

**Questions for final test for students 3 courses of English-speaking groups for specialty 7-07-0911-03 «Dentistry»**

1. Features of X-rays are:
2. In what year Wilhelm Conrad Roentgen discovered a new form of radiation (x-rays)?
3. In which areas of specialty imaging is fluoroscopy (roentgenoscopy) commonly employed?
4. Method computed tomography (CT) is a mode of imaging in which:
5. Method magnetic resonance imaging (MRI) is a mode of imaging in which:
6. Method of conventional tomography is a mode of imaging in which:
7. Method of ultrasound diagnostic is a mode of imaging in which:
8. The factors influencing on the ability of X-rays to penetrate object:
9. The material of choice for the construction of a long-lasting filament is:
10. The technique allows to obtain a dynamic image anatomical structures is:
11. The wavelength of an x-ray photon is commonly expressed in units of angstroms. An angstrom is equivalent to:
12. What is advantage of the rotating target disk over the stationary target?
13. List the main components of the x-ray
14. What is the direction of the flow of electrons in the x-ray tube?
15. What is the nature of x-rays?
16. Which imaging technique allows the part of interest to be viewed in sections?
17. Which imaging technique does not use ionizing radiation?
18. Which imaging technique is the basic method of X-ray diagnostic:
19. Which imaging technique is the special method of X-ray diagnostic:
20. Which of following is a factor that differs between X-ray and gamma rays?
21. Which of the following descriptions of electromagnetic radiation photons will be the most penetrating?
22. X-ray film consists of:
23. Define the method of irrigoscopy
24. Select the contrast agents for carotid angiography examination
25. Select the contrast agents for excretory urography research
26. Select the contrast agents for fistulography
27. Select all groups and all types of contrast agents which can be used for bronchography research:
28. Select all groups and all types of contrast agents which can be used for bronchography research:

29. Select all groups and types of contrast agents which can be used for carotid angiography:
30. Select all groups and types of contrast agents which can be used for excretory urography research:
31. Select all groups and types of contrast agents which can be used for fistulography:
32. Select oil-soluble radiographic contrast agents
33. Select radiographic contrast agents with the high atomic weight
34. Select radiographic contrast agents with the low atomic weight
35. Select water-soluble radiographic contrast agents
36. Specify all groups of X-ray techniques, which include bronchography research:
37. Specify all groups of X-ray techniques, which include carotid angiography
38. Specify all groups of X-ray techniques, which include the method of excretory urography research:
39. Specify all groups of X-ray techniques, which include the method of fistulography
40. The most common contrast material used for gastrointestinal examination is
41. The most common contrast material used for urinary tract examination is
42. The most common contrast material used for vascular system examination is
43. What is the purpose of bronchography research?
44. What is the purpose of carotid angiography examination?
45. What is the purpose of excretory urography research?
46. What is the purpose of fistulography examination?
47. What type of contrast media are commonly used for enhancement during CT imaging?
48. Which of the following is an advantage of using a nonionic, water-soluble iodinated contrast medium over its ionic counterpart?
49. What is the purpose of producing X-ray examination in traumatic injuries of the bone?
50. List the main radiographic signs (symptoms) of a fracture?
51. What are the types of the bone fragment displacement distinguished?
52. Joint Space Changes can be the following
53. Define the term "Luxation"
54. Define the term "Subluxation"
55. The injuries of the musculoskeletal system include
56. Call the main types of the bone fractures according passing fracture line

57. Call the directions of the bone fragment displacement by the side dislocations?
58. List the main X-ray signs of the green-stick fractures of the long bone
59. What elements of bones and joints form the so-called «X-ray joint space»?
60. Call the main types of bone fragment displacement by the longitudinal dislocation
61. Call the main radiological symptoms of the traumatic epiphysiolysis
62. What is the early term for the appearance of bone callus of the long bone in children?
63. What is the early term for the appearance of bone callus of the long bone in adults?
64. What are the most frequent causes of formation of "false joint"?
65. Call the specific types of bone fractures in children:
66. What are the features of fractures in the elderly?
67. Call radiological signs of pathological fractures:
68. Specify radiographic sign of the simple bone fracture:
69. Specify the radiographic signs of complex fractures of the bones:
70. List the possible complications after the injury of the bones:
71. Specify the radiographic signs of the pseudoarthrosis (false joint)
72. Call the main radiological symptoms of the impacted fracture in the long tube bone
73. Call the main radiological symptoms of the compression fracture of the vertebral body
74. Define the process osteoporosis
75. Define the process osteosclerosis
76. Call the main radiological signs of the bone osteoporosis:
77. Call the main radiological signs of the bone osteosclerosis
78. Call the main radiological signs of the bone destruction
79. Call the part of the long tubular bone in which periosteal reaction is the most active
80. Call the part of the long tubular bone in which periosteal reaction is the less active
81. Call the part of the long tubular bone in which the periosteal reaction is absent
82. In what term is it possible to detect early radiographic signs of osteomyelitis in the long bone?
83. Call the main radiological symptoms of acute osteomyelitis:

84. Call the main radiological symptoms of chronic osteomyelitis:
85. Call the more typically periosteal reactions of acute and chronic osteomyelitis
86. Call the more typically periosteal reactions of osteosarcoma
87. Call the main radiological symptoms of osteosarcoma (osteoblastic type)
88. Call the main radiological symptoms of osteosarcoma (osteolytic type)
89. Call the main radiographic signs of tuberculous spondylitis ("postarthritic" stage)
90. What are the main radiographic signs of joint ankylosis?
91. Point the most frequent location of osteomyelitis in the long tubular bone
92. Point the most frequent location of tuberculosis process in the long tubular bone
93. Indicate the main radiographic signs of the benign bone neoplasm
94. Indicate the main radiographic signs of the bone malignant neoplasm
95. Call the main radiographic signs of the joint tuberculous process in the pre-arthritic stage
96. Call the main radiographic signs of the joint tuberculous process in the arthritic stage
97. Call the main radiographic signs of the joint tuberculous process in the post-arthritic stage
98. List the main radiographic signs of the enchondroma
99. List the main radiographic signs of the ecchondroma
100. Call the part of the long tubular bone in which periosteal reaction is the less active
101. By nature ultrasound is
102. Ultrasound is sound the frequency of which not less than
103. The physical basis of generating ultrasonic waves is
104. Physical basis for registration of ultrasound waves is
105. The average speed of propagation of ultrasound in soft tissues is
106. Ultrasound propagation speed depends mainly
107. Medical ultrasound systems typically use frequency
108. Direct piezoelectric effect
109. The reverse piezoelectric effect is
110. The echo-free structure in the human body when scanning in the B-mode can be
111. The echo-positive structure (echo-producing echogenic, hyperechogenicity) in the human body when scanning in the B-mode is

112. Specify the patient's preparation for the ultrasound of the abdomen and pelvis minor is
113. What is a contraindication for ultrasound diagnostics
114. For examination of the abdomen and pelvis in adults is used transducer with a frequency of
115. Standard for examination of the abdomen and pelvic adult uses an electronic multielement transducer
116. To examination the thyroid uses a transducer with a frequency
117. Standard for heart examination uses a transducer
118. For a standard examination of the thyroid gland in adults uses a transducer
119. Ultrasonography has high diagnostic efficiency in the study:
120. US has significant limitations in the study
121. A-mode signal registration is
122. B-mode signal registration is
123. M-mode signal registration is
124. Color Doppler is
125. Resolution ultrasonic device increases
126. Scanning depth ultrasonic device increases
127. The Doppler effect is
128. Specify ultrasound signs of liver cysts
129. Under standard conditions chololith rendered as:
130. The echogenicity of the thyroid tissue normally have
131. Where most often visualized by ultrasound esophagus?
132. Structure intact liver parenchyma by ultrasound is represented as
133. By ultrasound thickness measurement correctly methodically adult right lobe of the liver is
134. By ultrasound thickness measurement correctly methodically adult left lobe of the liver is
135. CT is the basis of the method
136. Advantages of CT (CT vs. radiography) are
137. MRI is the basis of the method
138. In accordance with the scale in CT Hounsfield units (HU) air has a density
139. In accordance with the scale in CT Hounsfield units (HU) a cortical bone has a density
140. In accordance with the scale in CT Hounsfield units (HU) water has a density
141. The magnetic field strength measured in units

142. 32-slice CT scanner is characterized by
143. Radiation exposure during CT is
144. Radiation exposure during MRI is
145. When T1-WI (MRI) adipose tissue is the signal
146. When T2-WI (MRI) adipose tissue is the signal
147. When T1-WI (MRI) water is the signal
148. When T2-WI (MRI) water is the signal
149. Absolute contraindications for MRI are
150. Relative contraindications for MRI are
151. Advantages of MRI (MRI vs. CT) are
152. Disadvantages of MRI (MRI vs. CT) are
153. Advantages of CT (CT vs. MRI) are
154. Disadvantages of CT (CT vs. MRI) are
155. The basic methods of X-ray diagnostics in dentistry are:
156. Special methods of X-ray diagnostics in dentistry are:
157. Methodology of teleradiography performing is:
158. The method of studying the full dental status of the primary dental patient should be:
159. Indications to the study of the whole occlusion in adults are:
160. Methods of the intraoral radiography are:
161. What is digital radiography?
162. Determine the contraindications to the study of the whole occlusion by the method of intraoral radiography:
163. Specify ways to reduce the radiation exposure of dental patients:
164. For what purpose is used the rule of isometric view in intraoral contact radiography?
165. For what purpose is used the rule of orthoradial in intraoral contact radiography?
166. List the contrasting techniques used in the maxillofacial radiology:
167. What is the rule of orthoradial?
168. What is the rule of isometric?
169. Linear zonography. What is the slice thickness and the swing angle of X-ray tube?
170. Linear tomography. What is the slice thickness and the swing angle of X-ray tube?
171. Contact intraoral radiography. Which tasks of this method are?

172. Which are the possibilities of the ultrasound method in the study of the maxillofacial region?
173. Indications for USD in the maxillofacial region:
174. Contact intraoral radiography. What is the essence of the method?
175. Occlusive intraoral radiography. What is the essence of the method?
176. Occlusive intraoral radiography. Which tasks of this method are?
177. List contraindications for occlusive intraoral radiography:
178. Interproximal intraoral radiography. What is the essence of the method?
179. Interproximal intraoral radiography. Which tasks of this method are?
180. Teleradiography. Which tasks of this method are:
181. Teleradiography. What is the essence of the method?
182. Panoramic radiography. What is the essence of the method?
183. Panoramic tomography (OPTG). What is the essence of the method?
184. Panoramic tomography. Which are features of the resulting image?
185. Which elements of bones and joints form the so-called «X-ray joint space»?
186. What are the objectives of the teeth and jaws X-ray examination in their injuries?
187. What is the purpose of producing X-ray examination of the injuries to the teeth and jaws?
188. In what time frame is it necessary to carry out a radiographic examination of the injuries to the teeth and jaws?
189. What are the main radiographic symptoms of jaws and tooth fractures in adult?
190. What are there the displacement types of the bone fragments?
191. What are the types of the longitudinal displacement of the bone fragments?
192. Depending on the direction of the line of fracture in relation to the long axis they distinguish:
193. Point a typical localization oblique fractures of the mandible:
194. Point the typical localization transversal fractures of the mandible:
195. Point the typical localization longitudinal fractures of the mandible:
196. Through what passes the lower fracture line of the upper jaw of Le Fort-3?
197. Through what bone formations passes the fracture line of the upper jaw of Le Fort-2?
198. Through what passes the top line of fracture line of the upper jaw of Le Fort-1?
199. List the possible complications after the injury of the facial skull:

200. Which are there the possible complications of injuries facial skeleton in children?
201. What is the most common site of post-traumatic hyperostosis in children?
202. What is the term of the callus formation in children?
203. What is the term of the callus formation in adults?
204. What are the most frequent causes of formation of "false joint"?
205. Specify the features of fractures of facial bones in children:
206. Call radiological signs of pathological fractures:
207. List "areas of weakness" in mandible:
208. Specify radiographic sign of the simple bone fracture:
209. Specify the radiographic signs of complex fractures of the bones:
210. What stage caries process corresponds to enamel defects less than half its width?
211. What stage caries process corresponds to enamel defects, more than half its width, but does not cross the enamel-cement border?
212. What stage of the carious process does the enamel and dentin defect correspond to occupying at least half of the hard tissues to the tooth cavity?
213. What stage of the carious process corresponds to a dentin defect of more than half its width but not penetrating the tooth cavity?
214. What stage caries process corresponding defects penetrating into the cavity of a tooth?
215. Specify tasks the radiological examination at the caries:
216. Specify the radiographic method preferably for detecting caries:
217. Specify localization carious changes to better identify when the intraoral radiography contact is used?
218. With what degree of morphological changes detected radiographically caries?
219. To what degree of morphological changes in dental tissues do radiological methods reveal caries?
220. Specify the most effective methods of intraoral X-rays to detect caries?
221. Specify the advantages in the study of X-ray interproximal dental hard tissues:
222. List the radiological signs of post-traumatic osteomyelitis:
223. In what terms can be detected early radiographic signs of post-traumatic osteomyelitis of the mandible?
224. What is the X-ray method is more preferable to detect periodontal disease?

225. Call radiological symptoms of acute osteomyelitis:
226. Indicate the most characteristic localization in case of tuberculosis of the facial skull.
227. Indicate the most characteristic radiological signs of the tuberculosis process:
228. Indicate the timing of the detection of radiological signs of osteomyelitis of the socket of the extracted tooth from the onset of clinical manifestations:
229. What is the radiological method that is preferable for detecting periodontal disease?
230. Specify the radiographic features of periodontitis in children:
231. Indicate the age of patients, in which tuberculous jaw lesions are more common.:
232. Indicate the most characteristic radiological signs of the tuberculosis process:
233. Which are the main radiological signs of granulating periodontitis:
234. What are the main radiological signs of granulomatous periodontitis:
235. Which are the radiological signs of fibrotic periodontitis:
236. List the radiological signs of chronic odontogenic osteomyelitis

Testing the level of knowledge on theoretical questions is carried out in the form of computer testing

Practical part: describe the presented results of X-ray studies of the maxillofacial area (two radiographs).

The list of questions was approved at a meeting of the department, protocol No. 1 dated 28.08.2025.

Head of the department  
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