Appendix to the working program

Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation

BANK OF ASSESSMENT TOOLS FOR DISCIPLINE

PATHOLOGY

Training program (specialty): **33.05.01 PHARMACY**
code, name
Department: **PATHOLOGICAL PHYSIOLOGY**

Mode of study: **FULL-TIME**

Nizhniy Novgorod
2023

1. Bank of assessment tools for the current monitoring of academic performance, mid-term assessment of students in the discipline / practice

This Bank of Assessment Tools (BAT) for the discipline "**Pathology**" is an integral appendix to the working program of the discipline "**Pathology**". All the details of the approval submitted in the WPD for this discipline apply to this BAT.

(Banks of assessment tools allow us to evaluate the achievement of the planned results stated in the educational program.

Assessment tools are a bank of control tasks, as well as a description of forms and procedures designed to determine the quality of mastering study material by students.)

2. List of assessment tools

The following assessment tools are used to determine the quality of mastering the academic material by students in the discipline/ practice:

No.	Assessment tool	Brief description of the assessment tool	Presentation of the assessment tool in the BAT
1	Tests	A system of standardized tasks that allows you to automate the procedure of measuring the level of knowledge and skills of a student	Bank of test tasks

3. A list of competencies indicating the stages of their formation in the process of mastering the educational program and the types of evaluation tools

Code and formulation of competence*	Stage of competence formation	Controlled sections of the discipline	Assessment tools
UC-1. Able to carry out critical analysis of problem situations based on a systematic approach, develop an action strategy	Current	Subject and tasks of pathology. Basic concepts of nosology. Pathogenic effect of environmental factors. Modeling of pathological processes. Acute non-specific cell injury. Disorders of peripheral blood circulation and microcirculation. Acute inflammation. Chronic inflammation. Fever. Allergy. Tumor growth. Pathology of water-salt metabolism. Edema. Pathology of the acid-base balance. Pathology of carbohydrates metabolism. Emergency states. Pathology of red blood cells: anemia, erythrocytosis. Pathology of white blood cells: leukocytosis, leukopenia, leukemoid reactions, leukemia. Pathology of hemostasis. Pathology of external respiration. Hypoxia Pathology of the cardiovascular system. Heart failure. Coronary insufficiency. Cardiac arrhythmias. Hypertension..	Tests

		Pathology of the gastrointestinal tract. Peptic ulcer disease. Pathology of the liver. Jaundice. Pathology of the kidneys. Pathology of the endocrine system. Pathology of the nervous system. Pain.	
GPC-2 Able to apply knowledge about morphofunctional features, physiological conditions and pathological processes in the human body to solve professional tasks	Current	Subject and tasks of pathology. Basic concepts of nosology. Pathogenic effect of environmental factors. Modeling of pathological processes. Acute non-specific cell injury. Disorders of peripheral blood circulation and microcirculation. Acute inflammation. Chronic inflammation. Fever. Allergy. Tumor growth. Pathology of water-salt metabolism. Edema. Pathology of the acid-base balance. Pathology of carbohydrates metabolism. Emergency states. Pathology of red blood cells: anemia, erythrocytosis. Pathology of white blood cells: leukocytosis, leukopenia, leukemoid reactions, leukemia. Pathology of hemostasis. Pathology of external respiration. Hypoxia Pathology of the cardiovascular system. Heart failure. Coronary insufficiency. Cardiac arrhythmias. Hypertension.. Pathology of the gastrointestinal tract. Peptic ulcer disease. Pathology of the liver. Jaundice. Pathology of the kidneys. Pathology of the endocrine system. Pathology of the nervous system. Pain.	Tests

4. The content of the assessment tools of entry, current control

Current control is carried out by the discipline teacher when conducting classes in the form of: assessment tool.

Assessment tools for current control.

Assessment tool

№	Test	Answers	Developing competence code (according to the WPD)
1.	The main etiological factor of acute altitude sickness is: A) Decrease in atmospheric pressure B) Decrease in partial pressure of O_2 in the air C) Ultraviolet radiation D) Low temperature E) High temperature	B	UC-1; GPC-2
2.	The conditions those promote overheating of the organism: A) High humidity and environment temperature B) Increase in perspiration	A, C, D	UC-1; GPC-2

	C) Decrease in perspiration D) Uncoupling oxidation and phosphorylation E) Dilatation of peripheral blood vessels		
3.	What cells, organs and tissues are the most radiosensitive: A) Brain B) Bone marrow C) Erythrocytes D) Gastro-intestinal epithelium E) Gonads	B, D, E	UC-1; GPC-2
4.	Factor promoting radiation-damage of cells are: A) Vitamin E deficiency B) High mitotic activity C) Low mitotic activity	A, B	UC-1; GPC-2
5.	Mark the signs of arterial hyperemia: A) Cyanosis of the organ B) Reddening of the organ or tissue C) Marked edema of the organ D) Increased tissue turgor E) Increased temperature in the organs localized superficially	B, D, E	UC-1; GPC-2
6.	Choose the basic types of arterial hyperemia according to its origin: A) Neurotonic B) Obstructive C) Neuroparalytic D) Myoparalytic E) Compressive	A, C, D	UC-1; GPC-2
7.	Mark the signs of venous hyperemia: A) Increased tissue turgor B) Edema of an organ C) Cyanosis of an organ or tissue D) Redness of an organ or tissue E) Decrease in temperature in internal organ	A, B, C	UC-1; GPC-2
8.	Mark the symptoms of ischemia: A) Cyanosis of an organ B) Paleness of an organ or tissue C) Pain D) Decrease in tissue turgor E) Reddening of the organ or tissue	B, C, D	UC-1; GPC-2
9.	Which bioactive substances are responsible for ischemia? A) Histamine B) Catecholamines C) Bradykinin D) Thromboxane A_2 E) Acetylcholine	B, D	UC-1; GPC-2
10.	Causes of aseptic inflammation may be the following: A) Hemorrhage into tissues B) The surgical operation that was done in aseptic conditions C) Parenteral injection of sterile foreign protein D) Enteral administration of non-sterile foreign protein E) Transient hyperoxia of tissues	A, B, C	UC-1; GPC-2
11.	Inflammation is regarded as an adaptive reaction of the organism because it: A) Inactivates phlogogenic agent B) Prevents allergization of the organism C) Mobilizes defensive factors of the organism D) Promotes the restoration or replacement of injured tissues E) Restricts the site of injury (especially in venous hyperemia)	A, C, D, E	UC-1; GPC-2
12.	The sings that can show the presence of inflammatory process in the organism are: A) Leukocytosis B) Erythrocytosis C) Fever D) Increase in ESR E) Thrombosis	A, C, D	UC-1; GPC-2
13.	In an acute inflammation site there are such chemical and physical changes as: A) Acidosis B) Hyperosmia C) Hyperoncia	A, B, C	UC-1; GPC-2

	D) Hyposmia E) Hyponcia		
14.	Mediators of inflammation that cause an increase in vascular permeability in inflammation are: A) Heparin B) Histamine C) Bradykinine D) Interferon E) Leukotrienes	B, C, E	UC-1; GPC-2
15.	What is common to the first type of an allergic response? A) Leading role of IgE in pathogenesis B) A response reveals itself in 15-20 minutes after the repeated contact with the allergen C) A response reveals itself in 24-48 hours after the repeated contact with the allergen D) Histamine, bradykinine, leukotryens play the main role in the mechanism of allergic reaction E) In the mechanism of allergy the main role belongs to lymphokines	A, B, D	UC-1; GPC-2
16.	What things are common to allergic reactions of the 4^{th} type: A) Sensitized T lymphocytes play a leading role in the pathogenesis B) Start in 6-8 hours C) Start in 20-30 minutes D) The mechanism of development depends on lymphokines E) The mechanism of development depends on histamine and bradykinin	A, B, D	UC-1; GPC-2
17.	Autoimmune diseases that develop according to 2^{d} type of allergy are: A) Myasthenia gravis B) Serum disease C) Immune agranulocytosis D) Acute glomerulonephritis E) Autoimmune hemolytic anemia	A, C, E	UC-1; GPC-2
18.	Autoimmune diseases that develop according to the 3^{rd} type of allergy are: A) Myasthenia gravis B) Serum disease C) Immune agranulocytosis D) Acute glomerulonephritis E) Autoimmune hemolytic anemia	B, D	UC-1; GPC-2
19.	What changes in the organism are typical of acute-phase reaction? A) Activation of immune system B) Increase of ACTH production in hypophysis C) Increase of albumin production in liver D) Activation of phagocytosis E) Increase in protein synthesis in muscles	A, B, D	UC-1; GPC-2
20.	Noninfectious fever arises in the following pathological processes: A) Necrosis of tissues B) Hyperproduction of thyroid hormones C) Malignant tumor D) Intravascular hemolysis of erythrocytes E) Exogenic overheating	A, C, D	UC-1; GPC-2
21.	What symptoms are typical of acute-phase reaction? A) Fever B) Neutropenia C) Positive nitrogen balance D) Increase in cortisol production by adrenal glands E) Negative nitrogen balance	A, D, E	UC-1; GPC-2
22.	Name mechanisms that take part in raising the temperature of the body in fever: A) Peripheral vasoconstriction B) Increase in contractile thermogenesis C) Decrease in perspiration D) Activation of biological oxidation E) Increase in perspiration	A, B, C, D	UC-1; GPC-2
23.	Mark the manifestations of malignant tumors growth: A) Metastasis B) Recurrence C) Invasive growth D) Expansive growth E) Weakening of contact inhibition of cells	A, B,C, E	UC-1; GPC-2

24.	Which factors are responsible for the destruction of tumor cells in the organism? A) Macrophage phagocytosis B) T-lymphocyte suppressors C) T-lymphocyte killers D) NK “Natural killers” E) Fibrinous pellicle covering tumor cells	A, C, D	UC-1; GPC-2
25.	What characterizes malignant growth? A) Weakening of contact inhibition of cells in tissue culture B) Availability of solid surface for grow of the cells in tissue culture C) Intensification of anaerobic glycolysis D) Production of the factor which intensifies angiogenesis E) Weakening of cellular differentiation	A, C, D, E	UC-1; GPC-2
26.	Compensatory mechanisms of metabolic acidosis are: A) Binding of hydrogen ions by proteins and bicarbonate buffer B) Hyperventilation C) Intensified urine excretion of ammonia salt D) Intensified urine excretion of bicarbonate by kidneys E) Entrance of hydrogen-ions into erythrocytes in exchange of potassium-ions and into bones in exchange of sodium-ions and calcium-ions	A, B, C, E	UC-1; GPC-2
27.	Which processes take place in compensation of respiratory acidosis? A) Activation of acidogenesis and ammoniogenesis in kidney B) Increase in HCO_3 reabsorbtion in kidney canaliculi C) Decrease in HCO_3 reabsorbtion in kidney canaliculi D) Binding of surplus of protons by reduced hemoglobin E) Hypokalemia	A, B, D	UC-1; GPC-2
28.	Which factors are the causes of respiratory acidosis? A)Hypoventilation of lungs B)Accumulation of exudates in pleural cavity C) Hyperventilation of lungs D) Decreased excitability of respiratory center E) Inhalation of gaseous mixture with high content of CO_2	A, B, D, E	UC-1; GPC-2
29.	Which hormones excess can give rise of hyperglycemia? A) Adrenalin B) Glucocorticoids C) Insulin D) Glucagon E) ADH	A, B, D	UC-1; GPC-2
30.	What is the main link in pathogenesis of diabetic coma in patients with diabetes mellitus 1 type? A) Hyperglycemia B) Hyperketonemia C) Hyperpotassiumemia D) Hypersodiumemia E) Alkalosis	B	UC-1; GPC-2
31.	What is the cause of polyuria in an early stage of diabetes mellitus? A) Microangiopathy of kidneys B) Hyperglycemia C) Ketonemia D) Hypercholesterolemia E) Hyperpotassemia	B	UC-1; GPC-2
32.	What are the complications of long-term diabetes mellitus? A) Fast development of atherosclerosis B) Microangiopathy C) Macroangiopathy D) Polyuria E) Nephropathy F) Neuropathy	A, B, C, E, F	UC-1; GPC-2
33.	Choose the possible causes of right ventricle failure: A) Arterial hypertension of the systemic circulation B) Arterial hypertension of the pulmonary circulation C) Defect of interventricular septum D) Emphysema of lungs E) Coarctation of aorta	B, C, D	UC-1; GPC-2
34.	Choose the possible causes of the left ventricle failure: A) Aortic stenosis	A, B, D	UC-1; GPC-2

	B) Infarction of the left ventricle C) Arterial hypertension of the pulmonary circulation D) Hypertonic disease E) Emphysema of lungs		
35.	Heart failure due to the overload by an increased blood volume develops in the following cases: A) Inherited defects of heart septum B) Hypertension of systemic circulation C) Insufficiency of heart valves D) Aortic stenosis E) Aortic regurgitation	A, C, E	UC-1; GPC-2
36.	An overload of the left ventricle by an increased blood pressure develops in the following cases: A) Coarctation of aorta B) Essential hypertension C) Mitral insufficiency D) Symptomatic hypertension E) Aortic regurgitation	A, B, D	UC-1; GPC-2
37.	Endogenous hypertensive agents promoting elevation of arterial pressure by rising peripheral vascular resistance are: A) Bradykinin B) Catecholamines C) Angiotensin II D) Vasopressin E) Nitric oxide	B, C, D	UC-1; GPC-2
38.	Endogenous antihypertensive agents promoting arterial pressure fall by decreasing of peripheral vascular resistance are: A) Catecholamines B) Bradykinin C) Prostaglandin E D) NO (nitric oxide) E) Angiotensin	B, C, D	UC-1; GPC-2
39.	Factors that are responsible for pathogenesis of edemas in decompensated heart failure are: A) An increase in hydrostatic pressure in the venous part of capillaries B) An increase in aldosterone and vasopressin content in the blood C) A decrease in aldosterone and vasopressin content in the blood D) Dynamic lymphatic failure E) A decrease in oncotic pressure of blood	A, B, D, E	UC-1; GPC-2
40.	Compensatory mechanisms in acute hypoxia are: A) Blood redistribution B) Increase in lung ventilation C) Tachycardia D) Decrease in cardiac output E) Release of erythrocytes from blood storages	A, B, C, E	UC-1; GPC-2
41.	Inspiratory dyspnea can be revealed in the following pathological conditions: A) Pulmonary emphysema B) Larynx edema C) Bronchial asthma attacks D) Stenosis of trachea E) I asphyxia stage	B, D, E	UC-1; GPC-2
42.	Expiratory dyspnea can be revealed in the following pathological conditions: A) Pulmonary emphysema B) Larynx edema C) Bronchial asthma attacks D) Stenosis of trachea E) I asphyxia stage	A, C	UC-1; GPC-2
43.	Respiratory insufficiency may be characterized by the following changes in gas composition and acid-base balance of arterial blood: A) Hypoxemia B) Hyperoxemia C) Respiratory acidosis D) Hypercapnia E) Hypocapnia	A, C, D	UC-1; GPC-2

44.	Respiratory insufficiency is characterized by: A) Dyspnea B) Anemia C) Tachycardia D) Cyanosis E) Hypoxia	A, C, D, E	UC-1; GPC-2
45.	Hyperacidity and hypersecretion of gastric glands are characterized by the following symptoms: A) Predisposition to constipation B) Elevation of pepsin activity C) Spasm of pylorus D) Low pepsin activity	A, B, C	UC-1; GPC-2
46.	The following factors can contribute to the development of gastric and duodenal ulcers: A) Infection B) Overproduction of glycocorticoids C) Increased mucus excretion D) Duodeno-gastric reflux E) Increased evacuation of food from the stomach	A, B, D	UC-1; GPC-2
47.	Name the absence of enzymes and hydrochloric acid in gastric juice: A) Achlorhydria B) Acholia C) Achilia D) Hypochilia E) Hypocholia	C	UC-1; GPC-2
48.	Mark the factors which play an important role in ascites pathogenesis in portal hypertension: A) Elevation of hydrostatic pressure in a portal vein system B) Lowering of lymph-formation C) Elevation of lymph-formation D) Lowering of oncotic pressure of blood E) Activation of RAAS	A, C, D, E	UC-1; GPC-2
49.	Mark the manifestations of malabsorption syndrome: A) Diarrhea B) Constipation C) Weight loss D) Hypoproteinemia E) Hyperproteinemia	A, C, D	UC-1; GPC-2
50.	Which pigment stains urine in dark color in posthepatic jaundice? A) Conjugated bilirubin B) Unconjugated bilirubin C) Urobilin D) Stercobilin E) Hemoglobin	A	UC-1; GPC-2
51.	Which pigments stain urine in a dark color in prehepatic jaundice? A) Conjugated bilirubin B) Unconjugated bilirubin C) Urobilin D) Stercobilin E) Hemoglobin	C, D	UC-1; GPC-2
52.	The symptoms characteristics of cholemia are: A) Bradycardia B) Skin itch C) Tachycardia D) Decrease in arterial pressure E) Rising of arterial pressure.	A, B, D	UC-1; GPC-2
53.	Which vitamins absorption will became worse in acholia? A) Vitamin A B) Vitamin B1 C) Vitamin D D) Vitamin E E) Vitamin K	A, C, D, E	UC-1; GPC-2
54.	Which of the following indexes characterize a tubular function disorder of kidneys? A) Aminoaciduria B) Hematuria	A, C, D	UC-1; GPC-2

	C) Isosthenuria D) An unselective proteinuria E) A lowering of creatinin clearance		
55.	Mark the main mechanisms of the glomerular filtration rate lowering: A) Decrease in systemic arterial pressure B) Primary urine outflow damage C) Falling of oncotic pressure of blood D) Elevation of oncotic pressure of blood E) Lowering of a functional nephrons number	A, B, D, E	UC-1; GPC-2
56.	Polyuria can be caused by the lack of: A) Vasopressin B) Adrenaline C) Aldosterone D) Oxytocin E) Insulin	A, C, E	UC-1; GPC-2
57.	Parameters describing reduction in glomerular filtration rate are: A) Leukocyturia B) Azotemia C) Oliguria D) Aminoaciduria E) Ketonuria	B, C	UC-1; GPC-2
58.	Choose the diseases that are typical of the development of secondary diabetes mellitus: A) Acromegaly B) Insulinoma C) Cushing's syndrome D) Myxedema E) Addison's disease	A, C	UC-1; GPC-2
59.	Which hormones insufficiency may develop in the organism after a sudden cessation of the prolonged corticosteroid therapy? A) Cortisol B) Adrenalin C) ACTH D) ADH E) Insulin	A, C	UC-1; GPC-2

5. The content of the assessment tools of mid-term assessment

Mid-term assessment is carried out in the form of an **exam**.
The content of the assessment tool (questions.)

The bank of assessment tools for conducting current control and mid-term assessment of students in this discipline is presented on the Educational Portal of the PRM. A link to this electronic resource:

https://sdo.pimunn.net/course/view.php?id=2767

https://sdo.pimunn.net/course/view.php?id=2768

5.1 The list of control tasks and other materials necessary for the assessment of knowledge, skills and work experience *(the teacher indicates only those tasks and other materials that are used within the framework of this discipline)*

5.1.1. Questions for the discipline exam.

Question	Competence code (according to the WPD)
1. Health (norm) and disease. Characteristics of the diseases. Pathological process, pathological reaction, pathological state, typical (common) pathological process. Stages and outcomes of a disease.	

2. Etiology. Causes of diseases. 3. Pathogenesis (definition). Cause and effect relations. Conception of a vicious circle. 4. Reactivity of the body: definition, kinds, mechanisms. Resistance: definition, kinds, mechanisms. Reactivity and resistance. The role of heredity in pathology: hereditary and congenital diseases, genetic predispositions. Causes and kinds of mutations. Types of genetic diseases transduction. Molecular-genetic and chromosome diseases. 5. Stress-reaction (general adaptation syndrome). Adaptation diseases. 6. Shock. Definition, kinds, phases, pathogenesis. Coma. Definition, classification, pathogenesis. 7. Etiology and pathogenesis of a cell injury. Mechanisms of cell injury compensation. Necrosis and apoptosis. 8. Arterial hyperemia. Causes, kinds, pathogenesis, external signs, consequences, significance. 9. Venous hyperemia. Causes, pathogenesis, manifestations, consequences, outcomes. 10. Ischemia. Causes, kinds, pathogenesis, signs, consequences, outcomes. Reperfusion. 11. Thrombosis as a cause of peripheral disorders of blood circulation. Embolism as a cause of peripheral disorders of blood circulation. 12. Inflammation. Etiology. Pathogenesis of local signs of acute inflammation. Mediators of inflammation. Kinds, mechanisms of action. 13. Disorders of blood circulation and microcirculation in the focus of inflammation. Mechanisms of exudation. Kinds of exudates and their qualities. Comparison of exudation and transudation. Mechanism of leukocytes emigration. Phagocytosis. Kinds, stages, significance. 14. Acute phase response. 15. Fever, definition. Kinds of fever. Pyrogens, kinds, the mechanism of action. Fever pathogenesis. 16. Allergy (hypersensitivity). Definition. Etiology. Kinds of allergens. Sensitization mechanisms. 17. Classification of allergic reactions (types of hypersensitivity). 18. Tumor growth (neoplasia). Definition. Tumor growth and other hyperbiotic processes. Benign and malignant tumors, comparative characteristics. Etiology of neoplastic growth. 19. Mechanism of carcinogenesis (transformation, promotion, progression). 20. Absolute and relative insulin deficiency. Diabetes mellitus. Disorders of an acid-base balance. Acidosis. Alkalosis. 21. Causes, kinds, pathogenesis and results of hypo- and hyperhydration of the body. 22. Edema. Definition, kinds, causes, pathogenesis, significance. 23. Hypoxia. Definition. Kinds of hypoxia. Gas content of the blood in different kinds of hypoxia. Compensation mechanisms, pathological changes in the body.	UC-1; GPC-2

24. Anemia. Definition. Principles of classification. Qualitative changes of erythrocytes in anemia.

25. Changes of the blood volume. Causes, kinds, pathogenesis. Acute and chronic blood loss (causes, pathogenesis, results).

26. Leukocytosis and leukopenia. Definitions, causes, kinds, mechanisms of development. Qualitative changes of leukocytes in the peripheral blood.

27. Leukemia. Definition. Etiology. Kinds. Classification.

28. Hemorrhagic syndrome. Causes, pathogenesis and results.

29. Causes, kinds and pathogenesis of heart failure. Compensation mechanisms in heart failure.

30. Ischemic heart disease, etiology, pathogenesis, manifestations. Myocardial hypertrophy. Definition. Stages.

31. Modem conceptions about causes, kinds, and pathogenesis of a symptomatic hypertension and hypertensive diseases.

32. Insufficiency of an external respiration. Kinds. Gas composition of blood in the external respiration insufficiency. Influence of the external respiration insufficiency on the organism.

33. Causes of maldigestion. Compensation reactions of the digestive system. Modern conception about causes and pathogenesis of gastric and duodenal ulcers.

34. Causes of hepatic failure. Changes in the body in the liver pathology. Hepatic coma. Kinds, pathogenesis.

35. Disorders of the bile formation and bile excretion. Jaundice.

36. Acute renal failure: causes, pathogenesis, stages and outcomes. Chronic renal failure: causes, pathogenesis, stages. Uremia.

37. General etiology and pathogenesis of the endocrine disorders.

38. Disorders of the pituitary gland. Disorders of the thyroid gland.

39. Etiology and pathogenesis of the nervous system disorders.

40. Modern conceptions of the pain mechanism. Kinds of pain. Effect of pain on the body.

6. Criteria for evaluating learning outcomes

For the credit (example)

Learning outcomes	**Evaluation criteria**	
	Not passed	**Passed**
Completeness of knowledge	The level of knowledge is below the minimum requirements. There were bad mistakes.	The level of knowledge in the volume corresponding to the training program. Minor mistakes may be made

Availability of skills	Basic skills are not demonstrated when solving standard tasks. There were bad mistakes.	Basic skills are demonstrated. Typical tasks have been solved, all tasks have been completed. Minor mistakes may be made.
Availability of skills (possession of experience)	Basic skills are not demonstrated when solving standard tasks. There were bad mistakes.	Basic skills in solving standard tasks are demonstrated. Minor mistakes may be made.
Motivation (personal attitude)	Educational activity and motivation are poorly expressed, there is no willingness to solve the tasks qualitatively	Educational activity and motivation are manifested, readiness to perform assigned tasks is demonstrated.
Characteristics of competence formation*	The competence is not fully formed. The available knowledge and skills are not enough to solve practical (professional) tasks. Repeated training is required	The competence developed meets the requirements. The available knowledge, skills and motivation are generally sufficient to solve practical (professional) tasks.
The level of competence formation*	Low	Medium/High

***** - *not provided for postgraduate programs*

For the exam (example)

Learning outcomes	**Assessment of competence developed**			
	unsatisfactory	**satisfactory**	**good**	**excellent**
Completeness of knowledge	The level of knowledge is below the minimum requirements. There were bad mistakes	The minimum acceptable level of knowledge. A lot of light mistakes were made	The level of knowledge in the volume corresponding to the training program. A few light mistakes were made	The level of knowledge in the volume corresponding to the training program, without errors
Availability of skills	Basic skills are not demonstrated when solving standard tasks. There were bad mistakes	Basic skills are demonstrated. Typical problems with light mistakes have been solved. All tasks have been completed, but not in full.	All basic skills are demonstrated. All the main tasks have been solved with light mistakes. All tasks have been completed, in full, but some of them with shortcomings	All the basic skills were demonstrated, all the main tasks were solved with some minor shortcomings, all the tasks were completed in full
Availability of skills (possession of experience)	Basic skills are not demonstrated when solving standard tasks. There were bad mistakes	There is a minimal set of skills for solving standard tasks with some shortcomings	Basic skills in solving standard tasks with some shortcomings are demonstrated	Skills in solving non-standard tasks without mistakes and shortcomings are demonstrated

Learning outcomes	Assessment of competence developed			
	unsatisfactory	**satisfactory**	**good**	**excellent**
Characteristics of competence formation*	The competence is not fully formed. The available knowledge and skills are not enough to solve professional tasks. Repeated training is required	The formation of competence meets the minimum requirements. The available knowledge and abilities are generally sufficient to solve professional tasks, but additional practice is required for most practical tasks	The formation of competence generally meets the requirements, but there are shortcomings. The available knowledge, skills and motivation are generally sufficient to solve professional tasks, but additional practice is required for some professional tasks	The formation of competence fully meets the requirements. The available knowledge, skills and motivation are fully sufficient to solve complex professional tasks
The level of competence formation*	Low	Below average	Intermediate	High

For testing:

Mark "5" (Excellent) - points (100-90%)
Mark "4" (Good) - points (89-80%)
Mark "3" (Satisfactory) - points (79-70%)

Less than 70% – Unsatisfactory – Mark "2"

Developer(s):
Full name, position, academic degree, academic title

Date "_____" _____ 202__