Examination Questions on Topographic Anatomy and Operative Surgery for Medical Faculty of International Students (2016-2017 years)

GENERAL QUESTIONS


2. Terminology and basic definitions in topographic anatomy: topography; parts of the body; areas, planes and lines; external landmarks; neurovascular bundles; collateral bloodflow.

3. Fasciae: definition; types; functions; intermuscular septas and fascial coverage of muscles; fascia sheath of neurovascular bundles.

4. Interfascial (fat) spaces; fascial sheath of neurovascular bundles and their role in spread of infectious processes.

5. Tendon retinacula, fibrous and synovial tendon sheath and their role in operative surgery.

6. Surgical operations: classifications, aims; main steps; timing; technique; special types of surgery (plastic, reconstructive, repeated).

7. Surgical operations: indications; basic principles and their topographic background; complications related to surgical operation (during and after the surgery) and explanation of possible reasons depend on anatomical features of a certain area.

8. Surgical instruments: classification; rules of application.

9. Make up a basic set of instruments for surgical operation.

10. Suture material in surgery: classification; types. Requirements to suture materials.

11. Rules (principles) of disconnection and connection of the tissue. Types of skin sutures (give their characteristics and show on the model). Types of surgical knots (give their characteristics and show on the model).

12. Vascular surgery. The principles of the operations on the vessels (puncture, catheterization, vascular sutures, balloon dilation, stenting, bypass, prosthetic).

13. Endoscopic surgery: topographic and anatomic considerations principles and examples of the transluminal and endovascular operations.


15. The principles of the operations in artery atherosclerosis: endarterectomy, balloon dilation, stenting, rotational atherectomy, prosthetic.

16. The principles of the operations in case of the damaged basic vessels. Vascular sutures: Carrel and Morozova techniques. Catheterization of
subclavian vein: indications, procedure, complications (Seldinger’s technique).

17. The principles of the operations on the nerves and tendons.

THE HEAD

20. Topographic anatomy of the fronto-parieto-occipital region.
21. Types of extracranial hemorrhage of the scull. Intracranial hemorrhage; Topographic background of scalped wounds.
22. Topographic anatomy of the temporal region. Topography of the middle meningeal artery; principles of the arterial bleeding arrest.
23. Topography of the mastoid region.
24. Dura mater sinuses: topography; directions of the blood flow; connection with extracranial veins.
25. Techniques to stop venous sinuses bleeding.
26. Topography of the buccal region.
27. Topographic anatomy of the parotid-masticatory region.
31. Initial surgical debridement of the head wounds.
32. Techniques to stop subcutaneous vein, diploe vein bleeding. Definition of head injuries: closed and open; penetrating and non-penetrating.
33. Indications and principles of decompressive trepanation of the skull. Make up a set of instruments for trepanation of the skull.
34. Insications and principles of osteoplastic trepanation of the skull.
35. Principles of anthropotomy: indications; possible complications.

THE NECK

37. Neck fascia.
38. Interfascial fat spaces, fascial beds and fascial sheaths. Surgical approaches to incise neck abscesses.
40. Topographic anatomy of the sterno-cleido-mastoid region.
41. Topographic anatomy of the carotid triangle.
42. Topographic anatomy of the antescalene space and the scaleno-vertebral triangle.
43. Topographic anatomy of the suprathyroid region.
44. Topographic anatomy of the infrathyroid region. Topographic anatomy of larynx and trachea.
45. Topographic anatomy of pharynx, esophagus, thyroid and parathyroid glands.
46. Topographic anatomy of the lateral neck region. Interscalene space.
47. Upper tracheotomy: indications, technique of the procedure. Make up a set of instruments for tracheostomy.
48. Lower tracheotomy: indications, technique of the procedure. Make up a set of instruments for tracheostomy.

THE THORAX

52. Boundaries and regions of the thorax. External landmarks.
53. Topographic anatomy of the anterior thoracic wall.
54. Topographic anatomy of intervertebral spaces and internal thoracic arteries.
55. Topographic anatomy of the mammary gland.
56. Topographic anatomy of pleura.
57. Topographic anatomy of lungs.
58. Topographic anatomy of superior mediastinum.
59. Topographic anatomy of anterior and middle mediastinum.
60. Topographic anatomy of posterior mediastinum: ascending aorta, thoracic part of esophagus, vagal nerves.
62. Topographic anatomy of the diaphragm. Definition and types of diaphragmatic hernias.
63. Definitions: open and closed, penetrating and non-penetrating thoracic injuries. Initial debridement of thoracic wounds.
64. Puncture of the pleural cavity. The main points, indications, basic steps of procedure. The main possible complications.
65. Pulmonectomy, lobectomy, segmental resection: indications, principles and complications.
68. Principles of the heart transplantation. Pericardial puncture (Larrey’s technique and puncture on the level of V intercostal space).
70. Principles of persistent truncus arteriosus and coarctation of the aorta treatment.
71. Principles of the surgery of ventricular and atrial septal defects.
72. The tetralogy of Fallot. The approaches to surgical treatment this anomaly.

THE ABDOMEN

73. Boundaries and regions of the abdomen. External landmarks. The projection of the abdominal organs on the abdominal wall.
74. Topographic anatomy of the anteriolateral abdominal wall.
75. Topographic anatomy of the rectus sheath.
76. Topographic anatomy of the linea alba
77. Topographic anatomy of the inguinal region: inguinal triangle, inguinal interspace, inguinal canal.
78. Embryology of the inguinal canal. The processus vaginalis and its persistence. Descent of the testes and the migration anomalies. The cryptorchism and ectopy of the testis.
79. Hernia definition. The main elements of the hernia.
80. Surgical anatomy of direct inguinal hernia.
81. Surgical anatomy of indirect inguinal hernia.
82. Surgical anatomy of congenital inguinal hernia.
83. Surgical anatomy of umbilical hernia and hernias of linea alba.
84. Surgical anatomy of hernias: strangulated, sliding, irreducible.
85. Surgery of hernias: incision, separation and dissection of hernia sac, hernioplasty, wound closure.
86. Surgical technique for direct inguinal hernia.
87. Surgical technique for indirect inguinal hernia.
88. Surgical technique for umbilical hernia and hernias of linea alba.
89. Surgical technique for strangulated inguinal hernia.
90. Surgical technique for congenital inguinal hernia.

92. Topographic anatomy of the peritoneum: compartments, canals, sinuses, recesses, mesentery, lesser and greater omentum.

93. Topographic anatomy of the peritoneum: omental bursa, subphrenic, subhepatic, hepato-renal recesses.

94. Topographic anatomy of the stomach.

95. Topographic anatomy of the duodenum.

96. Topographic anatomy of the pancreas and spleen.


98. Gastric resection: indications, principles of Bilroth I and Bilroth II procedures.


100. Gastrostomy: indications, principles of Kader’s and Witzel’s techniques.

101. Gastrostomy: indications, principles of Toprover’s technique.

102. Surgical approaches to the pancreas. Pancreatoduodenal resection principles.


104. Topographic anatomy of the liver.

105. Topographic anatomy of the gallbladder, extrahepatic bile ducts. Parts of choledoch.


108. Surgical approaches to the gallbladder. Cholecystectomy: indications and principles of the surgery.


110. Open cholecystectomy: indications, types, principles.

111. Drainage of the common bile duct: indications, types and principles of the procedure.

112. Duodenal papilla sphincterotomy: indications, types and principles of the procedure.

113. Biliodigestive anastomosis: indications, types, principles of the procedure.

114. Topographic anatomy of small intestine. Meckel’s diverticulum and other types of abnormalities associated with persistence of the vitellointestinal tract.

115. Topographic anatomy of caecum and appendix.

116. Topographic anatomy of large intestine.
118. Principles of intestinal sutures: Lambert; purse-string seam; Z-shaped suture; Mateshuk; Albert; Schmiden
119. Anterior gastrointestinal anastomosis: indications, principles of procedure.
120. Posterior gastrointestinal anastomosis: indications, principles of procedure.
122. Intestinal resection: indications, principles of application ‘end-to-end’ anastomosis.
123. Intestinal resection: indications, principles of application ‘end-to-side’ anastomosis.
126. Principles of appendicular abscess drainage.
127. Loop colostomy and alternative technique of fecal diversion: indications and principles of the procedure.

LUMBAR REGION. RETROPERITONEAL SPACE.

129. Topographic anatomy of retroperitoneal space. Layers of the fat tissue.
130. Topographic anatomy of the kidney.
131. Topographic anatomy of suprarenal glands and ureter.
132. Topographic anatomy of aorta and its branches.
133. Topographic anatomy of inferior caval vein and its tributaries.
134. Topographic anatomy of the azygos and hemiazygos veins.
135. Venous anastomosis in retroperitoneal space
136. Topography of the thoracic duct and nerves of the retroperitoneal space.
137. Surgical approaches to the kidneys: extraperitoneal, intraperitoneal, laparoscopic.
139. Renal wound suturing, pyelotomy: indications, principles of the procedure.
141. Ureter suturing, kidney resection: indications, principles of the procedure.
142. Aortic bypass: indications, principles of the procedure.
SMALL PELVIS

143. Boundaries and bony landmarks of the pelvis
144. Muscles of pelvic and urogenital diaphragms.
145. Fascia and compartments of the small pelvis.
146. Fat spaces of the small pelvis and ways of infection spread.
147. Topographic anatomy of the vagina, uterus and appendages. Cesarean delivery.
148. Topographic anatomy of the urinary bladder.
149. Topographic anatomy of the rectum and anal canal.
150. Surgery in case of hemorrhoiditis and paraproctitis.
151. Topographic anatomy of prostatic gland and urethra in men.
152. Puncture of the urinary bladder, cystostomy: indications, types, principles of the procedure.
155. Topographic anatomy of the testis and scrotum. The principles of the operation in case of the hydrocele (Winkelman and Bergman technique).

THE UPPER LIMB

156. Boundaries and regions of the upper limb. External landmarks.
158. Topography of neurovascular fascicle and lymph nodes of the axillary region.
159. Projection and surgical approach to the axillary artery. Collateral blood flow of the scapula region.
160. Dislocation of the bones in case of the humerus fracture on different levels.
161. Projection and surgical approach to the brachial artery.
162. Topography of the elbow region.
163. Topography anatomy of the anterior part of forearm.
164. Topography of neurovascular fascicles of the anterior part of forearm.
165. Topography anatomy of the posterior part of forearm.
166. Topography anatomy of the carpus region. Topography of the fibrous canals of the anterior region of the carpus.
167. Bone base of the carpus. Topography of the fibrous canals of the posterior region of the carpus.
168. Topography anatomy of the palm region. Fat spaces of the palm region
169. Topography anatomy of the finger.
170. Whitlow: classification, anesthesia, incisions
THE LOWER LIMB

172. Topography anatomy of the gluteal region.
173. Topography anatomy of the hip joint.
174. Topography anatomy of the anterior part of the hip.
175. Topography anatomy of the femoral canal.
176. Topography anatomy of the posterior part of the hip.
177. Topography anatomy of the knee joint.
178. Topography anatomy of the posterior surface of the knee joint region.
179. Dislocation of the bones in case of femur fracture on different levels.
180. Topography anatomy of the anterior part of the leg.
181. Topography anatomy of the posterior part of the leg.
182. Crucropoliteal canal, superior and inferior musculoperoneal canals and their contents.
183. Topography anatomy of the foot. Points for the pulse palpation of the lower extremity.
184. Amputation: determination, indications, types. Concept of limb re plantation. Create a set of special instruments for amputation.
185. Technique of the hip amputation. Make up a set of special instruments for amputation.
186. Technique of the herniatomy of femoral hernias.
188. Indications and surgery of autovenous femoropopliteal shunting.
190. Surgery of varicose veins: removing (stripping) or ligation of large veins, laser treatment, sclerotherapy.

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