Questions for examination on surgery for 4-year students

I. Acute appendicitis

1. Anatomy of the appendix, cecum and terminal ileon. The possible positions of the appendix.
6. Clinical features of acute appendicitis in dependence on appendix’s position (retrocecal, pelvic, medial, and high-lying positions).

II. Cholelithiasis. Posthepatic (mechanical) jaundice

15. Cholelithiasis: clinical features in dependence on the clinical form.
19. Inflammatory complications of cholelithiasis: symptoms, diagnosis, treatment, and prophylaxis.
20. Degenerative complications of gallstone disease: symptoms, diagnosis and treatment, and prophylaxis.
25. Clinical and laboratory differential diagnosis of posthepatic (mechanical), hepatic (parenchymal) and prehepatic (hemolysis) jaundice.
27. Surgical treatment of the posthepatic (mechanical), jaundice. Methods of drainage of the biliary ducts, biliodigestive anastomosis.

III. Hernia


31. Conservative and surgical treatment of hernias: indications and contraindications, stages of herniotomy. Possible iatrogenic complications within herniotomy, its prophylaxis and correction.


34. Rare forms of hernias strangulation: Richter’s hernia, Littre’ hernia, Maydl’s hernia, false strangulation or Broke’s hernia. Features of pathology and clinical signs.


41. Surgical treatment of femoral hernia: Bassini’s and Ruggi’s procedures.


43. Hernias of the linea alba (epigastric hernias): etiology, classification, symptoms, and surgical procedures.

44. Incisional (postoperative) and recurrent hernias: definition, causes of development, symptoms, indications for repair, surgical procedures. Autodermal hernioplasty and alloplasty with prosthetic mesh.

45. Surgical technique of herniotomy in giant incisional hernias, postoperative complications and its prophylaxis.

46. Steps and particularities of herniotomy for strangulated hernia, signs of viability of strangulated bowel loop, measures of the intestinal resuscitation. Indications for resection of the affected intestinal loop, surgical approach, borders of resection, types of restoration of the intestinal integrity.


IV. Diseases of pancreas

48. Anatomy and physiology of pancreas. The role of trypsin, lipase, amylase and insulin. Relations between pancreas and extrahepatic bile ducts.


50. Acute pancreatitis: etiology and pathogenesis.


52. Diagnostic methods in acute pancreatitis: laboratory examination, ultrasound, CT-scan, upper endoscopy and ERCP, laparoscopy.

53. Differential diagnosis of acute pancreatitis with acute appendicitis, intestinal obstruction, perforated gastroduodenal ulcer, myocardial infarction, left-side pleuropneumonia.


55. Endoscopic and surgical treatment of acute pancreatitis in dependence on the form, clinical period and complication’s appearance.

56. Classification of complications of acute pancreatitis.


61. Chronic pancreatitis: etiology and pathogenesis, pathology, classification, clinical symptoms, diagnostic methods.

V. Peptic ulcer disease
64. Anatomy and physiology of stomach and duodenum, vascularization, innervation. Gastric glands.
65. Phases of gastric secretion. Examination of the acid gastric secretion (analysis of the gastric juice and pH-measurement), and main secretor type (Hollander’s and Kay’s tests). Use of obtained results for determination of type and volume of gastric surgery.
67. Gastroduodenal ulcer perforation: classification (Saveliev), clinical signs, and diagnosis.
68. Atypical and sealed perforation of the gastroduodenal ulcer: particularities of symptoms, diagnosis, and surgical management.
69. Surgical treatment of perforated gastroduodenal ulcer (Mikulicz’s, Oppel’s, and Judd’s procedures, vagotomy, gastric resection). Conservative treatment of perforated ulcer (method of Taylor).
71. Differential diagnosis of upper gastrointestinal bleeding: peptic ulcer, hemorrhagic gastritis, gastric tumors, variceal bleeding, Mallory-Weiss syndrome etc.
73. Pyloroduodenal stenosis due to peptic ulcer disease: classification, symptoms, and diagnosis. Differential diagnosis with malignant obstructive gastric tumors.
75. Gastroduodenal ulcer penetration and malignancy: particularities of presentation, diagnosis, indications for surgery and operative procedures.

VI. Intestinal obstruction
83. Intestinal obstruction: definition and classification.
84. Pathophysiology of intestinal obstruction.
85. Clinical symptoms of intestinal obstruction.
86. Diagnosis of the proximal intestinal obstruction (plane X-ray films, Schwarz’s procedure, ultrasound, laboratory examination).
87. Diagnosis of the distal intestinal obstruction (plane X-ray films, barium enema, colonoscopy, laboratory examination).
88. Methods of preoperative, intraoperative and postoperative decompression of the gastrointestinal tract in intestinal obstruction.
89. Adhesive intestinal obstruction: symptoms and diagnosis.
40. Surgical procedures in adhesive intestinal obstruction. Conservative treatment, cut of adhesions, resection of intestine, entero-entero anastomosis, and external ileostomy.
41. Mechanical intestinal obstruction: classification, etiology, symptoms, diagnosis
42. Strangulating intestinal obstruction: symptoms, diagnosis, and volume of the surgical treatment.
43. Simple (obstacle induced) intestinal obstruction: etiology, classification, symptoms, and diagnosis

VII. Abdominal trauma
98. Abdominal trauma: etiology, classification, physical examination and diagnosis.
99. Particularities of physical examination of severe injured patients with shock, unconscious patients, comatose patients, drunken intoxicated patients.
100. Blunt abdominal trauma: etiology, classification, symptoms, and methods of diagnosis in dependence on patients' general status.
101. Physical examination and diagnosis in blunt abdominal trauma. Technique of paracentesis and peritoneal lavage, and interpretation of obtained results.
102. Particularities of examination in penetrating trauma: exploration of wound, additional methods of diagnosis (vulnerography, laparoscopy, excretory urography).
103. Injuries of abdominal wall: contusion, non-penetrating wounds, and Reilly's syndrome. Particularities of symptoms and surgical management.
115. Associated trauma: definition, particularities of physical examination and diagnosis, surgical management.

VIII. Peritonitis
117. Peritonitis: ways of infection penetrating into the peritoneal cavity, classification.
118. Stages of the clinical evolution of pancreatitis. Symptoms and signs.
119. Pathophysiology of advanced peritonitis.
120. Clinical, instrumental and bacteriological diagnosis of peritonitis.
121. Differential diagnosis of peritonitis with myocardial infarction, inflammatory diseases of lungs, Henoch's purpura, renal colic, biliary colic, lead colic, ruptured Graafian follicle, and rupture of tubal gestation.

IX. Varicose veins
129. Anatomy and physiology of veins in lower limbs. Superficial and deep veins, perforating veins, vein valves.
130. Simple (primary) varicose veins in lower limbs: etiology, pathogenesis, classification, and clinical findings. Clinical tests: Brodie-Troianov-Trendelenburg test, Delbe-Perthes’s test, and Pratt’s test.
133. Complications of varicose veins. Venous ulcer: etiology, clinical findings, and management.

X. Thoracic trauma
137. Incidence and etiology of chest trauma.
140. Physical examination and clinical features in chest trauma.
141. Paraclinical diagnostic methods in chest trauma. Interpretation of paraclinical data.
142. Medical and surgical management of different types of thoracic injuries.