

Examination Questions on Topographic Anatomy and Operative Surgery
For students training in specialty «General Medicine»
(2025-2026 years)

1. Fasciae, interfascial cell spaces, fascial beds, fascial sheaths, tendon retinaculums, fibrous and synovial sheaths of tendons and their importance in operative surgery.
2. Borders and regions of the head. Fat spaces of the head. Specifics of blood supply and venous outflow of the head: topography of the main arteries and veins; arterial and venous anastomosis.
3. Topographic anatomy of the temporal, frontal-parietal-occipital, and mastoid regions.
4. Topographic anatomy of the parotid-masseteric and buccal regions.
5. Brain meninges, submeningeal spaces. Types of intracranial hematomas. Dura mater sinuses, diploic and emissary veins: topography, directions of the blood flow, connection with extracranial veins.
6. Topographic anatomy of the deep face region: borders, content, cellular spaces.
7. Borders and regions of the neck. Neck fasciae, interfascial fat spaces, fascial beds and fascial sheaths.
8. Topographic anatomy of the sternocleidomastoid region, antescalene, interscalene space, and the scaleno-vertebral triangle.
9. Topographic anatomy of the submandibular and carotid triangles.
10. Topographic anatomy of the pharynx, cervical part of esophagus, thyroid and parathyroid glands.
11. Topographic anatomy of the lateral neck region.
12. Topographic anatomy of the larynx, trachea, thyroid and parathyroid glands.
13. Thorax, borders and regions of the anterior thoracic wall. Topographic lines. Topographic anatomy of the mammary gland.

14. Topographic anatomy of the lungs and pleura.
15. Topographic anatomy of the thoracic wall. Intercostal space. Topographic anatomy of the intercostal neurovascular bundle and internal thoracic artery.
16. Topographic anatomy of the superior mediastinum and its content.
17. Topographic anatomy of the posterior mediastinum and its content.
18. Topographic anatomy of the middle mediastinum and its content.
19. Topographic anatomy of the heart, pericardium and truncus arteriosus.
20. Borders, regions and external landmarks of the abdomen. Holotomy of the abdominal organs. Rectus abdominis muscle sheath.
21. Topographic anatomy of the anterolateral abdominal wall, linea alba and umbilical region.
22. Topographic anatomy of the inguinal region, inguinal interspace and inguinal canal. Inguinal triangle (Hesselbach's triangle), its surgical significance.
23. Topographic anatomy of the inguinal canal and spermatic cord. Embryology of the inguinal canal; testicular descent.
24. Hernia, main elements of the hernia. Surgical anatomy of the inguinal hernias (indirect, direct, congenital, strangulated, irreducible, sliding).
25. Abdomen, abdominal cavity, peritoneum, peritoneal cavity, extraperitoneal space. Topographic anatomy of the abdominal cavity compartments.
26. Topographic anatomy of the stomach.
27. Topographic anatomy of the duodenum, pancreas and spleen.
28. Topographic anatomy of the liver and portal vein. Ductus venosus (Arantii). Portocaval anastomoses.
29. Topographic anatomy of the gallbladder and extrahepatic bile ducts.
30. Topographic anatomy of mesenteric part of the small intestine. Topography of the vitelline duct and variants of pathology in case of its persistence.

31. Topographic anatomy of the inguinal region of the abdomen, caecum and appendix, variants of appendix location.
32. Topographic anatomy of the large intestine.
33. Topographic anatomy of the lumbar region and retroperitoneal space. Topography of the kidney and ureter.
34. Topographic anatomy of inferior vena cava and its tributaries. Porto-caval and cavo-caval anastomoses.
35. Pelvic bones, pelvic cavity, perineum, pelvic floor, urogenital and pelvic diafragms.
36. Topographic anatomy of the vagina, uterus, fallopian tubes, and ovaries.
37. Topographic anatomy of the rectum and anal canal.
38. Topographic anatomy of the urinary bladder, prostate, and urethra.
39. Topographic anatomy of the testis and scrotum.
40. Topography of the axillary region.
41. Borders and regions of the upper limb. Topographic anatomy of the anterior region of the arm.
42. Topographic anatomy of the anterior elbow region.
43. Topographic anatomy of the anterior and posterior forearms regions.
44. Topographic anatomy of the palmar hand region.
45. Regions, borders, and external landmarks of the lower limb. Topographic anatomy of the gluteal region.
46. Topographic anatomy of the anterior femoral region and femoral canal.
47. Topographic anatomy of the anterior and posterior knee regions, knee joint.
48. Topographic anatomy of the anterior leg region.
49. Topographic anatomy of the posterior leg region.

50. Topographic anatomy of the ankle region (anterior, posterior, medial and lateral parts), foot region.
51. Surgical operation: definition, classification, indications for the operation; requirements for the operation, basic operative procedures, typical operative techniques.
52. Rules (principles) of disconnection and connection of the tissues.
53. Principles of the operations on the vessels: (puncture, Seldinger's technique, stenting, bypass, prosthetics, thrombectomy, endarterectomy, rotary atherectomy).
54. Principles of operations in case of the great vessels injury.
55. Definition of terms: closed and open, non-penetrating and penetrating head injuries. Initial surgical debridement of head wounds.
56. Soft tissue (extracranial) and intracranial hematomas. Methods of bleeding arrest in case of injury of subcutaneous veins of the head, diploic veins, sinuses of the dura mater. Principles of arresting bleeding from the middle meningeal artery.
57. Surgical treatment of submandibular abscesses. Surgical treatment of abscesses (phlegmons) of the deep facial region.
58. Craniotomy. Resectional and osteoplastic methods.
59. Anthrotomy, topographo-anatomic explanation of possible complications.
60. Surgical accesses to the carotid, vertebral, and lingual arteries.
61. Conicotomy (cricothyrotomy), upper tracheostomy, indications, techniques.
62. Catheterization of the subclavian vein (Seldinger's technique).
63. Thyroidectomy, hemithyroidectomy, thyroid resection, thyroidectomy with lymph node dissection, indications, techniques.
64. Principles of mammary gland abscesses and phlegmone surgery.

65. Breast surgery. Sectoral resection, radial resection (Halsted, Madden, Patey).
66. Principles of the lungs surgery (pneumonectomy, lobectomy, resection).
67. Open and closed, penetrating and non-penetrating thoracic injuries. The management of the thoracic wounds. Puncture of the pleural cavity.
68. Principles of the heart transplantation. Pericardial puncture (Larrey's technique and parasternal puncture).
69. Surgical treatment of the ischemic heart disease (stenting, aorto-coronary bypass and mammary-coronary bypass, minimally invasive coronary artery bypass grafting).
70. Surgery of the persistent (patent) truncus arteriosus. Surgery of the valve diseases (commissurotomy, annuloplasty, prosthesis).
71. Surgery of the congenital heart defects (coarctation of aorta, atrial and ventricular septal defect, tetralogy of Fallot).
72. Laparotomy types. Laparotomy through the rectus sheath. Upper, lower, middle laparotomy. The principle of closing a laparotomy wound.
73. Topographic and anatomical substantiation, indications and techniques of the operations in case of cryptorchidism, ectopia, congenital inguinal hernia, hydrocele and hydrocele of the cord.
74. Techniques of the operations in case of direct hernia (hernioplasty by Bassini, Lichtenstein's technique of hernioplasty) and in case of indirect inguinal hernia (hernioplasty by Martynov, Girard-Spasokukotski with Kimbarovsky stich). Laparoscopic hernioplasty (TEP and TAPP).
75. Hernia definition. Surgical anatomy and hernioplasty of the congenital inguinal hernia, strangulated, sliding, irreducible. Surgical anatomy of umbilical hernia and hernias of linea alba.
76. Principles of intestinal sutures: Lambert; Matshuk; Albert; Schmid.
77. Gastric resection: indications, principles of Billroth I and Billroth II procedures, Finsterer-Hofmeister modification.
78. Gastrotomy: indications, principles of Kader's, Witzel's, Toprover's techniques.
79. Spleen surgery. Pancreatoduodenal resection.

80. Suture of the liver wound. Principles of the liver resection, transplantation.
81. Cholecystectomy: indications, types and principles of the surgery.
82. Biliodigestive anastomosis: indications, types, principles of the procedure. Drainage of the common bile duct. Duodenal papilla sphincterotomy (papillotomy).
83. Appendectomy technique, retrograde appendectomy. Principles of Meckel's diverticulum removal.
84. Principles of intestinal wound suturing. Intestinal resection: indications, principles of the "side-to-side" and "end-to-end" anastomosis.
85. Anterior and posterior gastrointestinal anastomosis, techniques.
86. Colostomy.
87. Surgical approaches to the kidneys and ureters: extraperitoneal, intraperitoneal, laparoscopic. Renal transplantation. Nephrectomy, kidney resection, nephrostomy.
88. Anatomical reasons for varicocele formation. Principles of varicocele surgery.
89. Drainage of pelvic abscesses through the rectum, vagina.
90. Cesarean Section, stages of operation.
91. Puncture of the urinary bladder. Cystostomy. Transvesical prostate adenomectomy. Transurethral resection of the prostate.
92. Operations in case of the hydrocele (Winkelman and Bergman technique).
93. Collateral blood flow of the scapula region and their significance for operative surgery. Projection and surgical approach to the axillary artery.
94. Projection and surgical approach to the brachial artery in the shoulder and anterior elbow area. Projection anatomy and exposure of the radial and ulnar arteries.
95. Principles of the operation in case of the phlegmons of the palm and whitlow.
96. Hip replacement. The principles of the operation in case of the congenital hip joint dislocation.
97. Surgical anatomy and hernioplasty of the femoral hernias.

98. Approaches to the femoral artery. Femoral-popliteal bypass.
99. Amputation: determination, indications, types. Principles of limb replantation.
100. Principles of the surgery of varicose veins (sclerotherapy, endovenous laser radio frequency ablation, stripping (Babcock method), ligation of the perforating veins).
101. Select instruments and products for medical use for tracheostomy, name them and explain the purpose of use.
102. Select instruments and products for medical use for amputation of the lower limb at the hip level.
103. Select instruments and products for medical use for rib resection.
104. Select instruments and products for medical use for open appendectomy.
105. Select instruments and products for medical use for craniotomy.
106. Describe components of pleural puncture kit, name them and explain the purpose of use. Indicate points for puncture for pneumo- and hemothorax.
107. Detect the suture material type according to the information indicated on the package (suture material and needle type).
108. Detect the surgical needle type according to the information indicated on the package (suture material and needle type).
109. Form a surgical knot on the phantom. Explain the technique.
110. Form a square knot on the phantom. Explain the technique.
111. Form a simple (granny) knot on the phantom. Explain the technique.
112. Apply two simple interrupted sutures on a two-layer silicone skin pad and form a knot.
113. Apply a Donati suture on a two-layer silicone skin pad and form a knot.
114. Apply a U-shaped horizontal suture on a two-layer silicone skin pad and form a knot.
115. Select instruments, apply and remove U-shaped horizontal skin suture. Explain the technique.
116. Select instruments, apply and remove U-shaped vertical skin suture. Explain the technique.
117. Select instruments, apply and remove a simple interrupted skin suture. Explain the technique.

118. Rules for vessel ligation using a Deschamps and Cooper needles.
119. Rules for tissue cutting with a scalpel.
120. Suture a bowel wound on a phantom.
121. Applying hemostatic clamp and ligating of vessel in the wound.
122. Catheterization of the subclavian vein (Seldinger technique).
123. Rules for tissue dissection using grooved probe.

The exam questions are revised and approved at the department meeting of the
Operative Surgery and Topographic Anatomy Department
(protocol № 9 of 05.12.2025 year)

Head of the department



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