Admission to 1 module (theoretical questions)
Attention! Answers to questions should be written briefly (only 5 keywords) within one minute. It is recommended to draw diagrams.
The test includes 20 questions that need to be answered within 20 minutes.
Gadgets are not allowed.
Each correct answer is rated at 1 point.
Positive result - more than 12 points.
Excessive time is fined by deducting 1 point for each additional minute.

1. What is X-ray radiation?
2. Structure and principle of working of an X-ray tube.
5. Fluoroscopy: advantages.
7. Fluoroscopy: Radiation source and detector.
23. MRI: indications.
24. MRI: contraindications.
25. MRI: advantages.
26. MRI: disadvantages of the method.
28. Protection of personnel and patients from the action of ionizing radiation during x-ray studies.
29. The classification of the x-ray contrast agents substances Their use in radiodiagnosis.
30. Methods of radiological diagnosis of the heart and large vessels.
31. Normal x-ray anatomy of the heart and large vessels. Heart arches in a straight front projection.
32. Pulmonary patterns, its substrate.
33. The ring-shaped shadows of the lungs, their differential diagnostics.
34. The total opacity of the lungs, their differential diagnostics.
35. Lucency of the lungs, their differential.
36. Methods and principles of X-ray examination of the stomach.
37. Methods of X-ray examination of the large intestine.
38. Diagnostic methods of foreign bodies.
39. Methods of X-ray examination of the kidneys
40. Methods of X-ray examination of the bladder.
41. X-ray signs of pneumothorax.
42. X-ray signs of hydrothorax.
43. X-ray signs of pneumohydrothorax.
44. X-ray signs of intestinal obstruction.
45. Methods of radiation diagnosis of diseases of bones and joints.
46. Radiological semiology of diseases of bones.
47. Radiological semiotics of joint diseases.
48. X-ray signs of perforation of the hollow organ of the abdominal cavity.
49. Diagnostic methods for blood accumulation in the abdominal cavity, retroperitoneal space, pleural cavity, pericardial cavity
50. Methods of radiation diagnostics of bone diseases.
51. Methods of radiodiagnosis of joint diseases.
52. Determination of bone age.
54. Lung roots: anatomical substrate and radiographic picture.
55. Degree of occlusion of the bronchi, causes, radiographic picture.
56. X-ray signs of atelectasis.
57. X-ray anatomical forms of the heart.
58. Cardiothoracic index.
59. Radiological diagnostics of perforated ulcer.
60. Contraindications to the use of barium sulfate.
61. Complex radiodiagnosis of gallstone disease.
62. Radionuclide methods for the study of the reticulo-endothelial system of the liver.
63. Complex radiodiagnosis of diffuse and focal lesions of the liver.
64. Methods of radiodiagnosis of diseases of kidneys, ureter, bladder.
65. Methods of radiation diagnostics of genital diseases.
66. Radionuclide methods for the study of kidneys.
67. X-ray methods of kidney research.
68. X-ray methods of urinary bladder examination.
69. Hysterosalpingography.
70. Radionuclide rheography and dynamic renoscintigraphy.
71. Complex radiodiagnosis of urolithiasis.
72. Ultrasonic signs of cholelithiasis.
73. Ultrasonic signs of urolithiasis.
75. Methods of diagnosis of breast diseases.
76. The importance of RIA in the complex radiodiagnosis of diffuse and focal lesions of the kidneys.
77. Selection of the most informative methods of radiation examination for the diagnosis of urgent conditions. Perforation of the hollow organ.
78. Selection of the most informative methods of radiation research for the diagnosis of urgent conditions. Internal bleeding.
79. X-ray signs of hydronephrosis.
80. FAST Protocol.
81. Ultrasonic diagnosis of hydrothorax.
82. Methods of research of a pancreas.
83. Ultrasound signs of gallstone disease.
84. Methods of investigation of parenchymal organ trauma.
85. Blue - protocol.
86. Pulmonary edema. Diagnostic methods, radiological signs, causes.
87. Biological effect of ionizing radiation on all levels of the organization.
88. Direct and indirect effect of ionizing radiation on living organisms.
89. Specific, individual and age-related types of radiosensitivity.
90. Mutagenic effect of radiation.
91. The influence of external factors on radiosensitivity organisms.
92. Radioactivity and units of radioactivity. Types of radioactive decay.
93. The RPC: receiving and basic requirements.
94. The RPC Metabolism in the body. Critical organs.
95. Maximum allowable radiation dose for human and different categories of staff.
96. Classification of methods of radionuclide diagnostics.
98. Means of obtaining diagnostic information in radionuclide investigation, and its processing.
99. Scanning, principle of the method and interpretation of the results.
100. Gamma scintigraphy, principles of method and processing results.
101. Research iodine accumulation function of the thyroid gland.
102. How do X-rays are formed, their basic properties?
103. The structure and working principle of x-ray tube.
104. The principle and application of X-ray imaging.
105. Protection of personnel and patients from exposure to ionizing radiation during X-ray studies.
106. Physical and technical basics of computer tomography, diagnostic possibilities of the method.
107. Positron emission tomography.
109. Characteristics of methods of radionuclide diagnostics «in vivo»
110. Radial semiotics of lung diseases.
111. Round shadows in the lungs, their differential diagnosis.
112. Ring-shaped shadows in the lungs, their differential diagnosis.
113. Urgent radial diagnostics of pathology of chest: pneumothorax.
114. Urgent radial diagnostics of pathology of chest: hydropnemothorax.
115. Urgent radial diagnostics of pathology of chest: hydrothorax.
117. Methods of radial diagnostics of heart and blood vessels.
118. The normal radiographic anatomy of the heart and vessels. The arcs of heart in front projection.
119. The basic configuration of X-ray signs of aortic heart.
120. Radial classification configurations heart.
121. Basic x-ray signs of mitral configuration of the heart
122. Basic x-ray signs of trapezoidal configuration heart
123. General principles of radiological examination gastrointestinal tract.
124. Methods of radiological research of the esophagus and its normal radial image.
125. X-ray research of the diverticula of esophagus and their complications
126. Methods of radiological research of the stomach and its normal radial image.
127. Radial diagnostics of intestinal obstruction, causes, differential diagnostics.
128. Methods of radial diagnostics of diseases of the liver, gallbladder, bile ducts and pancreas.
129. Methods of X-ray research of the colon, normal X-ray anatomy of the colon.
130. Radiographic signs of perforation of a hollow organ.
131. Scanning and thyroid scintigraphy.
132. The value of radio immunoassay (RIA) in complex radial diagnostics of diseases of the thyroid gland.
133. Radionuclide methods of research of hepatobiliary system.
134. Complex radial diagnostics cholelithiasis.
135. Radionuclide methods of research of reticulo-endothelial system of the liver.
136. Complex radial diagnostics of diffuse and focal liver lesions.
137. Methods of radial diagnostics of diseases of the kidneys, ureters, bladder.
138. Methods of radial diagnostics of diseases of genitals.
139. Radionuclide methods of examination kidneys.
140. Radionuclide renography and renal dynamic scintigraphy,
141. Characteristics tubulotropic and glomerulotropic RPC.
142. Static radionuclide methods of examination kidneys. Nephroscintigraphy and scan
143. Complex radial diagnostics of urolithiasis.
144. Methods of radial diagnostics of diseases of bones and joints.
Radial sings of diseases of musculoskeletal system: changes in shape, size, position of bones.
Radial sings of diseases of musculoskeletal system: changing contours (abscess, periostosis).
Radial sings of diseases of musculoskeletal system: changes in structure (osteoporosis).
Radial sings of diseases of musculoskeletal system: destruction, osteonecrosis, osteolysis, atrophy.
Radial sings of diseases of musculoskeletal system: joint space changes.
Changes joint space, ankylosis.
Age-related changes in bones and joints, bone age.
Age-related changes in bones and joints, bones and joints features in the elderly.
Radial sings of diseases of musculoskeletal system: changing contours.
Radial sings of diseases of musculoskeletal system: changes in soft tissues.
Features of the X-ray image of bones in children.
Radiological research methods skull and brain (skull radiography, ventriculography, tsysternohrafiya).
Radiographic methods research bone and joint, radiography, tomography densitometry.
X-ray methods research bone and joints: fistulography.
X-ray methods research bone and joints: angiography.
Normal X-ray anatomy and physiology of joints.
Methods and X-ray anatomy of the spine and spinal cord.
Selecting the most informative methods of radial investigation for diagnosis of emergency conditions.
The criteria for selecting methods of radial investigation in pathology of different organs and systems.
Physical and biological bases of radiotherapy.
The mechanism of radiation damage of tumor cells.
Interval radiotherapy and radio modifying factors.
Classification of methods of radiation therapy.
Basic principles of radiation therapy.
General and local reactions and complications during radiation therapy.
Indications for radiotherapy in non-tumor diseases (inflammatory, degenerative).
178. Preventive radiation reactions and injuries.
179. At what level spend two horizontal lines that share the lung field into sections or zones?
180. What parts of the lung fields and indicate their limits.
181. What are the areas of the lung fields, located above the collarbone?
182. What are conditional zone, which share the lung fields and indicate their limits.
183. At what level is the border between the upper and middle lobes of the right lung in the front?
184. At what level is the border between the upper and lower portions of the left lung in the front?
185. At what level is the border between the middle and lower lobe of the right lung in the front?
186. At what level are the borders between the upper and lower parts of both lungs?
187. What are the segments on the right upper lobe
188. What are the segments on the right middle lobe
189. What are the segments of the lower lobes right and left lungs.
190. What are the segments of the upper lobe of the left lung.
191. What is the post-mortem substrate eclipse in the pulmonary field?
192. What are the radiological syndromes of lung diseases?
193. What are the variants of opacity in lung field?
194. Write the classification of focal shadows and specify their size.
195. Which anatomical structure is the standard of the intensity of opacity?
196. As divided by the intensity of the eclipse?
197. What are the types of pathological changes of lung pattern?
198. What is the width of the root of the lung on chest radiograph adult normal?
199. Which methods of radiodiagnostic can exclude the presence of pulmonary embolism?
200. What are the X-ray symptoms of total exudative pleuritis.