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MEDICAL UNIVERSITY OF PLEVEN

FACULTY OF MEDICINE

DEPARTMENT OF ANATOMY, HISTOLOGY, CYTOLOGY AND BIOLOGY

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SYNOPSIS

HUMAN ANATOMY

FOR MEDICAL STUDENTS

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I. BONES

The principle part of the osteology is being tested at the practical examination. In the description of the bones, knowledge is required about the insertion points of the muscles and the relations with blood vessels and nerves. For the joints, the joint elements and the mechanics of movements are considered. Knowledge is required about the Ro-anatomy of the bone and locomotor systems.

1. The bone as an organ - structure, development and growth of the bones.
2. Joints – types. Structure and mechanics.
3. Vertebral column. Connections between the vertebrae.
4. Thorax. Connections of the bony elements. The thorax as a whole.
5. Calvaria. Cranial suture
6. Internal surface of the cranial base.
7. External surface of the cranial base.
8. Lateral surface of the skull.
9. Orbit.
10. Bony skeleton of the nasal cavity.
11. Atlanto – occipital joint. Atlanto – axial joint.
12. Temporo-mandibular joint.
13. Joints of the shoulder girdle.
14. Shoulder joint.
15. Elbow joint. Connections of the bones of the forearm.
16. Wrist joints.
17. Carpal-metacarpal joints. Joints of the fingers.
18. Connections of the pelvis bones. Form and dimensions of the pelvis.
19. Hip joint.
20. Knee joint.
21. Connections of the leg bones. Ankle joint.
22. Talocalcaneonavicular joint.
23. Semi-mobile joints of the foot. Joints of the toes.

II. MUSCLES

Knowledge is required about muscle groups, their fascias, the insertion points of the individual muscles, their innervation and function.

24. Structure, subsidiary formations and mechanic of the muscles.
25. Muscles of facial expression.
26. Masticatory muscles.
27. Superficial muscles of the back.
28. Deep muscles of the back. Dorsal fasciae
29. Superficialis muscles of the neck. Neck fascia.
30. Deep muscles of the neck.
31. Muscles of the thoracic wall. Proper muscles of the thoracic wall.
32. Muscles of the shoulder girdle.
33. The diaphragm.
34. Abdominal wall muscles.
35. Inguinal canal.
36. Proper muscles of the shoulder girdle
37. Muscles of the arm. Arm fascia.

38. Muscles of the forearm -- anterior and lateral group.
39. Muscles of the forearm -- posterior group. Forearm fascia.
40. Muscles of the hand.
41. Muscles around the hip joint.
42. Muscles of the thigh. Thigh fascia.
43. Muscles of the leg - anterior and lateral group.
44. Muscles of the leg - posterior group. Leg fascia.
45. Muscles and fascias of the foot.

III. INTERNAL ORGANS

Knowledge is required about embryogenesis, structure, localization, skeletotopic and syntopic relations, microscopic anatomy, histo-physiology, blood supply, lymphatic, drainage and innervation.

46. Oral cavity. Hard and soft palate.
47. Tongue.
48. Isthmus faucium. Tonsils.
49. Principal salivary glands.
50. Pharynx.
51. Oesophagus.
52. Stomach.
53. Duodenum.
54. Small intestine.
55. Large intestine - coecum, appendix, colon.
56. Large intestine - rectum.
57. Liver
58. Intra- and extrahepatal biliary ducts. Gall bladder.
59. Exocrine pancreas
60. Peritoneum.
61. Respiratory system -- general review and growth.
62. External nose. Nasal cavity. Paranasal sinuses.
63. Larynx – cartilaginous skeleton. Principal structure
64. Larynx – skeletal and proper muscles. Laryngeal cavity.
65. Trachea. Bronchi.
66. Lungs.
67. Pleura. Pleural cavity.
68. Urinary system -- general review and growth.
69. Kidney.
70. Renal pelvis. Ureter. Urinary bladder.
71. Urethra in males and females.
72. Genitals - general review and growth.
73. Testis.
74. Epididymis. Seminal duct. Spermatic cord.
75. Seminal vesicles. Prostate. Bulbo-urethral gland.
76. Penis. Scrotum.
77. Ovary.
78. Uterine tube.
79. Uterus.
80. Vagina. External female genitals
81. Perineum. Muscles and fascias.

82. Mammary gland.

IV. ENDOCRINE SYSTEM

For each one of the glands with internal secretion, knowledge is required about the development, microscopic structure, cytophysiology, blood supply and innervation.

83. Pituitary gland.

84. Epiphysis.

85. Thyroid gland, parathyroid glands.

86. Suprarenal gland. Paraganglia.

87. Endocrine pancreas. Gastro-entero-pancreatic system.

V. VASCULAR SYSTEM

In blood vessel description, data need to be given about the localisation, ramifications (affluents) and the major collateral vessels. For the lymphatic system, knowledge is required about the regional lymph nodes and lymph drainage.

88. Heart. Development, topography and external features.

89. Heart ventricles. Heart valves.

90. Structure of the heart wall. Fibrous skeleton of the heart.

91. Pericardium. Pericardial cavity.

92. Blood supply and innervation of the heart. Impulse-conducting system.

93. Structure of the blood vessel wall. Arteries, veins, capillaries.

94. Vessels of the pulmonary circulation.

95. Aorta - general review.

96. External carotid artery.

97. Internal carotid artery.

98. Maxillary artery.

99. Subclavian artery.

100. Axillary and brachial arteries.

101. Radial and ulnar arteries.

102. Aortic arch. Thoracic aorta.

103. Abdominal aorta.

104. Celiac trunk. Superior and inferior mesenteric arteries.

105. Common iliac artery. External iliac artery. Femoral artery.

106. Internal iliac artery.

107. Popliteal artery. Arteries of the leg and foot.

108. System of the superior vena cava.

109. Veins of the thoracic wall.

110. System of the inferior vena cava.

111. Superficial and deep veins of the extremities.

112. System of portal vein. Porto-caval anastomoses, cava-caval anastomoses

113. Blood circulation in the fetus and its remnants.

114. Lymphatic system. General review. Structure of the lymphatic vessels wall. Major lymphatic vessels.

115. Lymph nodes. Thymus.

116. Spleen.

117. Bone marrow.

118. Lymphatic vessels and lymphatic nodes of the head and neck.

119. Lymphatic vessels and lymphatic nodes of the upper extremity.

120. Lymphatic vessels and lymphatic nodes of the lower extremity.
121. Lymphatic vessels and lymphatic nodes in the abdominal cavity and pelvis.

VI. NERVOUS SYSTEM AND ORGANS OF SENSE

In CNS parts description, data need to be given about the macroscopic and microscopic structure (cyto- and myeloarchitectonic). In peripheral nerves description knowledge is required about the nuclei (motor, sensor and autonomic), their distribution and their branches.

122. General review, phylogenesis and ontogenesis. Principal structure of the nervous system.
123. Spinal cord - form, position, envelopes and blood supply.
124. Grey matter of the spinal cord.
125. Funicules of the white matter of the spinal cord.
126. Medulla.
127. Pons.
128. Cerebellum - Microscopic structure of the cortex.
129. Cerebellum – fiber system and nuclei.
130. Fourth ventricle.
131. Midbrain.
132. Diencephalon – thalamus, epithalamus, metathalamus.
133. Diencephalon – subthalamus, hypothalamus.
134. Third ventricle.
135. Telencephalon. Sulci and gyri.
136. Telencephalon. Microscopic structure of the cerebral cortex.
137. Telencephalon. Localisation of the functions. Cerebral asymmetry.
138. Systems of fibres in the white matter of the telencephalon. Internal capsule.
139. Basal nuclei of the telencephalon.
140. Rhinencephalon. Limbic system
141. Corpus callosum. Commissures. Fornix
142. Lateral ventricle.
143. Functional systems (Pathways) in the CNS. Systems of common sensitivity – system for touch and pressure (exteroception).
144. System for temperature and pain.
145. System for touch and pressure connected with the trigeminal nerve.
146. System for deep sensation (proprioception).
147. Efferent motor systems. Pyramidal system. Oculomotor system
148. Efferent motor systems. Extrapyrarnidal system.
149. Meninges.
150. Circulation of the cerebro-spinal fluid. Cerebral cisternae.
151. Blood supply of the brain – cerebral and cerebellar arteries
152. Venous sinuses of the dura mater, cerebral veins.
153. Spinal nerves - formation. Spinal ganglia.
154. Posterior rami of the spinal nerves.
155. Cervical plexus.
156. Brachial plexus.
157. Ulnar nerve.
158. Median nerve.
159. Radial nerve.
160. Axillary nerve. Musculocutaneous nerve.
161. Review of the skin and muscles innervation of the upper extremity.

162. Intercostal nerves.
163. Lumbar plexus.
164. Sacral plexus. Sciatic nerve. Tibial nerve
165. Peroneal nerve
166. Review of the skin and muscles innervation of the lower extremity.
167. Cranial nerves: external ocular muscle nerves /III, IV, VI/
168. Cranial nerves: Trigeminal nerve /V/ - general review of its nuclei and branches.
169. Ophthalmic nerve.
170. Maxillary nerve.
171. Mandibular nerve.
172. Facial nerve.
173. Auditory portion of the VIII nerve. Auditory pathway
174. Vestibular portion of the VIII nerve. Vestibular pathway
175. Glossopharyngeal nerve.
176. Vagus nerve.
177. Accessory nerve. Hypoglossal nerve.
178. Autonomic nervous system. General review.
179. Sympathetic part of the autonomic nervous system.
180. Parasympathetic part of the autonomic nervous system.
181. Autonomic plexuses and ganglia in the region of the head and neck.
182. Autonomic plexuses and ganglia in the region of the thoracic and abdominal cavities.
183. Organ of olfaction. Olfactory pathway.
184. Organ of the taste. Gustatory pathway.
185. Organ of the vision - general review.
186. External tunic of the eyeball.
187. Middle tunic of the eyeball.
188. Retina. Visual pathway.
189. Central part of the eyeball, ocular chambers.
190. Subsidiary organs of the eye. Blood supply of the eye.
191. External ear. Middle ear.
192. Internal ear - osseous labyrinth.
193. Internal ear - membranaceous labyrinth.
194. Skin – structure. Hairs and nails.
195. Skin receptors of the common sensation.

VII. TOPOGRAPHIC ANATOMY

In the description of the topographo-anatomical regions, the borders, localisation of the anatomical objects in them, their relationships and projections on the skeleton are consecutively discussed..

196. Basis cranii - anterior, middle and posterior cerebral fossae.
197. Regio temporalis.
198. Regio fronto-parieto-occipitalis.
199. Face - topographo-anatomical specificities.
200. Orbit – upper floor.
201. Orbit – middle and lower floor.
202. Regio infraorbitalis, regio zygomatica
203. Regio nasalis, regio oralis
204. Regio buccalis, regio parotideomasseterica.
205. Regio suprahyoidea, regio infrahyoidea, trigonum submandibulare.

206. Regio sternocleidomastoidea.
207. Trigonum caroticum.
208. Regio colli lateralis.
209. Regio infraclavicularis.
210. Regio axillaris.
211. Thoracic wall.
212. Anterior mediastinum.
213. Posterior mediastinum.
214. Regio dorsi. Spinal canal and its content.
215. Topographo-anatomical regions of the abdomen.
216. Anterior abdominal wall, inguinal canal.
217. Upper part of the abdominal wall.
218. Lower part of the abdominal wall.
219. Regio lumbalis, retroperitoneal space.
220. Peritoneal space of the male and female.
221. Regio anoperinealis and subperitoneal space in the male.
222. Regio anoperinealis and subperitoneal space in the female.
223. Regio deltoidea.
224. Regio brachii anterior.
225. Regio brachii posterior.
226. Regio cubiti.
227. Regio antebrachii anterior.
228. Regio antebrachii posterior.
229. Dorsum manus.
230. Palma manus.
231. Regio femoris anterior.
232. Regio femoris posterior.
233. Regio genus.
234. Regio cruris.
235. Dorsum pedis.
236. Planta pedis.

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