LIST OF EXAMINATION QUESTIONS

FROM THE DISCIPLINE "HUMAN ANATOMY"

for students of the Faculty of Dentistry 2023-2024.

1. The cerebral skull. The bones that form it. Features of development (the germ layer, ossification stages, types of ossification).
2. Joints of the skull bones.
3. The facial skull. The bones that form it. Features of development (the germ layer, ossification stages, types of ossification).
4. Joints of the facial bones. Temporomandibular joint.
5. The calvaria (skullcap). The bones that form it. Features of the skull joints of a newborn (the fontanelles).
6. Individual, gender- and age-related features of the skull.
7. Internal base of the skull. Anterior, middle and posterior cranial fossas. The openings and canals of the skull base, blood vessels and nerves passing through them.
8. External base of the skull. The openings and canals of the skull base, blood vessels and nerves passing through them.
9. The orbit, its contents, walls, connections. The vessels and nerves that pass through the upper and lower orbital fissure, the optic canal, the infraorbital canal, the etmoid foramina.
10. The nasal cavity and its walls. The nasal passages. Connections of the nasal cavity with the oral cavity, the pterygopalatine fossa, and the anterior cranial fossa. The vessels and nerves that pass through these connections.
11. Air-filled bones of skull. Paranasal sinuses and their connections with the nasal cavity.
12. The temporal fossa, its walls and contents.
13. The infratemporal fossa, its walls and contents. The vessels and nerves that pass through these connections.
14. The pterygopalatine fossa, its walls and contents. The vessels and nerves that pass through these connections.
15. Special features of the cervical, thoracic, lumbar vertebrae. Physiologic and pathologic curves of the spine.
16. Intervertebral joints.
17. Atlanto-occipital joint.
18. Median atlanto-axial joint.
19. The muscles that provide movement of the spine.
20. The joints of ribs with each other, with the sternum and the spine.
21. Thorax in general. Physiologic and pathologic types of the thorax.
22. Constitutional types of the human body.
23. Development of the bones of the upper limb. Anomalies of the bones of the upper limb.
24. Syndesmoses of the upper limb.
25. The hand the whole. The bones that form it.

26. The joints of the bones of the hand.
27. Pelvic bones joints.
28. Age- and gender-related characteristics of the pelvis. The measurements of the female pelvis.
29. Development of the lower limb bones. Anomalies of the bones of the lower limb.
30. The foot as a whole, bones that form it.
31. The foot joints. Chopart's joint, Lisfranc joint. The notion of the foot arch.
32. Bone as an organ. Structure of bone.
33. Classification of bones.
34. Development of bones. Stages of bones' development. Primary and secondary bones. The types of ossification.
35. Classification of joints. Classification continuous joints.
36. Immovable joints of the axial skeleton.
37. The structure of a joint. Characteristics of the main and supplementary joint elements.
38. The anatomical and biomechanical classifications of joints.
39. The muscles that provide movement in the temporal-mandibular joint.
40. The shoulder joint, it arthrologic characteristics.
41. The muscles that provide movement in the shoulder joint.
42. The elbow joint, his arthrologic characteristics.
43. The blood supply to the elbow joint.
44. The muscles that provide movement in the elbow joint.
45. The wrist joint, it arthrologic characteristics.
46. The muscles that provide movement in the wrist joint.
47. The hip joint, its arthrologic characteristics.
48. The muscles that provide movement in the hip joint.
49. The knee joint, its arthrologic characteristics.
50. The blood supply to the knee joint.
51. The muscles that provide movement in the knee joint.
52. The ankle joint, its arthrologic characteristics.
53. The muscles that provide movement in the ankle joint.
54. Classification of muscles.
55. Muscle structure as an organ.
56. Development of the skeletal muscles.
57. The superficial muscles of the back, their origin, insertion, function innervation.
58. The deep muscles of the back, their origin, insertion, function, innervation.
59. The superficial chest muscles, their origin, insertion, function, innervation.
60. The deep chest muscles, their origin, insertion, function, innervation.
61. The diaphragm, its structure. The weak points of the diaphragm (openings, triangles, hiatus).
62. Innervation and blood supply to the diaphragm.
63. Anatomy of the abdominal muscles, their classification, origin, insertion, function,

64. Innervation and blood supply to the abdominal muscles.
65. Rectus abdominis muscle vagina.
66. The white line of the abdomen, the umbilical ring. The folds and fossas of the anterior abdominal wall.
67. The inguinal canal, its contents, walls, rings.
68. Superficial neck muscles, their origin, insertion, function, innervation.
69. The deep muscles of the neck, their origin, insertion, function, innervation and blood supply.
70. The fascias of the neck. Interfascial spaces of the neck, their contents and connections.
71. Triangles of the neck, their borders and contents
72. The mimic muscles, their development, function, innervation. The differences between the facial muscles and skeletal muscles.
73. The masseteric (chewing) muscles, their development, origin, insertion, function, innervation and blood supply.
74. The muscles of the shoulder girdle, their origin, insertion, function, innervation.
75. The brachial (shoulder) muscles, their origin, insertion, function, innervation.
76. The muscles of the forearm. Group characteristics of the forearm muscles, their innervation.
77. The muscles of the forearm. The anterior group of muscles of the forearm, their origin, insertion, function, innervation, and blood supply.
78. The muscles of the forearm. The posterior group of muscles of the forearm. Origin, insertion, function, innervation, and blood supply.
79. The muscles of the hand. Group characteristics, innervation, and blood supply.
80. The axillary fossa. The axillary cavity, its walls and contents.
81. The triangles of the anterior wall of the axillary cavity and anatomical structures that are projected on them.
82. The openings of the posterior wall of the axillary cavity and anatomical structures that pass through them.
83. Brachial groves and channels, vessel-nerve bundles that are located in them.
84. The cubital fossa, its contents
85. Grooves of the forearm. Vessel-nerve bundles that are located in them.
86. Bony and fibrous canals formed under the retinaculum flexorum; their contents.
87. Retinaculum extensorum. Bone and fibrous channels that are formed under it; their contents.
88. The muscles of the pelvis. Their classification, origin, insertion, function, innervation.
89. The femoral muscles, classification, origin, insertion, function, innervation.
90. The calf muscles, their group characteristic, function, innervation and blood supply.
91. The muscles of the foot, their group characteristic and function.
92. The blood supply and innervation of the foot muscles.
93. The anatomy of the gluteal region: muscles, blood vessels, and nerves.

94. The femoral triangle – its borders and contents.
95. The femoral ring (annulus femoralis) and hiuatus saphenus. Femoral canal.
96. Lacuna vasorum, lacuna musculorum: their walls and contents.
97. The muscular and vascular lacunae's, their walls and contents.
98. Adductor (Hunter's) canal, its walls and contents. Popliteal fossa.
99. The calf canals, their walls and contents.
100. Retinaculum flexorum and extensorum of the muscles of the lower leg. Bone and fibrous canals formed beneath them, their contents.
101. Development of the oral cavity.
102. Anomalies of development of the oral cavity and the face.
103. Vestibule of the mouth.
104. The layers of the oral cavity floor.
105. The palate, its structure, innervation and blood supply. The fauces of the mouth.
106. External structure of a tooth.
107. Dental tissues.
108. Innervation and blood supply of the upper and lower teeth.
109. Dental formulas.
110. The teething timeline for baby teeth and permanent teeth
111. Physiological and pathological bite types.
112. Tooth organ, parodont.
113. Periodont.
114. The development of teeth.
115. The tongue, its development and anomalies.
116. The tongue, its structure and function.
117. The tongue innervation (sensory, taste, motor, sympathetic, parasympathetic).
118. Blood supply to the tongue.
119. The parotid gland, its topography, structure, innervation, blood supply.
120. The submandibular salivary gland, its topography, structure, innervation, blood supply.
121. The sublingual salivary gland, its topography, structure, excretory ducts, innervation, blood supply.
122. The throat (pharynx), its parts, topography and connections.
123. The structure of the throat (pharyngeal) wall.
124. The Pirogov – Valdeyyer lympho-epithelial ring.
125. Innervation and blood supply to the throat (pharynx).
126. The esophagus. Parts, topography, narrowings.
127. The esophagus wall structure.
128. Blood supply to the esophagus; superior porto-caval anastomosis.
129. Innervation of the esophagus.
130. The stomach, its development, parts and topography.
131. The structure of the stomach wall; position of the stomach in terms of relation to the peritoneum; ligaments.
132. Innervation and blood supply to the stomach.
133. The duodenum, its parts and topography.

134. The structure of the duodenum wall, position of the duodenum in terms of relation to the peritoneum.
135. The innervation and blood supply to the duodenum.
136. The small intestine, its development, divisions, structure of the wall, position in terms of relation to the peritoneum, function.
137. Innervation and blood supply to the small intestine.
138. The colon, its development, divisions, their topography, flexures, position in terms of relation to the peritoneum.
139. Structure of wall and function of the colon.
140. Innervation and blood supply to the colon.
141. Appendix; topography, variants of position, structure.
142. The rectum, its parts, topography, flexures, wall structure.
143. Innervation and blood supply to the rectum; inferior porto-caval anastomosis.
144. The liver, its development, topography, functions.
145. External structure of the liver, lobes and segments.
146. The gallbladder. Excretory ducts of the liver and the gallbladder.
147. Innervation and blood supply to the liver.
148. Internal structure of the liver. Bile production and ways of excretion.
149. The "wonderful" venous net of the liver (rete mirabile). Portal and caval venous systems of the liver.
150. Peculiarities of the liver blood supply. Innervation of the liver.
151. The pancreas, its development, topography, structure. Excretory ducts. Endocrine part of the pancreas.
152. Innervation and blood supply to the pancreas.
153. The peritoneum, its general characteristics. Formations of the peritoneum: omentums, ligaments, mesenteries.
154. Abdominal and pelvic organs positions in terms of relation to the peritoneum. Peritoneal bursas.
155. Omental, hepatic and pregastric bursae of the peritoneum, their walls and connections.
156. Canals and sinus the middle floor of the peritoneum. Recesses.
157. Peritoneal folds in the pelvis. The folds and fossas of the peritoneum in the anterior abdominal wall.
158. The external nose. Structure, blood supply, innervation.
159. The internal nose. Paranasal sinuses, their function, peculiarities of the mucosa structure.
160. Innervation and blood supply to the nasal cavity.
161. The larynx: topography, external structure, functions.
162. Innervation and blood supply to the larynx.
163. The larynx, its internal structure. Cartilages of the larynx, their connections. The muscles of the larynx, their function. The muscle groups of the larynx.
164. The trachea and bronchi, their development, topography and structure.
165. Innervation and blood supply of the trachea and bronchi.
166. The lungs, their development (periods of development) and developmental anomalies.

167. Topography of lungs.
168. The hilum and the root of each lung (contents and topography).
169. Lobes, segments, primary and secondary pulmonary lobuli, acinus. Bronchial and alveolar pulmonary tree.
170. Innervation and blood supply to the lungs.
171. The pleura, its development, layers, pleural cavity, pleural recesses.
172. Pleural borders.
173. The mediastinum, its borders and divisions. The organs of the upper mediastinum, their topography.
174. The mediastinum, its borders and divisions. The organs of the lower mediastinum, their topography.
175. Topography and external structure of the kidneys. Renal capsule. Fixing apparatus of the kidney.
176. Development and developmental anomalies of the kidney.
177. Internal structure of the kidney (anatomical units, the nephrone structure) and function.
178. Innervation of the kidney.
179. Blood supply to the kidney; the “wonderful” arterial net of the kidney (rete mirabile).
180. The renal sinus, renal peduncle, the hilum of the kidney. The structure of small and large calyces, fornical apparatus of the kidney.
181. The ureter, its structure and topography.
182. The differences between the male and female urethra.
183. The urinary bladder, its topography, structure and position in terms of relation to the peritoneum.
184. Innervation and blood supply of the urinary bladder.
185. The testis, its external and internal structures, topography. Sperm production and excretion.
186. Coverings of testis.
187. Innervation and blood supply to the testis.
188. Development of testis. The process of descending of the testis into the scrotum. Anomalies of testis development and position.
189. Epididymis, spermatic cord and its components.
190. Seminal vesicles, prostate, bulbs of urethra (Cooper’s) glands, their excretory ducts.
191. Structure of the male urethra.
192. The external male genitalia. Their structure, blood supply, innervation.
193. Development and developmental anomalies of the male genitalia.
194. The ovary, its external and internal structure, topography.
195. Blood supply and innervation of the ovary.
196. The uterus, its topography, external structure. Variants of uterus position. Uterine ligaments.
197. Blood supply and innervation of the uterus.
198. The uterus, its internal structure.
199.Development and developmental anomalies of the uterus.

200. The uterine tube, its development, topography, position in relation to the peritoneum, parts, structure of wall.
201. Blood supply and innervation of the uterine tube.
202. The external female genitalia, their development and developmental anomalies.
203. The perineum, its definition, muscles and fascias.
204. Innervation and blood supply to the perineum.
205. Classification of the endocrine glands (according to development and topography).
206. Branhiogenic endocrine glands: thyroid, parathyroid. Their development, structure, topography, functions.
207. Blood supply and innervation of the thyroid.
208. The group of endocrine glands belonging to the adrenal system; adrenal glands, their development, topography, structure, functions.
209. Blood supply and innervation of the adrenal gland.
210. Neurogenic endocrine glands: pituitary, pineal gland, adrenal medulla, paraganglia, their development, topography, structure and function.
211. Endocrine parts of the gonads. Their development, topography, structure, function.
212. The primary and secondary organs of the immune system. Structure and function of red bone marrow and the thymus.
213. Structure and function of the spleen.
214. Structure and functions of the lymph nodes and the tonsils. Lymphoid formations of the mucous membrane of the digestive, respiratory, and urogenital tracts.
215. The heart, its development and developmental anomalies.
216. Topography of the heart.
217. External structure of the heart. The structure of the heart chambers.
218. The heart: openings, valves, their structure and function. The valvular apparatus of the heart.
219. The structure of the wall of the heart.
220. The conduction system of the heart.
221. The pericardium.
222. Blood supply and innervation of the heart.
223. Development of the central nervous system (brain vesicles and their derivatives).
224. Topographic and functional classification of the nervous system. Central nervous system divisions.
225. The structural unit of the nervous system. Types of neurons and their topography.
226. Types of nerve endings.
227. The functional unit of the nervous system. Reflectory arches.
228. The spinal cord, its external structure, topography of the spinal cord segments.
229. The spinal cord, morpho-functional characteristics of the grey matter.
230. Topography of the conducting pathways in the spinal cord fascicles.

231. Meninges of the brain and the spinal cord. Intermeningeal spaces.
232. Formation, circulation and outflow of cerebrospinal fluid.
233. The brainstem, its parts and their development.
234. Characteristics of the cranial nerve nuclei located in the brain stem.
235. Medulla oblongata. External and internal structure.
236. Pons. External and internal structure.
237. Grey matter of the cerebellum.
238. Ancient, old and new cerebellum.
239. Peduncles of the cerebellum.
240. Rrojection of cranial nerves nuclei onto the superior triangle of the rhomboid fossa.
241. Rrojection of cranial nerves nuclei onto the inferior triangle of the rhomboid fossa.
242. IV ventricle, its walls and connections.
243. The midbrain, its external structure, the tectum of the midbrain.
244. The midbrain; internal structure of the peduncles of the midbrain.
245. The diencephalon, its parts and external structure.
246. The diencephalon, its internal structure. Sensory, motor and autonomic subcortical centers.
247. The walls of the third ventricle, its connections.
248. The white matter of the cerebral hemispheres.
249. Brain commissures.
250. The lateral ventricles of the brain, their parts, walls, and connection with the third ventricle.
251. Basal nuclei of the brain hemispheres. Strio-pallidal system.
252. The olfactory brain.
253. The limbic system.
254. The brain meninges. Sinuses of the dura mater.
255. Production, circulation and outflow of the cerebrospinal fluid.
256. The cortex of the cerebral hemispheres. Primary, secondary and tertiary sensory and motor centers.
257. Cortical centers of language.
258. Localization of cortical ends of analyzers in the cortex of the parietal lobe.
259. Localization of cortical ends of analyzers in the cortex of the temporal lobe.
260. Localization of cortical ends of analyzers in the cortex of the frontal lobe.
261. Conducting pathways. Classification, general characteristics.
262. Propioceptive pathways of the cerebellar direction: anterior and posterior spinal-cerebellar pathways (Flexig's and Gowers's tracts).
263. Propioceptive pathways of the cortical direction (tract of Burdach and Gaulle).
264. The pathways of touch and pressure, pain and temperature sensitivity (Edinger tract).
265. General sensory pathways from the head and neck.
266. Descending pathways. Classification. Anterior and lateral cortical-spinal pyramidal pathways.

267. Cortical-nuclear pathway.
268. The 7-neurons extrapyramidal pathway.
269. The 6-neurons extrapyramidal pathway.
270. The middle longitudinal fasciculus.
271. The development of the eye. Anomalies of development.
272. Blood supply and innervation of the eyeball.
273. Eyeball coats (layers).
274. The accommodation apparatus.
275. Refractive components of the eye: the cornea, the eye chamber fluid (production, circulation, outflow), the lens, the vitreous body.
276. The skeletal muscles of the eye, their innervation and blood supply.
277. The lacrimal apparatus.
278. The structure of the retina.
279. Conducting pathways of the visual analyzer.
280. The external ear. Anatomy of the middle ear: tympanic cavity walls, openings, auditory bones, their connections, auditory tube.
281. Blood supply and innervation of the middle ear.
282. Blood supply and innervation of the external ear.
283. The internal ear: the bony labyrinth, its parts and structure.
284. The inner ear: membranous labyrinth, its part and structure. The spiral organ (organ of Corti).
285. The conducting pathways of the auditory analyzer.
286. The conducting pathways of the vestibular analyzer.
287. The organ of taste. The conducting pathway of the taste analyzer.
288. The skin and its derivatives. The mammary gland.
289. The organ of smell. I pair of cranial nerves. The conducting pathways of the olfactory analyzer.
290. Cranial nerves - III, IV, VI pairs, areas of innervation, symptoms of damage.
291. The 1st branch of the V pair of the cranial nerves, branches, regions of supply.
292. The 2nd branch of the V pair of the cranial nerves, branches, regions of supply.
293. The 3rd branch of the V pair of the cranial nerves, branches, regions of supply.
294. Nervus petrosus major.
295. Chorda tympani.
296. Nervus facialis.
297. Vegetative ganglia of the head. Their topography, nerves, that are interrupted in them, postganglionic fibers.
298. IX pair of the cranial nerves, branches, regions of supply.
299. Branches of the head and neck parts of the X pair of the cranial nerves, regions of supply.
300. Branches of the thoracic and cervical parts of the X pair of the cranial nerves, regions of supply.
301. XI and XII pairs of the cranial nerves.
302. Large and small circulation circles.

303. Placental circulation.
304. General anatomy of blood vessels. Magistral, extraorganic and intraorganic blood vessels.
305. Microvasculature net.
306. The lymphatic system. General characteristics.
307. The thoracic duct, its roots, topography, the place confluence into the venous system.
308. The right lymphatic duct.
309. Lymph nodes and vessels of the head and neck.
310. Lymphatic vessels and nodes of the chest.
311. Lymphatic vessels and nodes of the abdominal and pelvic cavities.
312. Lymphatic vessels and nodes of the upper limb.
313. Lymphatic vessels and nodes of the lower limb.
314. The aorta, its parts. The branches of the aortic arch.
315. Aortic arches of an embryo and their derivatives.
316. The internal carotid artery, regions of its branches. Differences between external and internal carotid artery in the neck region.
317. The external carotid artery, its topography, the anterior group of branches, areas of blood supply.
318. The external carotid artery, its topography, middle and posterior groups of branches, areas of blood supply.
319. The maxillary artery.
320. The superficial temporal artery.
321. The internal carotid artery, its topography and branches.
322. Blood supply to the brain. Arterial circle of Willis.
323. The subclavian artery, its topography, branches, regions of their branching.
324. Blood supply to the cerebellum and spinal cord.
325. The thoracic aorta, its branches and areas of blood supply.
326. The abdominal aorta, its parietal and paired visceral branches.
327. The abdominal aorta, its unpaired visceral branches.
328. The axillary artery, its topography, branches, regions of their branching.
329. The brachial artery, its topography, branches, regions of their branching.
330. The ulnar artery.
331. The radial artery.
332. The arterial net of the elbow.
333. The arterial nets of the wrist.
334. Arterial rches of the hand.
335. The common, external and internal iliac arteries, regions of their branching.
336. The femoral artery, its topography and branches.
337. The popliteal artery, its topography and branches.
338. Blood supply to the knee joint.
339. The anterior tibial artery: topography, branches, regions of supply.
340. The posterior tibial artery: topography, branches, regions of supply.
341. Arteria dorsalis pedis: topography, branches, regions of supply.
342. Plantar arteries: topography, branches, regions of supply.

343. The superior vena cava, its formation, topography, tributaries.
344. The main stages of development of magistral veins.
345. The internal jugular vein, its topography, extracranial tributaries.
346. The internal jugular vein, its topography, intracranial tributaries.
347. The external and anterior jugular veins. Topography, tributaries. Jugular venous arch.
348. Venous anastomoses of head.
349. Azygos and hemiazygos veins.
350. Veins of the upper limb.
351. The veins of the lower limb.
352. The inferior vena cava, its formation, topography, tributaries.
353. Pelvic veins. Venous plexuses of the pelvic organs.
354. The portal vein, its formation, topography, tributaries.
355. Porto-caval anastomoses.
356. Cava-caval anastomoses.
357. The structure of the spinal nerve and its branches, their characteristics and areas of innervation.
358. Formation of the somatic plexuses. Thoracic nerves.
359. The cervical plexus; its formation, topography, areas of innervation.
360. The brachial plexus; its formation, topography, short branches, areas of innervation.
361. The brachial plexus; its formation, topography, long branches, areas of innervation.
362. The lumbar plexus; formation, topography, branches, areas of innervation.
363. The sacral plexus; its formation, topography, short branches, areas of innervation.
364. The sacral plexus; its formation, topography, long branches, areas of innervation.
365. The general scheme of the structure and function of the autonomous (vegetative) nervous system.
366. Central and peripheral divisions of the sympathetic nervous system.
367. Central and peripheral divisions of the parasympathetic nervous system.
368. Differences in the structure of peripheral parts of the sympathetic and parasympathetic nervous systems. Peculiarities of autonomic reflectory arches.
369. Cervical part of the sympathetic trunk, its topography, nodes, branches.
370. Thoracic part of the sympathetic trunk, its topography, nodes, branches.
371. Lumbar part of the sympathetic trunk, its topography, nodes, branches.
372. Sacral part of the sympathetic trunk, its topography, nodes, branches.
373. The autonomous (vegetative) nervous plexuses of the abdominal cavity. The abdominal (solar) plexus.
374. The superior and inferior mesenteric plexuses.
375. The superior and inferior hypogastric plexuses.