

Exam Questions on Human anatomy for the second year students
Medical Faculty for International Students (specialty "Dentistry")

(approved at the meeting of the department of 20.11.2025, №4)

SKELETON AND JOINTS. MUSCLES

1. Vertebral column: departments, curvatures, it's formation in ontogenesis.
2. The structure of thoracic, lumbar and sacral vertebrae.
3. Features of the structure of the cervical vertebrae. The structure of the atlas and axial.
4. Connections of the spinal column: intervertebral symphysis, ligaments. Atlantoaxial joints.
5. Sternum and ribs: position, structure, classification of ribs. Structural features of the first rib.
6. The skeleton of the thorax: upper and lower apertures, costal arch, infrasternal angle. Costovertebral joints.
7. Skull: the division on the viscerocranium and neurocranium, the name and the relative positions of individual bones. Embryogenesis of the skull.
8. Frontal and ethmoid bone. Frontal sinus. Ethmoidal labyrinth.
9. Sphenoid bone: parts, foramina, canals, sphenoid sinus.
10. Temporal bone: part of the relief. Canals and canaliculi of the temporal bone and the contents
11. Maxilla: a macroscopic structure. Projection of infraorbital foramen.
12. Maxillary sinus, connection with nasal cavity. The relations of the roots of teeth to the floor of maxillary sinus. Palatine bone.
13. Mandible: a macroscopic structure. The mandibular canal. The projection of the foramina.
14. Calvaria: relief of external and internal surfaces of cranium, the sutures. Structure and development of the calvarium bones in embryogenesis.
15. External base of the skull: the relative positions of bones, relief of the surfaces; foramina; canals, fissures, content.
16. Internal base of the skull: the relative positions of bones, relief of the surfaces; foramina; canals, fissures, content.
17. The lateral norm of the cranium: borders, bone base of the infratemporal, temporal and pterygopalatine fossa, communication with different cranial cavities of the skull.
18. Orbit: walls, foramina, fissures and canals and it's contents. Connection to another region of the skull.
19. Bone nasal cavity: the structure of walls.
20. Nasal concha and meatuses. Communication of the nasal cavity with paranasal sinuses and orbit.

21. Age anatomy of the facial and cerebral skull: synchondrosis, sutures, fontanells.
22. Fibrous and cartilaginous joints of the skull bones. Atlantooccipital joint.
23. General morphological and functional characteristics of the upper extremities skeleton: the name of the bones, its relative positions.
24. General morphological and functional characteristics of the lower extremities skeleton: the name of the bones, its relative positions.
25. Morphological and functional characteristics of continuous and synovial bone joints. Structural components and classification of joints according to the shape of articular surfaces and the number of axes of movement (for example, joints of extremities).
26. Morphological and functional characteristics of the temporomandibular joint: articular surfaces, capsule, articular disc, ligaments. Movement in the temporomandibular joint.
27. Classification of skeletal muscles (in shape, direction of muscle fiber, function, the position in the human body). Anatomical and physiological diameter of the muscle. Accessory apparatus of the muscle.
28. Muscles of the trunk: the morphological and functional characteristics of muscles of the back, thorax, abdomen. Diaphragm: structure.
29. General morphological and functional characteristics of the abdominal muscles. Regions of the abdomen. "Weak" places of the anterolateral wall of the abdominal cavity.
30. Neck muscles: classification, structure and functions superficial muscles of neck. Blood supply and innervation.
31. Suprahyoid and infrahyoid muscles of neck. Structure and functions. Blood supply and innervation.
32. Neck muscles: classification, structure and functions deep muscles of neck. Blood supply and innervation.
33. Neck fascia. Topography of the plates of neck fascia.
34. Muscles of the face: development in embryogenesis, classification, structure, and function. Blood supply and innervation.
35. Masticatory muscles: the development in embryogenesis, structure, functions. Blood supply and innervation. The fascia of the head.
36. The muscles that provide movement of the mandible: development in embryogenesis, structure, and function. The phases of opening and closing the mouth.

CARDIOVASCULAR SYSTEM.

LYMPHOID SYSTEM.

37. General characteristic of cardiovascular system. Systemic and pulmonary circulation.
38. Heart: the topography, the external structure. Chambers and valves of the heart.

39. The structure of the wall of the heart: endocardium, myocardium and epicardium. Conduction system of the heart: bundles and nodes, topography, the functional significance.
40. Pericardium: fibrous, serous. Pericardial cavity. Blood supply and innervation of the heart.
41. Aorta: departments, level of bifurcation. The branches of arch aorta.
42. Parietal and visceral branches of thoracic and abdominal parts of the aorta.
43. External carotid artery: branches, areas of blood supply.
44. Maxillary artery: parts, branches, areas of blood supply.
45. The internal carotid artery: branches, areas of blood supply.
46. Subclavian artery: parts, branches, areas of blood supply.
47. The principles of the structure of arterial, venous and lymphatic bed of limbs.
48. The blood supply of the brain: sources, arterial circle of the brain, the functional significance of the dampers.
49. Dural venous sinuses. Emissary and diploic veins.
50. The main facial veins: the topography of facial and retromandibular veins, tributaries, anastomoses.
51. Pterygoid venous plexus: the topography, the sources of formation, anastomosis.
52. Anterior, external and internal jugular veins, tributaries, anastomoses.
53. The portal vein. The functional value of the portal system.
54. Superior vena cava: topography, the sources of formation. Azygos and hemiazygos veins, tributaries.
55. Inferior vena cava: topography, parietal and visceral tributaries. Cava-caval and portacaval anastomosis (shunt).
56. Thoracic and right lymphatic ducts: the sources of formation, topography, location, the confluence to venous system.
57. Secondary lymphoid organs. The lymph nodes of head and neck. Classification, topography.

NERVOUS SYSTEM. SENCE ORGANS.

ENDOCRINE GLANDS.

58. Nervous system: topographic and anatomy-functional classification, significance for the body.
59. Spinal cord: skeletotopy, external structure. Anterior and posterior roots. Cauda equina. Spinal segment.
60. Spinal cord: gray and white matter. Central canal. Meninges.
61. The brain: parts. Medulla oblongata: the boundaries, external and internal structure.
62. The fourth ventricle: the walls, connection to other cavities of the brain and the subarachnoid space.
63. Pons: borders, the external structure, the nuclei of gray matter.
64. Cerebellum: external and internal structure, cerebellar peduncles.

65. Mesencephalon: tectal plate, cerebral peduncles. Cerebral aqueduct. Topography of gray matter nuclei.
66. Diencephalon: thalamus, metathalamus, epithalamus, hypothalamus. The third ventricle: connection to other cavities of the brain.
67. Telencephalon. Surfaces, lobes, the main fissures and gyri of the brain hemisphere. Location of the cerebral hemisphere functions.
68. Basal ganglia, white matter. White matter of the cerebral hemisphere.
69. Lateral ventricle: parts, location, connection to other cavities of the brain. Production and the way of circulation of cerebrospinal fluid.
70. Classification of conduction pathways. The general principle of structure sensitive (afferent) and motor (efferent) conduction pathways.
71. Dura mater structure: folds, localization dural venous sinuses. Confluence sinuum.
72. Arachnoid and pia mater. Subarachnoid space. Production and the way of circulation of cerebrospinal fluid.
73. Spinal nerves: the branches, areas of division, the plexuses formation.
74. Cervical plexus: sources of formation, branches, areas of innervation.
75. Cranial nerves: general morphological and functional characteristics, classification.
76. The oculomotor (III), trochlear (IV), abducens (VI) nerves: the nuclei, the exit site of the brain and the skull, the branches, regions of innervation.
77. The trigeminal (V) nerve: the nuclei, the roots, the trigeminal ganglion, the overall plan of branching.
78. Ophthalmic (V1) nerve: branches, areas of innervation.
79. Maxillary (V2) nerve: branches and areas of innervation.
80. Mandibular (V3) nerve: branches and areas of innervation.
81. Facial and intermediate (VII) nerve: the nuclei, the localization in the brainstem, Branches, areas of innervation.
82. Glossopharyngeal (IX) nerve: the nucleus, the exit site of the brain and the skull, sensory ganglions, branches, regions of innervation.
83. Vagus (X) nerve: the nucleus, the exit site of the brain and the skull, branches, sensory ganglions, areas of innervation.
84. Accessory (XI) and hypoglossal (XII) nerve: the nucleus, the exit site of the brain and the skull, branches, areas of innervation.
85. Autonomic division of peripheral nervous system: general principles of structure and function; morphological and functional differences from the somatic part of nervous system. Division by sympathetic and parasympathetic part, structural and functional differences.
86. Morphological and functional features of the sympathetic division of autonomic division of peripheral nervous system.
87. Cervical region of the sympathetic trunk: ganglions, branches and areas of innervation.
88. Morphological and functional features of the parasympathetic division of autonomic division of peripheral nervous system.

89. External ear: pinna, external auditory canal, tympanic membrane. Structure, function, blood supply, innervation.
90. Middle ear: tympanic cavity walls, auditory tube, departments. Blood supply, innervation.
91. Internal ear: structure of the bone and the membranous labyrinth. Vestibulocochlear nerve (VIII). Pathway of auditory and statokinetic analyzers.
92. Eyeball: the structure of the fibrous, vascular and retina.
93. Nucleus of eye. Production and ways of outflow of aqueous humor.
94. Accessory eye structures: extraocular muscles of the eyeball, eyelids, conjunctiva, the lacrimal apparatus. Optic (II) nerve, conduction path of the visual analyzer.
95. The pituitary gland, thyroid and parathyroid glands, adrenal glands: the topography, the general morphological and functional characteristics.

DIGESTIVE SYSTEM.

96. Oral vestibule: borders, fornix, mucosal folds. The lips structure. Innervation, blood supply, lymph drainage.
97. Oral cavity proper: walls, borders. The hard palate structure, the relief of the mucous membrane. Innervation, blood supply.
98. Soft palate: structure, function. The muscles of the soft palate. Innervation, blood supply of mucosa and muscles.
99. Tongue: functions, parts, the relief of the mucous membrane. Internal and external muscles of the tongue. Innervation, blood supply, the lymph drainage.
100. General morphological and functional characteristics of the teeth. Parts of the tooth: the root, the neck, the crown. The cavity of the crown, root canal. Blood supply and innervation of the teeth, lymph drainage.
101. Parotid, submandibular and sublingual glands: structure, topography of ducts, innervation, blood supply and lymph drainage.
102. Pharynx: functions, topography, departments, wall structures. Waldeyer's lymphatic ring of pharynx. Innervation, blood supply and lymphatic drainage.
103. Esophagus: topography, departments, wall structures. Innervation, blood supply, lymph drainage.
104. Stomach: topography, the macroscopic structure. Innervation, blood supply, lymph drainage.
105. Small intestine: functions, topography, departments, layer by layer structure of wall. Innervation, blood supply.
106. The colon: functions, topography, departments, the features of wall structure. Innervation, blood supply.
107. Liver: function, topography, structure, fissures of visceral surface, contents.
108. Portal and classical lobules of liver. Characteristics of blood circulation.
109. Gall bladder: structure, pathway elimination of bile. Innervation, blood supply gall bladder.
110. Pancreas: topography, structure. Excretory ducts. Innervation, blood supply.

111. Parietal and visceral peritoneum, the peritoneal cavity. The derivatives of the peritoneum: greater and lesser omentum, mesentery, recess, folds.

RESPIRATORY SYSTEM

112. **External** nose. The nasal cavity: functions, structure of the walls, the nasal conchae and nasal meatuses, connection with paranasal sinuses. Innervation, blood supply, lymphatic drainage.

113. Paranasal sinuses: location, communication with the nasal cavity, functions, maxillary sinus. The ratio of the maxillary sinus to the roots of maxillary teeth.

114. Larynx: functions, topography, structure. Laryngeal cavity. Innervation, blood supply, lymph drainage.

115. Trachea, bronchi: function, topography, the macroscopic structure of the trachea and different caliber bronchi. Innervation, blood supply and lymphatic drainage.

116. Lungs: functions, the macroscopic structure. Innervation, blood supply and lymphatic drainage.

117. Pleura, departments, cavity, pleural sinuses. Blood supply, innervation of the pleura. Mediastinum: the division into parts. Mediastinum organs.

URINARY AND REPRODUCTIVE SYSTEM

118. Kidneys: topography, function, macroscopic structure. Nephron structure. Blood supply, innervation of the kidney.

119. Ureter, urinary bladder, urethra (male and female). Function, topography, structure, blood supply, innervation. Sphincter location.

120. Functional morphology of the internal and external male genitalia. Ways of seminal fluid elimination.

121. Functional morphology of the internal and external female reproductive organs.

CLINICAL ANATOMY OF HEAD AND NECK

122. Neck: border; regions, triangles. The projection on the skin of the common carotid and subclavian artery, the phrenic nerve, cutaneous branches of the cervical plexus. Innervation of the skin of the neck.

123. **Borders** and contents of submandibular triangle. Submandibular space.

124. Suprahyoid region: borders, submental triangle. Sublingual space: borders, content.

Human morphology department

125. Borders and layer by layer structure of omotracheal triangle. Organs of the neck: topography, blood supply and innervation, regional lymph nodes.
126. Carotid triangle: borders; stratified structure. Neurovascular bundle of the neck: structural components and their relative positions. Carotid sheath.
127. Scalenovertbral triangle: the border and content. Subclavian artery, departments, branches, regions of supplying.
128. The lateral region of neck: stratified structure of omoclavicular and omotrapezoid triangles. Interscalenum space: borders, contents.
129. Topography of vagus nerve on the neck: branches, innervated organs. The relationship of the recurrent laryngeal nerves with aorta, the right subclavian artery and the neck organs.
130. The surface anatomy of the head: division into cerebral and facial parts. Regions of the facial part of the head. The projection on the skin where exit branches of the trigeminal nerve, facial, superficial temporal and occipital arteries, the facial nerve, parotid duct exit. Innervation of the scalp.
131. Oral vestibule: borders, lip and cheek structure. Topography of the parotid papilla. Innervation, blood supply and lymph drainage of oral vestibule.
- ~~132. Oral cavity proper: borders, structure of superior and inferior walls. Innervation, blood supply and lymph drainage.~~
132. Groups of permanent teeth. Reference systems commonly used to designate teeth during clinical examination and written report (FDI and Palmer numbering systems).
133. Tooth crown (clinical and anatomical), crown relief. Crown and root thirds. Tooth determination principles: crown and root signs.
134. Permanent incisors: relief of crown surfaces, the characteristic of roots and tooth cavities. Innervation, blood supply and lymph drainage. Anatomical landmarks used of incisors anesthesia.
135. Permanent canines: relief of crown surfaces, the characteristic of roots and tooth cavities. Innervation, blood supply and lymph drainage. Anatomical landmarks used of canine's anesthesia.
136. Permanent premolars: relief of crown surfaces, the characteristic of roots and tooth cavities. Innervation, blood supply and lymph drainage. Anatomical landmarks used of premolars anesthesia.
137. Permanent molars: relief of crown surfaces, the characteristic of roots and tooth cavities. Innervation, blood supply and lymphatic drainage. Anatomical landmarks used of molars anesthesia.
138. Structure feature of deciduous teeth. Age of teething (eruption). Second dentition.
139. Parotido-masseteric region: borders, layer by layer structure. Parotid gland, parts. The relationship with the facial, mandible nerves, external carotid artery, retromandibular vein. Innervation, blood supply and lymph drainage. Projection of parotid duct to the skin.

140. Buccal region: borders, layer by layer structure; buccal fat pad. The course of the facial artery and vein, branches, anastomoses. Infraorbital space.

141. Deep region of the face: border; bony wall of infratemporal and pterygopalatine fossa; the contents. Spaces of deep region of the face, the relationship with other spaces of the head and neck.

142. Orbit region: borders, eyeball and related structures. The eyelids: stratified structure of the upper eyelid. Orbital fat body. Fascial sheath of eyeball, episcleral space. Nerves of the orbit.

143. The nasal region: the external nose and nasal cavity. The nasal meatuses and their communicate to the paranasal sinuses and orbit. Blood supply, innervation and lymph drainage of the mucous membranes of the nose.

144. Fronto-parieto-occipital region: borders, layer by layer structure Blood supply and innervation.

145. Temporal region: borders; layer by layer structure, spaces. Temporal muscle and fascia. Blood supply and innervation of the skin and temporal muscle.

Head of the Department of Human Morphology



Kabak S.L.