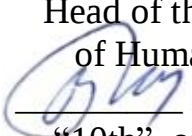


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Federal State Budget Educational Institution
of Higher Education
Pacific State Medical University
of the Ministry of Health of the Russian Federation

APPROVED BY
Head of the Department
of Human Anatomy
 / Chertok V.M./
“10th” of April 2026

COLLECTION OF ASSESSMENT TOOLS

B1.C.09 Anatomy of the basic educational program of Higher Education

Specialty	31.05.01 General Medicine (English-language program) (code, name)
Degree	Specialist's degree
Profile	02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system)
Mode of study	Full-time
Period of mastering the BEP	6 years (nominal length of study)
Department	of Human Anatomy

Vladivostok, 2026

1. INTRODUCTION

1.1. Collection of Assessment Tools is a document that regulates the format, content, and types of assessment tools for continuous assessment, interim examination and final (state final) examination, and graded criteria for each type of assessment tools.

1.2. Assessment tools allows to evaluate the development of universal, general professional, and professional competencies (UCs, GPCs and PCs respectively) outlined in Federal State Educational Standard of Higher Education and defined in the basic educational program of higher education for the specialty 31.05.01 General Medicine (English-language program), profile 02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system).

([BEP HE for the 31.05.01 General Medicine \(English-language program\)](#)), section 3. Learning Outcomes Requirements of the Basic Educational Program of Higher Education)

2. DOCUMENT BODY

2.1. Types of Assessment, Formats of Assessment Tools

No.	Types of assessment	Assessment Tools Format
1	Continuous assessment	Tests
		Interview questions
		Mini-Case Studies
2	Interim assessment	Tests
		Interview questions
		Mini-Case Studies

3. The contents of assessment tools for continuous and interim examination are prepared by the teacher of the course

Tests for continuous and interim assessment

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		ANSWER LEVEL 1 TEST QUESTIONS (ONE CORRECT ANSWER)
		1. The lower wall of the oral cavity proper is formed by 1) chewing muscles +2) maxillofacial muscles 3) the muscles of the tongue 4) facial muscles 2. The excretory duct of the parotid gland opens into +1) the vestibule of the oral cavity

	2) the oral cavity itself 3) the pharynx 4) the palatine tonsil 3. The facial nerve is divided into motor branches in 1) the temporal fossa 2) the iliac fossa +3) the parotid salivary gland 4) the submandibular salivary gland 4. This bone has a sinus 1) occipital bone 2) parietal bone 3) frontal bone 4) mandible 5. The hyoid canal passes through 1) frontal bone +2) occipital bone 3) parietal bone 4) sphenoid bone 6. The right common carotid artery departs from 1) the aortic arch 2) ascending aorta +3) brachiocephalic trunk 4) thoracic aorta 7. The left common carotid artery departs from +1) the aortic arch 2) the ascending aorta 3) the brachiocephalic trunk 4) the thoracic aorta 8. Foramen rotundum is located in 1. frontal bone 2. occipital bone 3. parietal bone +4. sphenoid bone 9. Skeletotopy of the esophagus corresponds to vertebrae 1) C5 – Th10 2) C4 – Th 11 3) C6 – Th12 +4) C6 – Th11 10. The phrenic nerve is 1) muscular 2) cutaneous 3) vegetative +4) mixed
	ANSWER LEVEL 2 TEST QUESTIONS (MULTIPLE CORRECT ANSWERS)
	1. Canals of the sphenoid bone

	1) carotid +2) optic 3) musculo-tubal +4) pterygoid 2. Canals of the temporal bone +1) carotid 2) visual +3) musculotubal +4) facial 3. Unpaired bones of the facial skull include 1) upper jaw +2) lower jaw +3) vomer +4) hyoid 4. List the processes of the upper jaw 1) coronal +2) frontal +3) alveolar 4) condyle 5. Parietal branches of the thoracic aorta 1) internal thoracic artery 2) anterior intercostal arteries +3) posterior intercostal arteries +4) superior diaphragmatic arteries 6. Thickenings of the spinal cord include +1) cervical 2) thoracic 3) lumbar +4) sacral 7. The vessels of the large circulatory system include +1) aorta +2) superior vena cava +3) inferior vena cava 4) pulmonary veins 8. The heart wall is formed by 1) pericardium +2) endocardium +3) myocardium +4) epicardium 9. The upper respiratory tract includes +1) nasal cavity 2) larynx 3) trachea +4) nasopharynx 10. Elements of the renal pedicle
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		+1) renal artery +2) renal vein 3) pelvis +4) ureter																																															
		ANSWER LEVEL 3 TEST QUESTIONS (MATCHING QUESTIONS)																																															
		1. Match the following: <table><tr><td>Gyri of the cerebral hemispheres</td><td>Lobes of the large brain</td></tr><tr><td>1. marginal gyrus</td><td>A) the frontal lobe</td></tr><tr><td>2. lingual gyrus</td><td>B) the parietal lobe</td></tr><tr><td>3. precentral gyrus</td><td>C) occipital lobe</td></tr><tr><td>4. postcentral gyrus</td><td>D) temporal lobe</td></tr><tr><td>5. angular gyrus</td><td rowspan="2">E) insular lobe</td></tr><tr><td>6. rectus gyrus</td></tr></table> Correct answer: 1 - B: 2 - D: 3 - A: 4 - B: 5 – B: 6 – A 2. Match the following: <table><tr><td>Three-sided and four-sided openings of the axillary cavity</td><td>Anatomical structures</td></tr><tr><td>1. Three-sided opening</td><td>A) a. profunda brachii</td></tr><tr><td>2. Three-sided opening</td><td>B) a. circumflexa scapulae</td></tr><tr><td>3. Four-sided opening</td><td>C) a. circumflexa humeri posterior и n. axillaris</td></tr><tr><td>4. Four-sided opening</td><td>D) a. circumflexa humeri anterior n. subscapularis</td></tr></table> Correct answer: 2 -A, 3-B 3. Match the following: <table><tr><td>Divisions of the spinal column</td><td>Number of vertebrae</td></tr><tr><td>1. cervical</td><td>A)5</td></tr><tr><td>2. thoracic</td><td>B) 7</td></tr><tr><td>3. lumbar</td><td>C) 12</td></tr><tr><td>4. sacral</td><td>D) 3</td></tr><tr><td>5. coccygeal</td><td>E) 8</td></tr></table> Correct answers: 1-B; 2-C; 3-A; 4-A; 5-D 4. Match the following: <table><tr><td>Section of the spine</td><td>Number of segments</td></tr><tr><td>1. cervical</td><td>A) 5</td></tr><tr><td>2. thoracic</td><td>B) 8</td></tr><tr><td>3. lumbar</td><td>C) 1</td></tr><tr><td>4. sacral</td><td>D) 12</td></tr><tr><td>5. coccygeal</td><td>E) 3</td></tr></table> Correct answers: 1-B; 2-D; 3-A; 4-A; 5-C	Gyri of the cerebral hemispheres	Lobes of the large brain	1. marginal gyrus	A) the frontal lobe	2. lingual gyrus	B) the parietal lobe	3. precentral gyrus	C) occipital lobe	4. postcentral gyrus	D) temporal lobe	5. angular gyrus	E) insular lobe	6. rectus gyrus	Three-sided and four-sided openings of the axillary cavity	Anatomical structures	1. Three-sided opening	A) a. profunda brachii	2. Three-sided opening	B) a. circumflexa scapulae	3. Four-sided opening	C) a. circumflexa humeri posterior и n. axillaris	4. Four-sided opening	D) a. circumflexa humeri anterior n. subscapularis	Divisions of the spinal column	Number of vertebrae	1. cervical	A)5	2. thoracic	B) 7	3. lumbar	C) 12	4. sacral	D) 3	5. coccygeal	E) 8	Section of the spine	Number of segments	1. cervical	A) 5	2. thoracic	B) 8	3. lumbar	C) 1	4. sacral	D) 12	5. coccygeal	E) 3
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5. Match the following:

Section of the spine	Number of segments
1.cervical	A) 5
2.thoracic	B) 8
3.Lumbar	C) 1
4. Sacral	D) 12
5. coccygeal	E) 3

Correct answers: 1-B; 2-D; 3-A; 4-A; 5-C**6. Match the following:**

Exit points of the three branches of the trigeminal nerve	Skull openings
1. optic nerve	A) round opening
2. optic nerve	B) the upper orbital fissure
3 maxillary nerve.	C) oval opening
4. maxillary nerve	D) occipital foramen
5. mandibular nerve	E) the lower orbital fissure
6. mandibular nerve	F) spinous opening

Correct answers: 2-B; 3-A; 6- C**7. Match the following:**

Muscle groups	Type of attachment
1. Facial muscles	A) bone to bone
2. Chewing muscles	B) bone to organ
3. Intercostal muscles	C) bone to skin
4. The diaphragm	

Correct answers: 1 - C; 2-A; 3-A; 4- B**8. Match the following:**

Name of the pelvis size	The value in cm
1.interosseous size	A) 28-29 cm
2.Inter-ridge size	B) 20-21 cm
1. external conjugate	C) 25-26 cm
4. The true conjugate	D) 15 cm
5. The Solovyov index	E) 11 cm

Correct answers: 1-C; 2-A; 3- B; 4- D; 5- D**9. Match the following:**

Outflow of venous blood from the surface tissues and deep parts of the face	Vessel name
1.surface tissues of the face	A)the facial vein
2.surface tissues of the face	B)lingual vein
3.deep sections of the face	C) thyroid veins
1. deep sections of the face	D) pterygoid plexus and maxillary vein

Correct answers: 1-A; 4-D.**10. Match the following:**

The muscle canal	Neurovascular plexus
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		1. brachymuscular canal	A) the spermatic cord, the iliopsoas nerve, the genital branch of the femoral nerve
		2. knee canal	B) radial nerve and deep artery of the shoulder
		3. adductor canal	C) posterior tibial artery, veins, tibial nerve
		4. inguinal canal	D) femoral artery and vein, subcutaneous nerve
		Correct answers: 1-B; 2-C; 3- D; 4-A	
		11. Match the following:	
		Respiratory organs	Functions performed
		1. nasal cavity	A) gas exchange
		2. larynx	B) warming and cleaning
		3. trachea	C) conducting air
		4. bronchi	D) sound formation
		5. lungs	
		Correct answers: 1-B ; 2-D ; 3-C ;4-C ;5 - A.	
		12. Match the following:	
		Anatomical terms	Anatomical location
		1. Cranial	A) closer to the coccyx
		2. caudal	B) closer to the front surface
		3. Ventral	C) closer to the head
		4. Dorsal	D) closer to the median plane
		5. Medial	E) further from the median plane
		6. Lateral	F) closer to the back surface
		Correct answers: 1- C; 2-A ; 3-B ; 4-E ; 5- D ; 6- D.	

Assessment criteria

"**Very good**" – over 80% correct answers of questions of every level

"**Good**" – 71-80% correct answers of questions of every level

"**Satisfactory**" – 55-70% correct answers of questions of every level

"**Unsatisfactory**" – less than 55% correct answers of questions of every level

Interview questions

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		ANSWER THE QUESTIONS - The structure of the tubular bones. - Distinguishing features of the cervical, thoracic and lumbar vertebrae. - The rib arc.

	4. The structure of the scapula. 5. The structure of the humerus. 6. The structure of the ulna. 7. The radius. The structure of the epiphyses. 8. Parts of the hand. 9. List and show the bones of the wrist. 10. The structure of the pelvis. 11. Find the greater trochanter. 12. Structure of the tibia. 13. Parts of the talus and calcaneus. 14. Connect the rib with the vertebrae. 15. Connect the clavicle with the scapula and sternum. 16. Types of joints and their functions. 17. Continuous joints: classification, structure, and functional features. 18. Diarthrosis: classification and functional features. 19. The structure of joints. 20. The mandatory elements of joints. 21. The auxiliary elements of joints. 22. The differences between synarthrosis and diarthrosis. 23. The features of the shape and functions of joints. 24. The basics of joint kinematics. 25. The connections between the vertebrae. The movements of the spinal column. 26. The atlanto-occipital joint. 27. The spinal column as a whole. Formation of curves. 28. Temporomandibular joint. 29. Connection of ribs with vertebrae and sternum. 30. The chest in general. 31. Shoulder joint: structure, shape, movements. 32. Elbow joint: structure, shape, movements. 33. Connections of forearm bones. 34. Joints of the hand. 35. Connections of pelvic bones. The pelvis in general. 36. Age characteristics of the pelvis. Dimensions of the female pelvis. 37. Hip joint: structure, shape, and movements. 38. Knee joint: structure, shape, and movements. 39. Foot joints: structure, shape, and movements. 40. Arch of the foot. 41. Auxiliary muscle apparatus. 42. Synergistic, agonistic, and antagonistic muscles. Give examples. 43. Muscles involved in the movement of the upper limb belt around the vertical axis. 44. Muscles that raise and lower the upper limb belt, and exercises for their development. 45. Muscles involved in the rotation of the scapula. 46. Muscles involved in the abduction, adduction, pronation, and supination of the shoulder. 47. The axillary (subscapular) cavity and its walls. Shoulder fascia. 48. Flexor and extensor muscles of the shoulder.
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	49. Muscles involved in flexion and extension of the forearm. 50. Muscles of the forearm. 51. Muscles involved in pronation and supination of the forearm. 52. The cubital fossa. 53. Flexion and extension of the hand and fingers. 54. Abduction and adduction of the hand. 55. Fasciae and topography of the muscles of the upper limb. 56. Muscles involved in the flexion and extension of the thigh. 57. The femoral triangle and the femoral groove 58. Movement of the thigh and lower leg around the vertical axis. 59. Muscles that flex and extend the lower leg and foot. 60. The tibial tubercle. 61. Muscles involved in abduction and adduction, supination, and pronation of the foot. 62. Arch of the foot and its supporting apparatus. 63. Movement of the hip around the sagittal axis. 64. Adductor canal. 65. Topography of the muscles of the lower limb and their projection on the skin. 66. Muscles involved in the extension of the spinal column. 67. Muscles involved in bending the spinal column. 68. Muscles and fascia of the back, their functions, age features. 69. Muscles involved in the act of inspiration. 70. Muscles involved in the act of expiration. 71. Superficial muscles of the neck and muscles of the hyoid bone. 72. Deep muscles of the neck. 73. Fascia of the neck. Topography of the muscles of the neck. 74. Weak points of the anterior abdominal wall. 75. Facial and masseter muscles. 76. White line of the abdomen. Rectus abdominis sheath. 77. Inguinal and femoral canal. 78. Pelvic muscles: origin, attachment, and functions. 79. Nasal cavity: walls, nasal passages and their communications. 80. Larynx: structure of the walls, sections, elastic cone, folds, glottis, topography, structure. 81. Trachea and main bronchi: structure, topography. 82. Lungs: external and internal structure of the gate, elements of the root, topography. 83. Topography of the visceral and parietal pleura. Pleural cavity, pleural sinuses. 84. Mediastinum: boundaries, contents. 85. Oral cavity: walls, contents, pharynx. Language, its structure. 86. Pharynx: parts, structure of the walls, connections, topography.
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	87. Esophagus: structure, constrictions, topography. 88. Stomach: structure, ligaments, topography. 89. Liver: external structure, grooves, and their contents, ligaments. Formation of the portal vein and hepatic veins. 90. Topography of the liver. 91. Gallbladder: structure. Bile ducts. 92. Pancreas: structure, constrictions, topography. 93. Duodenum: parts, structure, topography. 94. Jejunum and ileum: structure, topography. 95. Colon: parts, structural features of the wall, topography. 96. Rectum: parts, structural features of the wall, topography. 97. Walls of cavities: abdomen, abdominal and peritoneal. Retroperitoneal space. Serous membranes of the thoracic cavity. 98. The boundaries of the upper and lower floors of the abdominal cavity and pelvis. 99. Parts of the peritoneal cavity of the upper and lower floors of the pelvis: bags, lateral sulci, mesenteric sinuses, and pockets. 100. The omental sac: walls, the omental orifice, and its walls. 101. Kidney: external and internal structure. Scheme of the nephron. 102. Topography of the kidneys. 103. Calyx-pelvic complex of the kidney. Ureter: parts, constrictions. 104. Urinary bladder: structure, topography. On the cystogram, find the bladder, determine its location and shape. 105. Internal male reproductive organs: structure, topography. 106. Testicle and spermatic cord: structure, topography. 107. Ovary: structure, topography. 108. Uterus: structure, topography. X-ray anatomy. 109. Fallopian tubes: structure, topography. X-ray anatomy. 110. Vagina: structure, topography. 111. Endocrine glands: classification. Structure, topography, functions. 112. Surfaces of the heart. 113. Chambers of the heart. 114. Anatomical structures that enlarge the atrial cavities. 115. Atrioventricular valves, list the structures of the valve apparatus. 116. Semilunar valves. 117. Layers of the heart wall. 118. Topography of the heart. 119. Arteriolo-venular anastomoses. Classification. Structure and function of various types of arteriolo-venular anastomoses. Significance for blood circulation. 120. Vessels. Features of the structure of veins of different types. Organ features of veins. 121. Aorta: parts, topography. Branches of the aortic arch. 122. Common and external carotid arteries. Topography, branches and areas of their blood supply.
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	123. Internal carotid artery: topography, branches. Arterial circle of the brain base. 124. Subclavian artery: topography, branches, and areas of their blood supply 125. Brachial, radial, and ulnar arteries: branches and areas of their blood supply 126. Arterial arcs of the hand: formation, topography, and branches. 127. Branches of the thoracic and abdominal aorta and areas of their blood supply. Show the aorta and its branches on an abdominal aortogram. 128. Bifurcation of the aorta, common, internal, and external iliac arteries, their branches, and areas of blood supply. 129. Femoral and popliteal arteries: topography, branches, and areas of blood supply. 130. Arteries of the lower leg and foot: topography, branches, and areas of blood supply. 131. Venous drainage from the head and neck, and the venous sinuses of the dura mater. Formation, tributaries, and topography of the superior vena cava. 132. Outflow of venous blood from the walls and organs of the chest cavity. 133. Portal vein system: formation, topography. 134. Inferior vena cava system: Formation, tributaries and topography. 135. Superficial veins of the upper and lower extremities. Deep main veins of the extremities, patterns of topography of superficial and deep veins. 136. Anterior and posterior cavocaval anastomoses. Porto-cavocaval anastomosis. Superior and inferior portocaval anastomosis. 137. Lymphatic system of the head and neck: topography of nodes, lymphatic trunks and tributaries. 138. Lymphatic system of the upper extremities: topography of nodes, lymphatic trunks and tributaries. 139. Lymphatic drainage from the walls of the chest and abdominal cavities: topography of lymph nodes, lymphatic trunks and tributaries. 140. Lymphatic system of the lower limb and pelvis: topography of lymph nodes, lymphatic trunks and tributaries. 141. Thoracic duct: formation, topography. Right lymphatic duct: formation, topography. 142. Structural elements, age-related features, and functions of the immune system. 143. Thymus. Structure and functional significance. Blood supply, innervation, and lymphatic drainage. 144. The spleen. Structure and functional significance. Blood supply, innervation, and lymphatic drainage. 145. Nervous tissue. Classification of neurons (morphological and functional). Structural and functional characteristics of neurons. 146. Nervous tissue. Morphological and functional characteristics. Sources of development. Nerve fibers. Morphological and functional characteristics of myelinated
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	and unmyelinated nerve fibers. Myelination and regeneration of nerve fibers. 147. Neuroglia. Classification. Structure and significance of different types of glia cells. Microglia. 148. Nerve endings. Classification, principles of structure. Receptor and effector endings, their morphofunctional characteristics. 149. Synapses. Classification, structure, mechanism of nerve impulse transmission in synapses. Interneuronal synapses. 150. Simple and complex reflex arcs. Neural theory. Contribution of foreign and Soviet scientists to the development and approval of the neural theory. 151. Nervous system. Classification (morphological and functional). Peripheral nervous system. Nerve. Structure and regeneration. Spinal ganglia. 152. The spinal cord: external and internal structure, topography, and blood supply. The neural composition. The sensory and motor pathways of the spinal cord as examples of reflex arcs. 153. The brain: sections and blood supply. 154. The diencephalon: sections and their structural elements. The fourth ventricle: walls and connections. 155. The cerebellum. Structure and functional characteristics. Neural composition of the cerebellum cortex and glia cells. Interneuronal connections. 156. The midbrain: external and internal structure. 157. The diencephalon: divisions, 2nd ventricle (walls and connections) 158. The cerebral cortex. General morphofunctional characteristics. Embryogenesis. Neural organization of the cerebral cortex. Myeloarchitectonics. Age-related changes in the cortex. 159. Basal nuclei of the cellular brain. Striopallidal system. White matter. Cavities of the terminal brain and their communications. Furrows and gyri of the hemispheres, localization of cortical centers of 1 and 2 signal systems. 160. Olfactory brain: anatomical structures of the central and peripheral parts. 161. Cavities of the brain. Circulation of cerebrospinal fluid. 162. Conducting pathways. Scheme of the pathways of general skin sensitivity. 163. Scheme of the pathways of proprioceptive sensitivity to the cerebral cortex (according to the Goll and Burdach pathways) 164. Schemes of the proprioceptive pathways to the cerebellum (the pathways of Gowers and Flexing) 165. Concept of analyzers. Structure and cytophysiology of receptor cells. Classification of sensory organs. The organ of smell: structure, development, and cytophysiology. 166. Eye. The structure of the main functional apparatuses of the eyeball, and age-related changes. Adaptive changes of the retina in light and in darkness.
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	167. The receptor apparatus of the eye. Photoreceptor cells. The neural composition and glia of the retina. The mechanism of photoreception. 168. The dioptric and accommodative apparatus of the eye. The iris and ciliary body, and their structural features. Age-related changes. 169. The organ of taste. Blood supply, innervation, and lymphatic drainage. 170. The organ of hearing. Morphological and functional characteristics. Blood supply, innervation, and lymphatic drainage. 171. The organ of balance. Structure, development, and functions. Blood supply, innervation, and lymphatic drainage. 172. The somatosensory analyzer. 173. III, IV, V, VI pairs of cranial nerves: nuclei, topography, areas of innervation 174. VII, VIII pairs of cranial nerves: nuclei, topography, areas of innervation 175. X pair of cranial nerves: nuclei, topography, areas of innervation 176. XI, XII pairs of cranial nerves: nuclei, topography, areas of innervation. 177. Motor nuclei of the cranial nerves. Areas of innervation. Sensory nuclei of the cranial nerves. Areas of innervation. Autonomic nuclei of the cranial nerves. Areas of innervation. 178. Places of exit (entry) from the brain and skull of the I-XII pairs of cranial nerves. 179. Scheme of formation of the spinal nerve and its 5 branches, composition of fibers and areas of their innervation. 180. Formation and topography of plexuses. 181. Cervical plexus: formation, topography. Branches and their areas of innervation. 182. Brachial plexus: formation, topography. Short branches and their areas of innervation. 183. Radial nerve: topography, areas of innervation. 184. Median nerve: topography, areas of innervation. 185. Ulnar nerve: topography, areas of innervation. 186. Musculocutaneous nerve: topography, areas of innervation. 187. Subclavian nerve: topography, areas of innervation. 188. Innervation of the muscles of the upper limb. 189. Innervation of the skin of the upper limb. 190. Intercostal nerves: topography, areas of innervation. 191. Lumbar plexus: formation, topography. Oblique nerve: topography, areas of innervation. 192. Iliohypogastric and ilioinguinal nerves: topography, areas of innervation. 193. Femoral and femoral-inguinal nerves: topography, areas of innervation. 194. Sacral plexus: formation, topography. Short branches and areas of their innervation.
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	195. Sciatic nerve: topography, areas of innervation. Branches of the sciatic nerve, their topography and areas of innervation. 196. Innervation of the muscles of the lower limb. 197. Innervation of the skin of the lower limb. 198. The sympathetic division of the ANS: the central and peripheral divisions. The border sympathetic trunk.
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Assessment criteria:

"Very good" grade is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships.

"Good" is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes.

"Satisfactory" is given to a student who possesses the bulk of knowledge on the subject; has difficulties answering questions with no outside help, uses imprecise wording; makes mistakes in substantial number of their answers.

"Unsatisfactory" is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions.

Standardized case studies and checklists for the **B1.C.09 Anatomy** course

Case Study No.1

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS: The patient cannot lift the lowered lower jaw.
Q	1	Question: Which muscles are damaged and are not performing their functions?
Q	2	Question: Describe their attachment locations and their functions.

Case Study No.1 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)

C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS The patient cannot lift the lowered lower jaw.
Q	1	Question: Which muscles are damaged and are not performing their functions?
A		Correct answer In this case, the masticatory muscles, namely the temporal, medial pterygoid and masticatory muscles, do not perform their functions.
Q	2	Question: Describe their attachment locations and their functions.
A		Correct answer 1. The temporal muscle has a fan-shaped structure: its anterior fibers run vertically upward, the middle ones run posteriorly, and the posterior ones run almost horizontally posteriorly. When all the bundles are shortened, it raises the lowered lower jaw. The posterior tufts pull back the protruding lower jaw. 2. The medial pterygoid muscle begins from the wing-shaped process of the sphenoid bone and attaches to the inner surface of the angle of the lower jaw. Raises the lower jaw and shifts it to the side with a two-sided contraction. In unilateral cases, it shifts the jaw in the opposite direction. 3. The masticatory muscle consists of two layers: a superficial one of oblique fibers and a deep one. The tendons of these layers are attached to different parts of the zygomatic arch, and the common movable point is attached to the outer surface of the angle of the lower jaw. It raises the lower jaw with a bilateral contraction, and with a unilateral one it additionally moves for-ward and towards the contracted muscle.
R2	Very good	is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships; demonstrates anatomical structures on models, their anatomical location, and clearly outlines holotopy, skeletotopy, and syntopy.
R1	Good/Satisfactory	is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes; fully demonstrates anatomical structures and their anatomical

		location on models, outlines holotomy, skeletotomy and syntopy with minor corrections necessary.
R0	Fail	is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions; demonstrates anatomical structures on models, their anatomical location, outlines holotomy, skeletotomy and syntopy with errors that change the essence of the answer

Case Study No.2

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS The patient was diagnosed with a fracture of the coronary process of the lower jaw on the X-ray
Q	1	Question: Name the main anatomical structures of the mandible
Q	2	Question: Which muscle dislodged the appendage? What function does this muscle perform?

Case Study No.2 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS The patient was diagnosed with a fracture of the coronary process of the lower jaw on the X-ray
Q	1	Question: Name the main anatomical structures of the mandible
A		Correct answer The lower jaw is an unpaired movable bone shaped like a horseshoe. In its structure, there are: a body with dental alveoli;

		two branches ending in condylar and coronal processes; a condylar process, which connects to the articular fossa of the temporal bone, participates in the formation of the temporomandibular joint, due to which movement in the lower jaw is carried out.
Q	2	Question: Which muscle dislodged the appendage? What function does this muscle perform?
A		Correct answer A violent blow to the temporalis muscle can cause contraction of this muscle enough to cause a coronoid fracture. Temporalis muscle is a large, fan-shaped muscle; the main function of this muscle is to produce the movements of the mandible at the temporomandibular joint and thus facilitate the act of mastication (chewing).
R2	Very good	is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships; demonstrates anatomical structures on models, their anatomical location, and clearly outlines holotopy, skeletotopy, and syntopy.
R1	Good/Satisfactory	is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes; fully demonstrates anatomical structures and their anatomical location on models, outlines holotopy, skeletotopy and syntopy with minor corrections necessary.
R0	Fail	is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions; demonstrates anatomical structures on models, their anatomical location, outlines holotopy, skeletotopy and syntopy with errors that change the essence of the answer

Case Study No.3

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity

I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS The patient has suffered a spinal injury. Blood supply to the back of the brain was disrupted.
Q	1	Question: Which part of the spinal column was injured?
Q	2	Question: Describe the structure of the Atlas.

Case Study No.3 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS The patient has suffered a spinal injury. Blood supply to the back of the brain was disrupted.
Q	1	Question: Which part of the spinal column was injured?
A		Correct answer In this case, the cervical spine, consisting of 7 cervical vertebrae, is damaged. It is distinguished by the small size of the vertebral bodies, holes in the transverse processes for vertebral arteries, and short and bifurcated spinous processes.
Q	2	Question: Describe the structure of the Atlas.
A		Correct answer The human Atlas (first cervical vertebra, C1) has a characteristic structure that differs from other cervical vertebrae. It consists of anterior and posterior arches, as well as lateral masses. The anterior arc is about one fifth of the circumference of the Atlas ring. Its anterior surface is convex, and in the center there is an anterior tubercle for attaching the long neck muscle and the anterior longitudinal ligament. At the back, the arch is concave, has a smooth, oval or round area (fovea dentis) for articulation with the dentoid process of the second cervical vertebra. The posterior arc is about two-fifths of the circumference of the ring. It ends at the back in the posterior tubercle, which is a vestige of the spinous process. The posterior part of the arch has a rounded edge at the top and back to attach the posterior atlanto-occipital membrane. The sulcus of the vertebral artery is visible on the upper surface of the posterior arch on both sides of the Atlas. The lateral masses are the most massive and solid parts of the atlas, they support the weight of the head. Each mass carries two articular surfaces: an upper and a lower one. On the sides of each lateral mass there are transverse processes — long, they protrude to the sides and down and serve to attach muscles that help in

		rotating the head. The Atlas articulates with the occipital bone from above and with the axis (the second cervical vertebra) from below. The articulation with the occipital bone forms the atlanto-occipital joint, which allows the head to nod up and down on the spinal column. The articulation with the axis is the Atlanto-axial joint, which allows the Atlas and the attached head to rotate on the axis.
R2	Very good	is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships; demonstrates anatomical structures on models, their anatomical location, and clearly outlines holotopy, skeletotopy, and syntopy.
R1	Good/Satisfactory	is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes; fully demonstrates anatomical structures and their anatomical location on models, outlines holotopy, skeletotopy and syntopy with minor corrections necessary.
R0	Fail	is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions; demonstrates anatomical structures on models, their anatomical location, outlines holotopy, skeletotopy and syntopy with errors that change the essence of the answer

Case Study No.4

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS During an accident, the lacrimal gland with the skull bone on which it is located was damaged.
Q	1	Question: Which of the bones was most likely damaged?
Q	2	Question: Describe the structure of the frontal bone

Case Study No.4 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS During an accident, the lacrimal gland with the skull bone on which it is located was damaged.
Q	1	Question: Which of the bones was most likely damaged?
A		Correct answer In this case, the frontal bone is damaged.
Q	2	Question: Describe the structure of the frontal bone
A		Correct answer The frontal bone consists of four parts. 1) Frontal scales (squama frontalis). It has external and internal surfaces. On the outer surface there is a frontal tubercle, glabella, brow arch, supraorbital margin, frontal notch (hole) and other elements. On the inner surface are the sulcus of the superior sagittal sinus, the frontal crest and the foramen magnum. The frontal sinus is located in the lower part of each half of the frontal scales. 2) The orbital part (pars orbitalis). The steam room is represented by two horizontally arranged plates separated by a lattice notch. The orbital parts make up the roof of the orbit and the bottom of the anterior cranial fossa. 3) The nasal part (pars nasalis). It is located between the orbital parts anteriorly from the latticed notch.
R2	Very good	is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships; demonstrates anatomical structures on models, their anatomical location, and clearly outlines holotopy, skeletotopy, and syntopy.
R1	Good/Satisfactory	is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes; fully demonstrates anatomical structures and their anatomical location on models, outlines holotopy, skeletotopy and syntopy with minor corrections necessary.

R0	Fail	is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions; demonstrates anatomical structures on models, their anatomical location, outlines holotopy, skeletotopy and syntopy with errors that change the essence of the answer
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Case Study No.5

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS As a result of a knife wound to the neck, the patient began bleeding from the common carotid artery, which is located in the carotid triangle as part of the neurovascular bundle.
Q	1	Question: What structures form this bundle?
Q	2	Question: Name the boundaries of the carotid triangle.

Case Study No.5 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS As a result of a knife wound to the neck, the patient began bleeding from the common carotid artery, which is located in the carotid triangle as part of the neurovascular bundle.
Q	1	Question: What structures form this bundle?
A		Correct answer The main (medial) neurovascular bundle of the neck is the carotid artery, internal jugular vein, and vagus nerve.
Q	2	Question: Name the boundaries of the carotid triangle.
A		Correct answer

		The upper border of the carotid triangle is the posterior abdomen of the biconvex muscle (m. digastricus), the anterior border of the carotid triangle is the upper abdomen of the scapula (m. omohyoideus), the posterior border is the anterior edge of the sternoclavicular muscle (m. sternocleidomastoideus).
R2	Very good	is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships; demonstrates anatomical structures on models, their anatomical location, and clearly outlines holotopy, skeletotopy, and syntopy.
R1	Good/Satisfactory	is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes; fully demonstrates anatomical structures and their anatomical location on models, outlines holotopy, skeletotopy and syntopy with minor corrections necessary.
R0	Fail	is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions; demonstrates anatomical structures on models, their anatomical location, outlines holotopy, skeletotopy and syntopy with errors that change the essence of the answer

Case Study No.6

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS The patient has suffered a cut wound on the back of the thigh and as a result cannot bend the injured leg.
Q	1	Question: Which muscles are damaged?
Q	2	Question: List the thigh muscle groups.

Case Study No.6 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS The patient has suffered a cut wound on the back of the thigh and as a result cannot bend the injured leg.
Q	1	Question: Question: Which muscles are damaged?
A		Correct answer In this case, the muscles of the posterior thigh group are damaged - semi-tendinous, semi-membranous and biceps
Q	2	Question: Question: List the thigh muscle groups.
A		Correct answer The thigh muscles are divided into three groups - anterior, posterior and medial. Anterior thigh muscle group: 1. The sartorial muscle (M. sartorius) starts from the anterior superior spine of the ilium. Attachment: tuberosity of the tibia, fascia of the tibia. Function: flexion of the hip and shin, rotates the bent shin inwards. 2. Quadriceps femoris (m. quadriceps femoris) – consists of four heads, which are: 1) The rectus femoris muscle (m. rectus femoris) starts from the anterior inferior spine of the ilium. 2) the lateral broad muscle of the thigh (m. vastus lateralis) begins from the large trochanter, the intertrochanteric line, the lateral lip of the rough line of the thigh; 3) the intermediate broad thigh muscle (m. vastus intermedius) starts from the anterior surface of the femur. 4) The medial broad thigh muscle (m. vastus medialis) starts from the medial lip of the rough line of the thigh. All four heads form a powerful tendon that attaches to the patella and passes into the ligament of the patella (ligamentum patellae), which attaches to the tuberosity of the tibia. The function of the quadriceps femoral muscle: extension of the lower leg, hip flexion (rectus femoris). Posterior thigh muscle group: 1. The biceps femoris is located laterally. It has two heads: a long one that starts from the sciatic protuberance, and a short one that starts from the lateral lip of the rough line of the thigh. Attachment: fibula head, tibia fascia. Function: flexion and rotation of the shin outward, hip extension. 2. The tendinous muscle (m. semitendinosus) is located medially. It starts from the sciatic protuberance. Attachment: tuberosity of the tibia (on the medial side), fascia of the tibia. Function: extension and reduction of the hip, flexion and rotation of the shin inwards. 3. The semimembranous muscle (m. semimembranosus) is covered by a semi-tendinous muscle. It starts from the sciatic

		protuberance. Attachment: to the medial condyle of tibia, to the fascia of the tibia, part of the fibers is woven into the capsule of the knee joint. Function: extension and reduction of the hip; flexion and rotation of the shin inwards. The medial thigh muscle group begins on the pubic and sciatic bones and attaches to the medial lip of the rough line of the thigh. This group of muscles includes: 1. Comb muscle (m. pectineus) 2. The long adductor muscle (m. adductor longus) 3. Short adductor muscle (m. adductor brevis) 4. The large adductor muscle (m. adductor magnus) is the widest and most powerful of all the adductor muscles of the thigh. 5. The small muscle (M. gracilis) The muscles of the medial group provide a common function: the reduction of the hip and its partial rotation outward.
R2	Very good	is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships; demonstrates anatomical structures on models, their anatomical location, and clearly outlines holotopy, skeletotopy, and syntopy.
R1	Good/Satisfactory	is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes; fully demonstrates anatomical structures and their anatomical location on models, outlines holotopy, skeletotopy and syntopy with minor corrections necessary.
R0	Fail	is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions; demonstrates anatomical structures on models, their anatomical location, outlines holotopy, skeletotopy and syntopy with errors that change the essence of the answer

Case Study No.7

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity

I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS The patient presents with an ape hand deformity.
Q	1	Question: Which nerve is damaged?
Q	2	Question: From which bundles and which plexus is this nerve formed?

Case Study No.7 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine for international students (in English)
C	UC-1	Is able to analyze of problems critically using system approach and devise a plan of action
C	GPC-5	Is able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
F	A/01.7	Providing emergency and urgent medical care to the population
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS The patient presents with an ape hand deformity.
Q	1	Question: Which nerve is damaged?
A		Correct answer The patient has a damaged median nerve.
Q	2	Question: From which bundles and which plexus is this nerve formed?
A		Correct answer N. The medianus, the median nerve (C5-C8, Th1), departs from the medial and lateral bundles with two roots covering the anterior a. axillaris, then it goes to the sulcus bicipitalis medialis along with the brachial artery. In the ulnar fold, the nerve fits under the m. pronator teres and the superficial flexor of the fingers and goes further between the latter and the m. flexor digitorum profundus, then in the sulcus medianus of the same name, in the middle of the forearm to the palm. There are no branches on the shoulder of N. medianus. On the forearm, he gives rami musculares to all the muscles of the anterior flexor group, with the exception of the m. flexor carpi ulnaris and the part of the deep flexor closest to the latter. One of the branches, the n. interosseus (antebrachii) anterior, accompanies the a. interossea anterior on the interosseous membrane, and innervates the deep flexor muscles (m. flexor pollicis longus and part of the m. flexor digitorum profundus), M. pronator quadratus and wrist joint. Above the wrist joint, the n. medianus gives rise to a thin skin branch, the ramus palmaris n. mediani, which supplies a small area of skin on the thenar and palm. N. The medianus enters the palm through the canalis carpi along with the flexor tendons and is divided into three branches, nn. digitales palmares communes, which run along the first, second and third interdigital spaces under the palmar aponeurosis towards the fingers. The first of them innervates the thenar muscles, with the exception of the m. adductor

		policis and the deep head of the m. flexor pollicis brevis, which are innervated by the ulnar nerve. Nn. digitales palmares communes, in turn, are divided into seven nn. digitales palmares proprii, which go to both sides of the 1-3 fingers and to the radial side of the IV finger. The skin of the radial side of the palm is supplied from these same branches; the finger nerves also supply the first and second vermiform muscles.
R2	Very good	is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships; demonstrates anatomical structures on models, their anatomical location, and clearly outlines holotopy, skeletotopy, and syntopy.
R1	Good/Satisfactory	is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes; fully demonstrates anatomical structures and their anatomical location on models, outlines holotopy, skeletotopy and syntopy with minor corrections necessary.
R0	Fail	is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions; demonstrates anatomical structures on models, their anatomical location, outlines holotopy, skeletotopy and syntopy with errors that change the essence of the answer

Case Study No.8

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS After an injury, the patient cannot climb stairs, jump, or squat.
Q	1	Question: Which nerve is damaged?
Q	2	Question: From which plexus is this nerve formed?

Case Study No.8 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS After an injury, the patient cannot climb stairs, jump, or squat.
Q	1	Question: Which nerve is damaged?
A		Correct answer The patient's femoral nerve is damaged.
Q	2	Question: From which plexus is this nerve formed?
A		Correct answer The femoral nerve, n. femoralis, exits the muscular lacuna and lies outside the vessels in the femoral triangle. The femoral vessels and nerve are separated by the fascia of the iliopsoas muscle. N. femoralis almost immediately splits into many branches. The deep branches of the femoral nerve innervate the heads of the quadriceps and the crested muscle. The femoral nerve departs from the lumbar plexus.
R2	Very good	is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships; demonstrates anatomical structures on models, their anatomical location, and clearly outlines holotopy, skeletotopy, and syntopy.
R1	Good/Satisfactory	is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes; fully demonstrates anatomical structures and their anatomical location on models, outlines holotopy, skeletotopy and syntopy with minor corrections necessary.
R0	Fail	is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions; demonstrates anatomical structures on models, their anatomical location, outlines holotopy, skeletotopy and syntopy with errors that change the essence of the answer

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS During a preventive examination, a metastatic lymph node was found on the medial wall of the patient's left underarm.
Q	1	Question: What is the most likely location of the primary tumor?
Q	2	Question: What is the anatomy of the thoracic duct?

Case Study No.9 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS During a preventive examination, a metastatic lymph node was found on the medial wall of the patient's left underarm.
Q	1	Question: What is the most likely location of the primary tumor?
A		Correct answer Localization of the primary tumor is the left mammary gland
Q	2	Question: What is the anatomy of the thoracic duct?
A		Correct answer The thoracic lymph duct begins in the abdominal cavity at the level of the XII thoracic — II lumbar vertebrae at the confluence of the right and left lumbar lymphatic trunks. The thoracic duct flows into the left venous angle (formed by the left subclavian and left jugular veins) or into the terminal sections of the veins forming it. The thoracic duct collects lymph from the lower extremities, organs and walls of the pelvic and abdominal cavities, the left lung, the left half of the heart, the walls of the left half of the chest, the left arm and the left half of the head and neck.

R2	Very good	is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships; demonstrates anatomical structures on models, their anatomical location, and clearly outlines holotopy, skeletotopy, and syntopy.
R1	Good/Satisfactory	is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes; fully demonstrates anatomical structures and their anatomical location on models, outlines holotopy, skeletotopy and syntopy with minor corrections necessary.
R0	Fail	is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions; demonstrates anatomical structures on models, their anatomical location, outlines holotopy, skeletotopy and syntopy with errors that change the essence of the answer

Case Study No.10

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS The patient is experiencing inflammation of the nasolacrimal canal.
Q	1	Question: What is the most likely pathway of the spread of the infectious process?
Q	2	Question: What is the anatomy of the nasal cavity?

Case Study No.10 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)

C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
I		READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS The patient is experiencing inflammation of the nasolacrimal canal.
Q	1	Question: What is the most likely pathway of the spread of the infectious process?
A		Correct answer The most likely pathway of infection is the lower nasal passage.
Q	2	Question: What is the anatomy of the nasal cavity?
A		Correct answer The nasal cavity (cavum nasi), which occupies a central position in the facial skull, opens from the front with a pear-shaped aperture (apertura piriformis), bounded by the nasal clippings (right and left) of the upper jaws and the lower edge of the nasal bones. In the lower part of the pear-shaped aperture, the anterior nasal spine (spina nasalis anterior) protrudes forward, extending posteriorly into the nasal septum. The nasal septum (septum nasi osseum), formed by a perpendicular plate of latticed bone (lamina perpericularis ossis ethmoidalis) and a coulter (vomer) located at the bottom of the nasal ridge, divides the nasal cavity into two halves. The posterior openings of the nasal cavity, or choanae, communicate the nasal cavity with the pharyngeal cavity. Each choana is bounded on the lateral side by the medial plate of the pterygoid process (lamina medialis processus pterygoidei), on the medial side by the coulter, on top by the body of the sphenoid bone (corpus ossis sphenoidalis), on the bottom by the horizontal plate of the palatine bone (lamina horizontalis ossis palatini).
R2	Very good	is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships; demonstrates anatomical structures on models, their anatomical location, and clearly outlines holotopy, skeletotopy, and syntopy.
R1	Good/Satisfactory	is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes; fully

		demonstrates anatomical structures and their anatomical location on models, outlines holotopy, skeletotopy and syntopy with minor corrections necessary.
R0	Fail	is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions; demonstrates anatomical structures on models, their anatomical location, outlines holotopy, skeletotopy and syntopy with errors that change the essence of the answer

4. Assessment criteria for learning outcomes

For graded test:

"Very good" grade is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships.

Test results: over 91% correct answers of questions of every level

"Good" is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes.

Test results: 81-90% correct answers of questions of every level

"Satisfactory" is given to a student who possesses the bulk of knowledge on the subject; has difficulties answering questions with no outside help, uses imprecise wording; makes mistakes in substantial number of their answers.

Test results: 71-80% correct answers of questions of every level

"Unsatisfactory" is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions.

Test results: less than 71% correct answers of questions of every level

Practical Skills Assessment Checklist

Practical Skill Name “Identifying the triangles of the lateral and anterior regions of the neck”

C	31.05.01	General Medicine (English-language program)	
C	UC-1	Able to carry out critical analysis of professional workplace challenge applying systematic approach and develop an action strategy	
C	GPC-5	Able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity	
WA	Work activities as part of the function Initial examination of patients. Interpretation of the data obtained from the initial examination of patients. Interpretation of data obtained from additional methods of patient examinations (including radiography, telerentgenograms, radiovisiograms, orthopantomograms, tomograms (on film and digital media)).		
	Action	Performed	Not Performed
1.	Determine the boundaries of the scapuloclavicular triangle on the lateral surface of the neck.	1 point	-1 point
2.	Determine the boundaries of the scapular-trapezoidal triangle on the lateral surface of the neck.	1 point	-1 point
3.	Determine the boundaries of the carotid triangle on the anterior surface of the neck.	1 point	-1 point
4.	Determine the boundaries of the submandibular triangle on the anterior surface of the neck.	1 point	-1 point
5.	Determine the boundaries of the scapulotracheal triangle on the anterior surface of the neck.	1 point	-1 point
	Total	5 points	

Assessment criteria:**“Pass”** –75% or more of actions performed correctly**“Fail”** – 74% and less