 o'clock p.m.
E	At 5-6 o'clock p.m.
№	krok 2007
Topic	CNS
Task	A patient complains of rapid fatigability. Objectively: he staggers and overbalances in the upright position with closed eyes. Skeleton muscular tonus is decreased. What brain structure is most likely to be damaged?
Correct answer	Cerebellum
B	Thalamus

C	Hypothalamus
D	Precentral gyrus of cerebrum cortex
E	Basal ganglions
№	krok 2007
Topic	BLOOD
Task	A patient with chronic glomerulonephritis has disorder of incretoty function of kidneys. What blood elements deficit will result from it?
Correct answer	Erythrocytes
B	Leukocytes
C	Thrombocytes
D	Leukocytes and thrombocytes
E	Erythrocytes and leukocytes
№	krok 2007
Topic	ANS
Task	In course of an experiment the peripheral segment of vagus nerve of an animal was stimulated. The following changes of heart activity were obseerved:
Correct answer	Reduced heart rate
B	Increase of frequency and force of heartbeat
C	Increased excitability of myocardium
D	Increased conduction of excitement through myocardium
E	Icreased force of heartbeat
№	krok 2007
Topic	ENDOCRINE SYSTEM
Task	A patient has hypocalcemia. What hormone deficiency may be it’s cause?
Correct answer	Parathormone
B	Thyrocalcitonin
C	Aldosterone

D	Corticotropin
E	Corticoliberin
№	krok 2007
Topic	ENDOCRINE SYSTEM
Task	A patient with diabetes mellitus had an insuline injection. It caused loss of consciousness and convulsions. What was the result of biochemic blood analysis on glucose content?
Correct answer	2,5 mmole/l
B	3,3 mmole/l
C	8,0 mmole/l
D	10 mmole/l
E	5,5 mmole/l
№	krok 2007
Topic	ENDOCRINE SYSTEM
Task	A patient who suffers from chronic renal insufficiency fell ill with osteoporosis. Disturbed synthesis of what mineral metabolism's regulator is the cause of osteoporosis?
Correct answer	Formation of 1, $25()_2D_3$
B	Proline hydroxylation
C	Lysine hydroxylation
D	Glutamate carboxylation
E	Cortisol hydroxylation
№	krok 2007
Topic	ENDOCRINE SYSTEM
Task	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?
Correct answer	Thyreocalcitonin
B	Somatotropin

C	Thyroxin
D	Parathormone
E	Triiodothyronine
№	krok 2007
Topic	DIGESTIVE SYSTEM
Task	What substance makes saliva viscous and mucous, has protective function, protects mucous membrane of oral cavity from mechanical damage?
Correct answer	Mucin
B	Glucose
C	Kallikrein
D	Amylase
E	Lysozyme
№	krok 2007
Topic	BLOOD
Task	A 2 year old child suffers from intestinal dysbacteriosis that lead to the development hemorrhagic syndrome. The most probable cause of hemorrhage is:
Correct answer	Vitamin K deficiency
B	Activation of tissue thromboplastin
C	Hypovitaminosis PP
D	Fibrinogen deficiency
E	Hypocalcemia
№	krok 2007
Topic	ENDOCRINE SYSTEM
Task	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?
Correct answer	Somatotropic
B	Corticotrophic

C	Thyreotropic
D	Gonadotropic
E	Prolactin
№	krok 2007
Topic	DIGESTIVE SYSTEM
Task	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?
Correct answer	Castle's factor
B	Hydrochloride acid
C	Mucin
D	Pepsin
E	Gastrin
№	krok 2007
Topic	BLOOD
Task	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?
Correct answer	Hypooncotic
B	Membranogenic
C	Disregulatory
D	Lymphogenic
E	Hyperosmolar
№	krok 2007
Topic	ENDOCRINE SYSTEM
Task	A patient with adenoma of glomeral zone of adrenal cortex (Conn's disease) has arterial hypertension, convulsions, polyuria. What is the main link in pathogenesis of these disorders?
Correct answer	Aldosterone hypersecretion

B	Aldosterone hyposecretion
C	Catecholamine hypersecretion
D	Glucocorticoid hypersecretion
E	Glucocorticoid hyposecretion
№	krok 2007
Topic	PAIN
Task	Four months ago a 43 year old patient had a traumatic amputation of his lower extrimity. Now he complains of sensing the amputated extremity and having constantly grave, sometimes unbearable pain in it. What type of pain does he have?
Correct answer	Phantom
B	Causalgia
C	Neuralgia
D	Thalamic
E	Reflex
№	krok 2007
Topic	EXCITABLE TISSUES
Task	In an excitable cell the ion channells were blocked. It hasn't changed essentially the value of rest potential, but the cell lost its ability to generate AP (action potential). What channels were blocked?
Correct answer	Natrium
B	Potassium
C	Natrium and potassium
D	Chloric
E	Calcium
№	krok 2007
Topic	
Task	A 25 year old patient had in the dentist's room a sudden attack of bronchial asthma. The doctor gave him salbutamol in the form of inhalation. What is the mechanism of action of this preparation?

Correct answer	Stimulates β_2-adrenoreceptors
B	Stimulates α-adrenoreceptors
C	Blocks $_1$-histamine receptors
D	Blocks phosphodiesterase
E	Blocks M-cholinergic receptors
№	krok 2007
Topic	
Task	Removal of a foreign body from patient's eye involves local anesthesia with lidocaine. What is the action mechanism of this medication?
Correct answer	It disturbs passing of Na^+ through the membrane
B	It blocks passing of nitric oxide
C	It inhibits cytochrome oxidase activity
D	It reduces dehydrogenase activity
E	It reduces passage of neuromediators
№	krok 2007
Topic	
Task	A patient has acute cardiac insufficiency resulting from essential hypertension. What medication will be the most appropriate in this case?
Correct answer	Corglycone
B	Digoxin
C	Cardiovalen
D	Caffeine
E	Cordiamin
№	krok 2007
Topic	

Task	A patient was operated on account of abdominal injury with application of tubocurarin. At the end of operation, after the respiration had been restored, the patient got injection of gentamicin. It caused a sudden respiratory standstill and relaxation of skeletal muscles. What effect underlies this phenomenon?
Correct answer	Potentiation
B	Cumulation
C	Antagonism
D	Habituation
E	Sensitization
№	krok 2007
Topic	
Task	A patient has an acute painfullness of face skin. What nerve is damaged?
Correct answer	Trifacial
B	Facial
C	Oculomotor
D	Vagus
E	Glossopharyngeal
№	krok 2018
Topic	respiratory
Task	After inhalation of dust a person develops cough, which results from stimulation of:
Correct answer	Irritant receptors
B	Juxtacapillary receptors
C	Pulmonary chemoreceptors
D	Pulmonary thermoreceptors
E	Nociceptors
№	krok 2018
Topic	Excit. tiss.

Task	Electric current has affected skeletal muscle fiber resulting in depolarization of the membrane. Depolarization develops due to the following ions penetrating the membrane:
Correct answer	Na^{+}
B	HCO^{3-}
C	Ca^{2+}
D	Cl^{-}
E	K^{+}
№	krok 2018
Topic	Digestion
Task	An experimental animal, a dog, received a weak solution of hydrochloric acid through a tube inserted into the duodenum. Primarily it will result in increased secretion of the following hormone:
Correct answer	Secretin
B	Gastrin
C	Histamine
D	Cholecystokinin
E	Neurotensin
№	krok 2018
Topic	Excretor
Task	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?
Correct answer	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

Topic	endocrine
Task	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?
Correct answer	Pancreas
B	Thyroid gland
C	Gonads
D	Adrenal glands
E	Pineal gland
№	krok 2018
Topic	hna
Task	A student, who unexpectedly met his girlfriend, developed an increase in systemic arterial pressure. This pressure change was caused by the intensified realization of the following reflexes:
Correct answer	Conditional sympathetic
B	Conditional parasympathetic
C	Conditional sympathetic and parasympathetic
D	Unconditional parasympathetic
E	Unconditional sympathetic
№	krok 2018
Topic	Digestion
Task	During experiment the processes of food and water hydrolysis products absorption were studied. It was determined that these processes mainly occur in the following gastrointestinal segment:
Correct answer	Small intestine
B	Stomach
C	Large intestine
D	Rectum
E	Oral cavity

№	krok 2018
Topic	ans
Task	In the course of experiment the vagus nerve of the test animal was severed, which resulted in the animal developing constant tachycardia. What effect of parasympathetic nervous system on cardiac performance is demonstrated by this experiment?
Correct answer	Inhibition
B	Stimulation
C	Stimulus summation
D	Paradoxical response
E	Mixed effect
№	krok 2018
Topic	Metabolism
Task	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?
Correct answer	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 processses
№	krok 2018
Topic	thermoregulation
Task	In hot weather the bus passengers asked to open the roof hatches. What way of heat transfer is activated in this situation?
Correct answer	Convection
B	Conduction
C	Radiation

D	Conduction and radiation
E	Sweat evaporation
№	krok 2018
Topic	analyzers
Task	During examination a neurologist taps the tendon under the patient's kneecap with a reflex hammer to evaluate reflex extension of the knee. This response is provoked by stimulation of the following receptors:
Correct answer	Muscle spindles
B	Golgi tendon organ
C	Articular receptors
D	Tactile receptors
E	Nociceptors
№	krok 2018
Topic	cardio-vascular
Task	An experimet was conducted to study major indicators of hemodynamics. What hemodynamics indicator would be the same for both systemic and pulmonary circulation?
Correct answer	Volumetric blood flow rate
B	Mean arterial pressure
C	Vascular resistance
D	Linear blood flow velocity
E	Dyastolic blood pressure
№	krok 2018
Topic	endocrine
Task	A 50-year-old man declined anaesthesia during dental manipulations. Due to severe pain he developed anuria caused by acute increase in production of:
Correct answer	Adrenaline
B	Renin

C	Thymosin
D	Thyroxin
E	Glucagon
№	krok 2018
Topic	blood
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	Vascular-platelet haemostasis
C	Clot retraction
D	Fibrinolysis
E	
№	krok 2018
Topic	heart
Task	Increased stumulation rate of isolated heart of a rabbit leads to incomplete relaxation of the heart ventricles due to:
Correct answer	Calcium accumulation in cardiomyocytes
B	Increased sodium content in cardiomyocytes
C	Inhibition of $K - Na$ pump
D	Increased potassium content in cardiomyocytes
E	Increased potassium content in the interstitial tissue
№	krok 2018
Topic	cns
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	Adrenaline

C	Noradrenaline
D	Histamine
E	Acetylcholine
№	krok 2018
Topic	cns
Task	A tumor is detected in one of the regions of the patient’s brain, resulting in the patient’s inability to maintain normal body temperature. What brain structure is damaged?
Correct answer	Hypothalamus
B	Thalamus
C	Cerebellum
D	Striatum
E	Substantia nigra
№	krok 2018
Topic	Excit. tiss.
Task	An experiment was conducted to measure the threshold of tactile receptors stimulation with various stimuli. What stimulus will have the lowest threshold?
Correct answer	Mechanical stimulus
B	Chemical stimulus
C	Photic stimulus
D	Cold stimulus
E	Heat stimulus
№	krok 2018
Topic	heart
Task	Auscultation reveals that in the patient’s II intercostal space along the parasternal line on the right the II heart sound is better heard than the I heart sound. What valve produces this sound when closing?
Correct answer	Semilunar aortic valve
B	Semilunar pulmonary valve

C	Bicuspid valve
D	Tricuspid valve
E	Bicuspid and tricuspid valves
№	krok 2018
Topic	endocrine
Task	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:
Correct answer	Hyperproduction of aldosterone
B	Increased blood coagulation
C	Intensification of erythropoiesis
D	Hyperproduction of vasopressin
E	Intensification of heart contractions
№	krok 2018
Topic	cns
Task	During a brain surgery stimulation of the cerebral cortex resulted in tactile and thermal sensations in the patient. What gyrus was stimulated?
Correct answer	Postcentral gyrus
B	Cingulate convolution
C	Parahippocampal gyrus
D	Superior temporal gyrus
E	Precentral gyrus
№	krok 2018
Topic	Digestion
Task	Various types of muscle contractions occurring in the alimentary canal of a test animal were studied and their different functional purposes were determined. It was noted that only one type of motor activity occurred in the circular and longitudinal muscles. Name this motor activity:
Correct answer	Peristalsis

B	Mastication
C	Nonpropulsive segmental activity
D	Pendular movements of intestine
E	Tonic contraction of sphincters
№	krok 2019
Topic	heart
Task	It is necessary to decrease pumping ability of the patient's heart. What membrane cytoreceptors must be blocked to achieve this effect?
Correct answer	β-adrenergic receptors
B	a-adrenergic receptors
C	*a*- and /β-adrenergic receptors
D	Nicotinic acetylcholine receptors
E	Muscarinic acetylcholine receptors
№	krok 2019
Topic	thermoregulation
Task	In hot weather the bus passengers asked to open the roof hatches. What way of heat transfer is activated in this situation?
Correct answer	Convection
B	Radiation
C	Conduction and radiation
D	Conduction
E	Sweat evaporation
№	krok 2019
Topic	Blood
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	Fibrinolysis
C	-
D	Vascular-platelet haemostasis
E	Clot retraction
№	krok 2019
Topic	REspiration
Task	A victim of a traffic accident has lost thoracic respiration but retaines diaphragmal. The spinal cord is most likely to be damaged at:
Correct answer	VI-VII cervical segments -
B	I-II lumbar segments
C	I-II cervical segments
D	I-II sacral segments
E	XI-XII cervical segments
№	krok 2019
Topic	CNS
Task	A tumor is detected in one of the regions of the patient’s brain, resulting in the patient’s inability to maintain normal body temperature. What brain structure is damaged?
Correct answer	Hypothalamus
B	Thalamus
C	Striatum
D	Substantia nigra
E	Cerebellum
№	krok 2019
Topic	digestion
Task	An experimental animal, a dog, received a weak solution of hydrochloric acid through a tube inserted into the duodenum. Primarily it will result in increased secretion of the following hormone:
Correct answer	Secretin

B	Cholecystokinin
C	Histamine
D	Gastrin
E	Neurotensin
№	krok 2019
Topic	Endocrine
Task	A 50-year-old man declined anaesthesia during dental manipulations. Due to severe pain he developed anuria caused by acute increase in production of:
Correct answer	Adrenaline
B	Thymosin
C	Glucagon
D	Renin
E	Thyroxin
№	krok 2019
Topic	Exsitation Tissies
Task	Electric current has affected skeletal muscle fiber resulting in depolarization of the membrane. Depolarization develops due to the following ions penetrating the membrane:
Correct answer	Na^{+}
B	Ca^{2+}
C	СГ
D	K^{+}
E	HCO^{3}-
№	krok 2019
Topic	endocrin System
Task	A patient presents with high content of vasopressin (antidiuretic hormone) in the blood. What changes in the patient’s diuresis will occur?

Correct answer	Oliguria
B	Polyuria
C	Glycosuria
D	Anuria
E	Natriuria
№	krok 2019
Topic	ANS
Task	In the course of experiment the vagus nerve of the test animal was severed, which resulted in the animal developing constant tachycardia. What effect of parasympathetic nervous system on cardiac performance is demonstrated by this experiment?
Correct answer	Inhibition
B	Stimulus summation
C	Mixed effect
D	Paradoxical response
E	Stimulation
№	krok 2019
Topic	endocrin System
Task	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?
Correct answer	Pancreas
B	Gonads
C	Pineal gland
D	Thyroid gland
E	Adrenal glands
№	krok 2019
Topic	Blood

Task	Differentiation of B-lymphocytes into plasma cells leads to synthesis of immunoglobulins that ensure specific immune response of the body. Differentiation of B-lymphocytes takes place in the following organ of immune system:
Correct answer	Tonsils
B	Thymus
C	Red bone marrow
D	Thyroid gland
E	Liver'
№	krok 2019
Topic	CNS
Task	During a brain surgery stimulation of the cerebral cortex resulted in tactile and thermal sensations in the patient. What gyrus was stimulated?
Correct answer	Postcentral gyrus
B	Parahippocampal gyrus
C	Cingulate convolution
D	Precentral gyrus*
E	Superior temporal gyrus
№	krok 2019
Topic	heart
Task	Auscultation reveals that in the patient’s II intercostal space along the parasternal line on the right the II heart sound is better heard than the I heart sound. What valve produces this sound when closing?
Correct answer	Semilunar aortic valve
B	Semilunar pulmonary valve
C	Tricuspid valve
D	Bicuspid and tricuspid valves
E	Bicuspid valve
№	krok 2019

Topic	digestion
Task	Various types of muscle contractions occurring in the alimentary canal of a test animal were studied and their different functional purposes were determined. It was noted that only one type of motor activity occurred in the circular and longitudinal muscles. Name this motor activity:
Correct answer	Peristalsis
B	Nonpropulsive segmental activity
C	Pendular movements of intestine
D	Tonic contraction of sphincters
E	Mastication
№	krok 2019
Topic	digestion
Task	During experiment the processes of food and water hydrolysis products absorption were studied. It was determined that these processes mainly occur in the following gastrointestinal segment:
Correct answer	Small intestine
B	Rectum
C	Oral cavity
D	Stomach
E	Large intestine
№	krok 2019
Topic	heart
Task	Increased stumulation rate of isolated heart of a rabbit leads to incomplete relaxation of the heart ventricles due to:
Correct answer	Calcium accumulation in cardiomyocytes
B	Inhibition of K — Na pump
C	Increased. sodium content in cardiomyocytes
D	Increased potassium content in cardiomyocytes
E	Increased potassium content in the interstitial tissue

№	krok 2019
Topic	VESSEL
Task	An experimet was conducted to study major indicators of hemodynamics. What hemodynamics indicator would be the same for both systemic and pulmonary circulation?
Correct answer	Volumetric blood flow rate
B	Mean arterial pressure
C	Vascular resistance
D	Linear blood flow velocity
E	Dyastolic blood pressure
№	krok 2019
Topic	ANALYZERS
Task	During examination a neurologist taps the tendon under the patient's kneecap with a reflex hammer to evaluate reflex extension of the knee. This response is provoked by stimulation of the following receptors:
Correct answer	Muscle spindles
B	Golgi tendon organ
C	Articular receptors-
D	Tactile receptors
E	Nociceptors
№	krok 2019
Topic	endocrin System
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 corticosteroid secretion
C	Increased thyroxin secretion
D	Inhibited parathormone secretion

E	Inhibited corticosteroid secretion
№	krok 2019
Topic	endocrin System
Task	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:
Correct answer	Hyperproduction of aldosterone
B	Intensification of heart contractions
C	Increased blood coagulation
D	Intensification of erythropoiesis
E	Hyperproduction of vasopressin
№	krok 2019
Topic	Excretion
Task	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?
Correct answer	Renal corpuscle
B	Ascending limb of loop of Henle
C	Descending limb of loop of Henle
D	Distal convoluted tubule
E	Proximal convoluted tubule
№	krok 2019
Topic	Metabolism
Task	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?
Correct answer	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 processses
E	Excessive amount of fats in the diet
№	krok 2019
Topic	HNA
Task	A student, who unexpectedly met his girlfriend, developed an increase in systemic arterial pressure. This pressure change was caused by the intensified realization of the following reflexes:
Correct answer	Conditional sympathetic
B	Unconditional sympathetic
C	Unconditional parasympathetic
D	Conditional parasympathetic
E	Conditional sympathetic and parasym-pathetic
№	крок 2020
Topic	Hormone
Task	A patient with a hemorrhage into the anterior hypothalamus developed polyuria. Which hormone is in this case insufficient, leading to the decreased water reabsorption in the kidney tubules?
Correct answer	Vasopressin
B	Adrenarin
C	Aldosterone
D	Calcitonin
E	Oxytocin
№	крок 2020
Topic	Metabolism
Task	A 42- years old woman who has been keeping to a vegetarian diet for 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 factors is the most likely cause of such a condition
Correct answer	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 processed
E	Insufficient amount of fats in the diet
№	крок 2020
Topic	CNS
Task	A woman is diagnosed with hemorrhage into the posterior horns of the spinal cord. What is their function?
Correct answer	Sensory
B	Sympathetic
C	parasympathetic
D	motor
E	
№	крок 2020
Topic	CNS
Task	A patient loses his equilibrium, when in an upright position, with his eyes closed. What brain structures are the most likely to be damaged in this patient?
Correct answer	Cerebellum.
B	Basal ganglia.
C	Limbic system.
D	precentral gyrus of the cerebral cortex.
E	Thalamus.
№	крок 2020
Topic	VND
Task	A student, who unexpectedly met his girlfriend, developed an increase in systemic arterial pressure. This pressure change was caused by the intensified realization of the following reflex
Correct answer	Condition sympathetic
B	Uncondition sympathetic

C	Uncondition parasympathetic
D	Condition parasympathetic
E	Condition parasympathetic and sympathetic
№	крок 2020
Topic	CNS
Task	A topical anesthetic was applied to the tongue apex of an experiment participant. The resulting gustatory loss will make person unable to feel the following taste :
Correct answer	Sweet
B	Bitter
C	Sour
D	Sour and salty
E	Salty
№	крок 2020
Topic	Hormone
Task	After examination, the signs of acromegaly were detected in a patient. What endocrine gland is involved in this pathological process?
Correct answer	Adenohypophysis
B	Adrenal gland
C	Neurohypophysis
D	Pineal gland
E	Thyroid gland
№	крок 2020
Topic	Metabolism
Task	In hot weather the bus passengers asked to open the roof hatches. What way of heart transfer is activate in this situation?
Correct answer	Convection
B	Radiation

C	Sweat evaporation
D	Conduction and radiation
E	Conduction
№	крок 2020
Topic	Analysator
Task	A patient complains of severe rhinitis and total loss of olfactory perception. Receptors of the olfactory analyzer are damaged in this patient. Where in the nasal cavity are these receptors located?
Correct answer	Superior nasal meatus
B	Inferior nasal meatus
C	Middle nasal meatus
D	Choanae
E	Common nasal meatus
№	крок 2020
Topic	ECG
Task	The patient's ECG shows a shortened R-R interval. How will the cardical activity change as the result?
Correct answer	Frequency of cardiac contractions will increase
B	Force of cardiac contractions will decrease
C	Force of cardiac contractions will increase
D	Frequency of cardiac contractions will decrease
E	Frequency and force of cardiac contractions will decrease
№	крок 2020
Topic	Vesels
Task	An older person presents with changes in the force of cardiac contractions and in the physical properties of the vasculature , which is clearly visible in the graphic recording of the pulse waves over the carotid artery. What examination method was used?
Correct answer	Sphygmography
B	myography

C	Plethysmography
D	Rheography
E	Phlebography
№	крок 2020
Topic	CNS
Task	The patient has a general sensitivity loss in separate areas on his body on the right. What cerebral gyrus is affected in this case?
Correct answer	Postcentral gyrus
B	Superior temporal gyrus
C	Inferior temporal gyrus
D	Precentral gyrus
E	Middle temporal gyrus
№	крок 2020
Topic	Analysator
Task	During physical and emotional exertion , a person is less sensitive to pain. This phenomenon occurs due to activation on the:
Correct answer	Antinociceptive system
B	Nociceptive system
C	parasympathetic system
D	Functions of the adrenal glands
E	Thyroid function
№	крок 2020
Topic	Bllod
Task	How does the pH of venous blood differ from arterial blood and why?
Correct answer	Lower due to higher blood CO_2 levels
B	No difference

C	Higher due to higher blood CO_2 levels
D	Lower due to O_2 release from the organisms
E	Higher due to O_2 release from the organisms
№	крок 2020
Topic	Hormone
Task	A patient with essential hypertension has increased blood vasopressin levels. This hormone has an effected on the functioning organ
Correct answer	Kidneys
B	Adrenal glands
C	Liver
D	Heart
E	Lungs
№	крок 2020
Topic	CNS
Task	A patient complains of sever rhinitis and total loss of olfactory perception. Receptors of the olfactory analyzer are damaged in this patient. Where in the nasal cavity are there receptors located
Correct answer	Superior nasal meatus
B	Middle nasal meatus
C	Interior nasal meatus
D	Choanae
E	Common nasal meatus
№	крок 2020
Topic	CNS
Task	During neurologists examination, a patient present with sensory loss on the back surfaceof the left hand. Name this phenomenon
Correct answer	Anestesia

B	Alexia
C	Atony
D	Astenia
E	Alexia
№	крок 2020
Topic	Hormone
Task	On the day before a surgery, the patient was out. This condition is associated which high levels of the following hormone
Correct answer	Adrenaline
B	Insulin.
C	Glucagon.
D	progesterone.
E	Prolactin
№	крок 2020
Topic	AP
Task	During dental manipulation in the oral cavity, a woman felt unwell she developed headache and palpitations. Blood pressure measurement revealed a systolic pressure of 170 mm (mm Hg) of human systolic blood pressure
Correct answer	100-120
B	140-160
C	90-100
D	160-180
E	60-80
№	крок 2020
Topic	Muscule
Task	A 25-year-old patient has marked muscle weakness. What electrolytes in blood plasma should be measured first?

Correct answer	Calcium ions
B	Potassium ions
C	Magnesium ions
D	Sodium ions
E	Chlorine ions
№	крок 2020
Topic	Hormone
Task	The 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 secretione
B	Increased corticosteroids secretion
C	Increased thyroxine secretion
D	Inhibited corticosteroid secretion
E	Inhibited parathormone secretion
№	крок 2020
Topic	CNS
Task	A patient delivered to neurological department presents with increased inhibition processes in the central nervous system. What neurotransmitter can cause this condition, where in excess?
Correct answer	GABA
B	dopamine
C	adrenaline
D	acetylcholine
E	norepinephrine
№	крок 2020
Topic	Hormone
Task	An acute blood loss has caused a decrease in the systemic blood pressure. This situation can be stabilized with the intensified secretion of a certain hormone. Name this hormone?

Correct answer	Renin
B	Glucagon
C	Insulin
D	Gastrin
E	Testosterone
№	крок 2020
Topic	Muscule
Task	It is known that calcium ions, along with other factors, enable contraction of the muscle tissue. In the process of muscle contraction, calcium interacts with the following structures:
Correct answer	Troponin protein of thin fibrils
B	Protein myosin of thick fibrils
C	By actin protein of thin fibrils
D	protein calsequestrin
E	Actinmyosin complex sarcoma era
№	крок 2020
Topic	Metabolism
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	Hypoproteinemia due to protein synthesis disturbance
B	Venous congestion and increased venous pressure
C	hypoglycemia due to glycogen synthesis disturbance
D	Decreased production of vasopressin in the hypothalamus
E	Deceleration of glomerular filtration rate
№	крок 2020
Topic	Hormone
Task	During a car accident, a person received a strong blow to the epigastric region, which caused a cardiac arrest. What was the likely cause of such changes in the cardiac activity?

Correct answer	Increased vagal tone
B	Aldosterone production
C	Cortisol production
D	Adrenaline production
E	Increased tone of the sympathetic nervous system
№	крок 2020
Topic	Resperatoty
Task	When dives quickly rise from the depths to the surface, they risk developing decompression sickness that can result in death caused by gas embolism. What gas is produced in this case?
Correct answer	N2
B	C02
C	NO2
D	CO2
E	CO
№	Krok 2021
Topic	Heart
Task	During a car accident, a person received a strong blow to the epigastric region, which caused a cardiac arrest. What was the likely cause of such changes in the cardiac activity?
Correct answer	Increased vagal tone
B	Increased tone of the sympathetic nervous system
C	Adrenaline production
D	Aldosterone production
E	Cortisol production
№	Krok 2021
Topic	Respiration
Task	Contractions of the respiratory muscles completely stop, if:
Correct answer	Spinal cord transection at the level of upper cervical segments

B	Spinal cord transection at the level of lower cervical segments
C	Separation of pons cerebelli from medulla oblongata
D	Bilateral vagal transection
E	
№	Krok 2021
Topic	Vessels
Task	Dependence of blood pressure from vascular resistance was studied in an experiment on a test animal. In what vessel will the resistance be the highest?
Correct answer	Arterioles
B	Arteries
C	Aorta
D	Veins
E	Capillaries
№	Krok 2021
Topic	Excretion
Task	Urinalysis shows glucosuria in a patient with diabetes mcllitus. What is the renal threshold for glucose?
Correct answer	10.0 mmol/L
B	5.55 mmol/L
C	20.0 mmol/L
D	15.5 mmol/L
E	8.88
№	Krok 2021
Topic	Hormone
Task	What hormone of parotid glands intensifies teeth mineralization by stimulating calcium supply to the calcified tissues?
Correct answer	Calcitonin
B	Glucagon

C	Cortisol
D	Parotin
E	Parathyrin
№	Krok 2021
Topic	Gigestion
Task	It is known that saliva contains thromboplastins. What is their role in the oral cavity?
Correct answer	Increase coagulation properties of saliva
B	Increase bactericidal properties of saliva
C	Increase fibrinolytic properties of saliva[Л]
D	Increase enzymatic properties of saliva
E	Increase immunity-inducing properties of saliva
№	Krok 2021
Topic	Hormone
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	Heart
Task	Auscultation reveals that in the patient's II intercostal space along the parasternal line on the right the II heart sound is belter heard than the I heart sound. Closure of which valve produces this sound?
Correct answer	Semilunar aortic valve
B	Right tricuspid valve

C	Left bicuspid valve
D	Bicuspid and tricuspid valves
E	Semilunar pulmonary valve
№	Krok 2021
Topic	Sensory
Task	A teenager with impaired visual acuity came to an ophthalmologist. The doctor explained that this condition was caused by a spasm of accommodation. What component of an eyeball is a part of accommodation apparatus?
Correct answer	Ciliary muscle
B	Vitreous body
C	Retina
D	Cornea
E	Sclera
№	Krok 2021
Topic	Hormone
Task	Formation of dental bone tissue requires calcium. The active form of vitamin D plays a large role in calcium metabolism and is produced in:
Correct answer	Kidneys and liver
B	Stomach and heart
C	Liver and muscles
D	Kidneys and heart
E	Intestine and liver
№	Krok 2021
Topic	CNS
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	Postcentral gyrus

B	Hypothalamus
C	Amygdala
D	Substantia nigra
E	Hippocampus
№	Krok 2021
Topic	Oral cavity
Task	What process becomes disturbed, if salivary pH drops below 6.5?
Correct answer	Supply of hard dental tissues with mineral substances
B	Intensity of metabolic processes in the pulp
C	Dental blood supply
D	Dentin formation
E	
№	Krok 2021
Topic	Blood
Task	During pregnancy, specific proteins that can destroy rhesus-positive erythrocytes of the fetus were detected in the blood of a rhesus-negative mother. Name this defensive component of the mother's body
Correct answer	Antibody
B	Antigen
C	Hormone
D	Serum
E	Enzyme
№	Krok 2021
Topic	Vessels
Task	In the wall of a blood vessel there is a large number of elastic fibers in all the layers. The middle layer contains elastic fenestrated membranes. Such characteristics of the vessel wall structure are caused by the following factors:

Correct answer	Osmotic pressure
B	High blood pressure
C	Low blood pressure
D	High blood flow velocity
E	Low blood flow velocity
№	Krok 2021
Topic	Blood
Task	After acute blood loss, the patient with rhesus-negative blood was mistakenly transfused with rhesus-positive blood. What changes will occur in blood in this case
Correct answer	Hemolysis of recipient’s erythrocytes
B	Erythrocytosis
C	Platelet aggregation
D	Hemolysis of donor’s erythrocytes
E	Aggregation of donor’s erythrocytes
№	Krok 2021
Topic	Hormone
Task	To improve tooth mineralization, dentists prescribe Ca^{2+} preparations. This substance has no effect on the following processes in an organism:
Correct answer	Oncotic pressure generation
B	Development of myocardial depolarization
C	Hemostasis
D	Muscle contraction
E	Synaptic transmission of excitation
№	Krok 2021
Topic	Excretion

Task	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?
Correct answer	Renal corpuscle
B	Descending limb of loop of Henle
C	Distal convoluted tubule
D	Ascending limb of loop of Henle
E	Proximal convoluted tubule
№	Krok 2021
Topic	Extability
Task	In an experiment, an excitatory cell was placed into a salt solution without sodium ions. How will it affect the process of excitation?
Correct answer	Action potential will be absent
B	Duration of action potential decreases
C	Duration of action potential increases
D	Amplitude of action potential increases
E	Amplitude of action potential decreases
№	Krok 2021
Topic	Extability
Task	During tooth extraction, novocaine (procaine) is administered to the area of a sensitive nerve, which results in an anesthetic effect because of disturbed:
Correct answer	Conduction of pain impulses
B	Formation of pain mediators
C	Tissue pH
D	Excitability of pain receptors
E	Axonal transport
№	Krok 2021
Topic	Hormone

Task	A 9-year-old boy is hospitalized in the endocrinology department. He has already had several limb fractures because of fragile bones. What endocrine gland does not function properly in this patient?
Correct answer	Thyroid gland
B	Parathyroid gland
C	Thymus gland
D	Pineal glands
E	Adrenal glands
№	Krok 2021
Topic	Hormone
Task	Examination of a 32-ycar-od man shows disproportional skeletal structure and enlargement of the supraorbital ridge, nose, lips, tongue, jawbones, and feet. What is the likely cause of these disturbances?
Correct answer	Increased levels of somatotropin
B	Increased concentration of glucagon
C	Decreased concentration of insulin
D	Increased levels of thyroxine
E	Increased levels of catecholamines
№	Krok 2021
Topic	Gigestion
Task	During experiment the processes of food and water hydrolysis products absorption were studied. It was determined that these processes mainly occur in the following gastrointestinal segment:
Correct answer	Small intestine
B	Oral cavity
C	Large intestine
D	Rectum
E	Stomach
№	Krok 2021

Topic	Heart
Task	Normal cardiomiocytes have a specific phase of the action potential:
Correct answer	Slow repolarization (plateau)
B	Rapid dyastolic repolarization
C	Rapid systolic repolarization
D	Systolic repolarization
E	Slow dyastolic repolarizalion
№	Krok 2021
Topic	Hormone
Task	A child presents with delayed mental development, delayed growth and formation of the teeth, late development of ossification foci, and low basal metabolic rate. What endocrine gland is functionally insufficient, causing this condition?
Correct answer	Thyroid gland
B	Gonads
C	Neurohypophysis
D	Adrenal glands
E	Pancreas
№	Krok 2021
Topic	CNS
Task	A car accident victim presents with a spinal hematoma accompanied by retrosternal pain, tachycardia, and elevated blood pressure. The patient’s condition results from the damage to the following segments of the spinal cord:
Correct answer	Thl-Th5
B	L1-L3
C	S1-S3
D	C6-C8
№	krok 2022

Topic	CNS
Task	A woman complains of impaired gustatory sensitivity of her tongue. This disturbance can be caused by the damage to a certain nucleus of the medulla oblongata. Name this nucleus:
Correct answer	Nucleus ambiguus
B	Hypoglossal nucleus
C	Inferior salivatory nucleus
D	Dorsal nucleus of vagus nerve
E	Solitary nucleus
№	krok 2022
Topic	gormon
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	gormon
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	digestion
Task	Every diet includes products with dietary fiber. These fibers cannot be digested by gastrointestinal enzymes and cannot be absorbed by the body. What is the role of dietary fiber?
Correct answer	Stimulates motor function of alimentary tract
B	Inhibits motor function of alimentary tract
C	Inhibits absorptive function of alimentary tract
D	Inhibits secretion of enzymes in digestive juices
E	Inhibits secretory function of alimentary tract
№	krok 2022
Topic	CNS
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	CNS
Task	Fatigability of masticatory muscles can result in their abnormally slow relaxation, which impairs mechanical processing of food. Name this condition
Correct answer	Contracture
B	Tetanus
C	Galvanization
D	Hypodynamia
E	Galvanism

№	krok 2022
Topic	gormon
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	digestion
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	CNS
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	heart
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	ANS
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	CNS
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	Sleep
Task	The patient’s EEG shows delta and theta rhythms, which indicates that the patient is in a state of:
Correct answer	Slow-wave sleep
B	Active wakefulness
C	Rapid eye movement sleep
D	Rest with eyes open
E	Rest with eyes closed
№	krok 2022
Topic	metabolisms
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	gormon
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	analizator
Task	A 14-year-old patient presents with disturbed twilight vision. What vitamin is deficient in the body of this patient?
Correct answer	A
B	B 12
C	B6
D	B1
E	C
№	krok 2022
Topic	heart
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	gormon
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	heart
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	Aschner-Dagnini reflex
B	Frank-Starling mechanism
C	Holtz reflex
D	Bainbridge reflex
E	Hering-Breuer reflex
№	krok 2022
Topic	gormon
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	gormon
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	gormon
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	gormon
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	blood
Task	The patient's blood group is being determined using monoclonal test reagents. Agglutination reaction is positive with anti-A and anti-B reagents and negative with anti-D reagents. Name the blood group of this patient:
Correct answer	AB (IV) Rh (-)
B	0 (I) Rh (+)
C	AB (IV) Rh (+)
D	B (III) Rh (-)

E	A (II) Rh (+)
№	krok 2022
Topic	HNA
Task	A student, who throughout the semester was studying poorly, is emotionally tense during the final exam. Leading mechanism of emotional tension in this case is the lack of:
Correct answer	Information
B	Time
C	Energy and information
D	Time and energy
E	Energy