

MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION
PENZA STATE UNIVERSITY
MEDICAL INSTITUTE



APPROVED
by Director of the Medical Institute
Mitroshin A.N.
2016

STUDY PROGRAM

C 1.1.43 Departmental Surgery, Urology

Field of study - 31.05.01 General medicine

Graduate's qualification (degree) – general practitioner

Mode of study - full-time

Penza, 20 16

1. Goals of the discipline

The goal of mastering the discipline Departmental Surgery and Urology is the formation of students' professional competences that contribute to the practical and theoretical study of the most typical nosological forms of surgical and urological diseases.

The objectives of the discipline Departmental Surgery and Urology are: acquiring profound medical knowledge that forms students' professional competences, which allow studying etiopathogenesis, key clinical symptoms, diagnostic algorithm, and methods of treating the most typical nosological forms of surgical and urological diseases.

2. Place of the discipline in the Basic Professional Educational Program (hereinafter – BPEP)

The academic discipline Departmental Surgery and Urology refers to the basic part of **block C.1. Disciplines**.

Departmental Surgery and Urology is one of the main clinical disciplines. In the process of studying theoretical and practical material, students explore the most common surgical and urological pathology based on knowledge obtained while studying the following disciplines: Human Anatomy, Normal and Pathological Physiology, Pharmacology, Topographic Anatomy and Operative Surgery, General Surgery, Propedeutics of Internal Diseases.

The main provisions of the discipline Departmental Surgery and Urology are necessary for the study of the clinical disciplines: Hospital and Pediatric Surgery, Modern Technologies in Treatment of Surgical Patients, Hospital Therapy.

3. Student's competences acquired through successful completion of the discipline Departmental Surgery and Urology

The process of studying the discipline is aimed at forming the components of the following competences in accordance with Federal State Educational Standards of Higher Education (hereinafter – FSES HE) in this field of study:

Competence code	Name of competence	Structural elements of competence (On successful completion of the course, students should know, be able to, obtain and apply)
1	2	3
PC-5	willingness to collect and analyze patient complaints, his medical history, examination results, laboratory, instrumental, autopsy and other studies in order to recognize the condition or establish the fact of the presence or absence of the disease	<p>To know: rules for collecting and analyzing complaints of a surgical patient, his medical history, examination results, laboratory, instrumental and autopsy, other studies in order to recognize the condition or establish the presence or absence of the disease</p> <p>Be able to: collect and analyze complaints of a surgical patient, his medical history, examination results, laboratory, instrumental, autopsy and other studies in order to recognize the condition or establish the presence or absence of the disease</p> <p>Obtain and apply: skills of collecting and analyzing complaints of a surgical patient, his</p>

		medical history, examination results, laboratory, instrumental, autopsy and other studies in order to recognize the condition or establish the fact of the presence or absence of the disease
PC-6	ability to determine the patient's underlying pathological conditions, symptoms, disease syndromes, nosological forms in accordance with the International Statistical Classification of Diseases and Health Problems, X revision	<p>Know: principles of identifying in surgical patients the main pathological conditions, symptoms, disease syndromes, nosological forms in accordance with the International Statistical Classification of Diseases and Health Problems</p> <p>Be able to: identify the main pathological conditions, symptoms, disease syndromes, nosological forms in surgical patients in accordance with the International Statistical Classification of Diseases and Health Problems</p> <p>Obtain and apply: skills of determining the basic pathological conditions, symptoms, disease syndromes, nosological forms in surgical patients in accordance with the International Statistical Classification of Diseases and Health Problems</p>
PC-8	ability to determine the tactics of managing patients with various nosological forms	<p>Know: methods of diagnosis, treatment and prevention of the most common surgical and urological diseases</p> <p>Be able to: make a plan of medical care taking into account the course of the disease, select and prescribe conservative therapy, develop the optimal treatment tactics</p> <p>Obtain and apply: algorithm for the implementation of basic diagnostic and therapeutic measures to provide medical care to patients with the most common surgical and urological pathology</p>

4.2. Content of the discipline

Section 1. DEPARTMENTAL SURGERY:

1. Acute appendicitis. Etiology, pathogenesis, clinic, diagnosis and treatment. Complications of acute appendicitis.
2. Acute appendicitis in children, in pregnant women, in elderly and senile persons. Chronic appendicitis.
3. Abdominal hernia: inguinal, femoral, white line, postoperative. Etiology and pathogenesis. Clinic, diagnosis and treatment. Strangulated hernia. Types of infringements. Features of operations at the restrained hernias.
4. Peptic ulcer of the stomach and duodenum. Etiology and pathogenesis. Clinic, diagnosis and treatment.
5. Complications of gastric ulcer and duodenal ulcer: ulcer perforation, bleeding, penetration, pyloroduodenal stenosis, ulcer transition into the malignant process. Diseases of the operated stomach.
6. Acute and chronic cholecystitis. Cholelithiasis. Etiology and pathogenesis. Clinic, diagnosis and treatment.
7. Mechanical jaundice. Obturation of the common bile duct (choledocholithiasis). Modern methods of diagnosis and treatment. Differential diagnosis of jaundice.
8. Acute pancreatitis. Etiology and pathogenesis. Classification. Clinic, diagnosis and treatment. Complications of acute pancreatitis. Diagnosis and treatment.
9. Chronic pancreatitis. Etiology and pathogenesis. Classification. Clinic, diagnosis and treatment.
10. Intestinal obstruction. Clinic and diagnosis. Dynamic (spastic, paralytic) and mechanical (strangulation, obstructive) intestinal obstruction.
11. Invagination. Clinic, diagnosis and treatment. Features of preoperative preparation and postoperative management of patients with intestinal obstruction.
12. Peritonitis. Classification. Acute purulent peritonitis. Clinic and diagnosis. Modern principles of complex treatment.
13. Trauma to the abdomen. Classification. Clinic and diagnosis. Trauma to the hollow and parenchymal organs, features of the clinical picture, depending on the location of damage.
14. Gastroduodenal bleeding non-ulcer etiology. Mallory-Weiss syndrome. Bleeding from varicose veins of the esophagus. Dieulafoy syndrome. Etiopathogenesis, clinic, diagnosis and treatment.

Section 2. UROLOGY:

1. Semiotics and symptomatology of urological diseases. Instrumental survey methods.
2. Emergency urology.
3. Nephrolithiasis.
4. Pyelonephritis (acute and chronic) and nephrogenic hypertension.

5. Tumor of the kidney and bladder.
6. Prostatic hyperplasia and prostate cancer.
7. Hydronephrosis and abnormal development of the organs of the genitourinary system.
8. Tuberculosis of the genitourinary system. Injuries of the genitourinary system.
9. Polyclinic technique. Andrology.
10. Acute and chronic renal failure. Monitoring the implementation of the academic history of the disease.

5. Educational technologies

- Multimedia lectures.
- Curation of profile patients.
- Solving situational problems.
- Execution of written works (abstracts on a given or free topic, reports).
- Independent work.
- Perform coursework.

5.1. Active learning methods

Solving situational problems

7th semester

Acute appendicitis. Acute cholecystitis. Pyelonephritis. Hydronephrosis. Acute and chronic renal failure.

8th semester

Peptic ulcer and duodenal ulcer. Abdominal trauma. Acute intestinal obstruction. Diseases of the pancreas. Peritonitis.

5.2 Educational technologies for students with disabilities

In order to implement an individual approach to teaching students who carry out the learning process on their own trajectory within the individual curriculum, the study of this discipline is based on the following possibilities: ensuring extracurricular work with students, including in an electronic educational environment using appropriate software, distance learning, capacities of the Internet resources, individual consultations, etc.

6. Educational and methodological support of students' independent work.

Assessment means for current performance monitoring, interim certification within the discipline.

6.1. Students' independent work plan

№	Topic	Type of independent work	Task	Recommended literature (sources of literature)	Number of hours
Section 1. DEPARTMENTAL SURGERY					
1	Semiotics of surgical diseases of the abdominal organs. Examination of the patient with surgical pathology.	Preparation for classroom training	To study the symptoms of peritoneal irritation, to master the procedure of physical examination of a patient with surgical abdominal pathology	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	2
2	Acute appendicitis. Etiology, pathogenesis, clinic, diagnosis and treatment. Complications of acute appendicitis	Preparation for classroom training	To study the clinical picture of acute appendicitis, to know the medical and diagnostic algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	2
3	Abdominal hernia: inguinal, femoral. Etiology and pathogenesis. Clinic, diagnosis and treatment. Strangulated hernia. Types of infringements. Features of operations at the restrained hernias.	Preparation for classroom training	To study the clinical picture of inguinal and femoral hernias, to know the therapeutic and diagnostic algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	2
4	Hernia white line of the abdomen. Postoperative hernia. Etiology and pathogenesis. Clinic, diagnosis and treatment. Features of operations. Rare forms of hernia.	Preparation for classroom training	To study the clinical picture of ventral hernia, to know the therapeutic and diagnostic algorithm, to master the technique of checking the main symptoms of the disease during physical examination	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	3

			of the patient		
5	Peptic ulcer and duodenal ulcer. Etiology and pathogenesis. Clinic, diagnosis and treatment.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	3
6	Complications of gastric ulcer and duodenal ulcer: ulcer perforation, bleeding, penetration, pyloroduodenal stenosis, ulcer transition into a malignant process. Diseases of the operated stomach. Curation of a profile patient.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	3
7	Acute and chronic cholecystitis. Cholelithiasis. Etiology and pathogenesis. Clinic, diagnosis and treatment.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	3
8	Complications of gallstones. Obturation of the common bile duct. Mechanical jaundice. Treatment. Complications JCB. Curation of a profile patient.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	3

			of the patient		
9	Peritonitis. Classification. Acute purulent peritonitis. Clinic and diagnosis. Modern principles of complex treatment.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	3
10	Peritonitis. Curation of a profile patient.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	2
11	Abdominal trauma. Classification. Diagnostic algorithm. Operational and non-operational treatment methods. Role of laparoscopy as a diagnostic and therapeutic method; diagnostic laparoscopy.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	3
12	Intestinal obstruction. Clinic and diagnosis. Dynamic (spastic, paralytic) and mechanical (strangulation, obstructive) intestinal obstruction.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	3

			of the patient		
1	Diseases of the pancreas. Acute pancreatitis. Etiology and pathogenesis. Classification. Clinic, diagnosis and treatment. Complications of acute pancreatitis: cysts and fistula. Diagnosis and treatment.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	1
2	Gastroduodenal bleeding non-ulcer etiology. Mallory-Weiss syndrome. Bleeding from varicose veins of the esophagus. Dyelafua syndrome. Etiopathogenesis, clinic, diagnosis and treatment. Gastroduodenal bleeding non-ulcer etiology. Curation of a profile patient.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	1
3	Semiotics and symptomatology of urological diseases. Instrumental survey methods	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	1
4	Nephrolithiasis. Tumor of the kidney and bladder. Prostate hyperplasia and prostate cancer	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by	1

			technique of checking the main symptoms of the disease during physical examination of the patient	Holly R. Fisher.-5th ed. 2162 p.	
5	Hydronephrosis and abnormal development of the organs of the genitourinary system. Pyelonephritis and nephrogenic hypertension.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	1
6	Emergency urology. Injuries of the genitourinary system.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	1
7	Acute and chronic renal failure. Tuberculosis of the genitourinary system.	Preparation for classroom training	To study the clinical picture of the disease, to know the diagnostic and treatment algorithm, to master the technique of checking the main symptoms of the disease during physical examination of the patient	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed. 2162 p.	1
8	Andrology. Outpatient admission	Preparation for classroom training	To study the clinical picture of diseases, to know the diagnostic and treatment algorithm, to master the	Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by	1

			technique of checking the main symptoms of the disease during physical examination of the patient	Holly R. Fisher.-5th ed. 2162 p.	

6.2. Guidelines for organizing students' independent work

Independent work of students is carried out in accordance with the methodological recommendations of the Department of Surgery.

1. Mitroshina S.Yu., Bazhenov MS, Nikolsky V.I. Regulation on perioperative prophylaxis: Guidelines. Penza. MIAC MHSD software, 2010.

1. Klimashevich A.V., Baulin A.V. General requirements for the implementation of the course work within the discipline Departmental Surgery: Tutorial. Penza: PSU Publ., 2011.

6.3. Materials for current performance monitoring and interim certification of students' knowledge

Competence mastering assessment

№	Type of assessment	Monitored topics (sections)	Monitored competence components
1.	Test validation	Section 1, 2	PC-5, PC -6, PC -8
2.	Practical skills test	Section 1, 2	PC -5, PC -6, PC -8
3.	Interview	Section 1, 2	PC -5, PC -6, PC -8
4.	Course work	Section 1, 2	PC -5, PC -6, PC -8
5.	Checking the solution of situational problems	Section 1, 2	PC -5, PC -6, PC -8

Approximate version of test:

1. What is incorrect about Benign Hyperplasia of Prostate ?
 - 1: Usually involves Median and lateral lobes of prostate
 - 2: Involves submucous glands
 - 3: Prostatic urethra below the level of verumontenum is elongated
 - 4: Treatment of choice is TURP
2. Triad of Renal cell carcinoma excludes
 - 1: pain
 - 2: hematuria
 - 3: fever
 - 4: mass
3. Bladder Calculi are:
 - 1: Most bladder calculi are primary.

- 2: Most bladder calculi are secondary
- 3: Common in elderly
- 4: usually solitary
- A: only 1 is correct
- B: only 2 is correct
- C: 2,3,4 are correct
- D: 1,4 are correct

4. What is correct about Retro Peritoneal Tumours?

- 1: Don't Move with respiration
- 2: Resonant note on percussion
- 3: Most common retro peritoneal tumour is Lipoma
- A: 1,2 B: 1,2,3
- C: 1,3 D: only 3

5. What is incorrect about HepatoCellular Carcinoma?

- 1: More Common in females
- 2: Hepatitis B and C both are incriminated in etiology
- 3: Fibrolamellar variant does not show increased levels of AFP
- 4: Prognosis of Fibrolamellar variant is better

6. What is incorrect about Choledochal Cyst?

- 1: More common in males
- 2: fusiform dilatation is commonest
- 3: dilatation of CBD and Intrahepatic ducts is 2nd most common form
- 4: High incidence of cholangiocarcinoma

7. What is incorrect about Gallstones?

- 1: 90% are mixed stones
- 2: are formed when bile salts to cholesterol ratio is 25: 1
- 3: Thallesemic patients tend to develop pigment stones
- 4: only 10 % of gall stones are radio opaque

8. A patient has colicky pain in right hypochondrium, history of fever and jaundice is also present. Patient also reports several symptom free intervals: most likely diagnosis is

- 1: Acute Cholecystitis
- 2: Ascending Cholangitis
- 3: Chronic Cholecystitis
- 4: Amoebic Liver Abscess

9. Match the following:

Signs in pancreatitis

- | | |
|------------------------|-------------------------------|
| a) :Grey Turner's Sign | i) Flank Discolouration |
| b) :Cullen's sign | ii) Umbilical Discolouration. |
| c) :Fox's Sign | III) Inguinal Ligament. |

- A: a-IV, b-III, c-II B: a-i, b-IV, c-II
 C: a-I, b-II, c-III, D: a-III, b-II, c-IV

10. Indirect Hernia:

- 1: Neck is narrow
- 2: Sack is lateral to inferior epigastric artery
- 3: is more common in elderly

4: is precipitated by surgeries like appendectomy

A: 1,2 are true

B:1,2,3 are true

C:all are true

D:1,2,4 are true

11. Ziemen's test is used to detect

1: indirect inguinal hernia

2: direct inguinal hernia

3: none of the above

4: both

12. **Hiatus Hernia**

1: Incidence of sliding variant is more than that of rolling type.

2: Sliding hernia is associated with cardiac arrhythmias

3: Occasionally gangrene of stomach may result in sliding variant

A: 1

B:2,3 are correct

C:1,2,3 are correct

D:none is correct

13. What is incorrect about **Complications of gastric ulcer?**

1: Hour glass contracture is found only in females

2: in hour glass contracture , niche is found along lesser curvature

3: in hour glass contracture , notch is found along lesser curvature

4: in teapot deformity: Bilroth-I is the procedure of choice.

14. What is incorrect about exocrine pancreas tumour?

1: Male predominance

2: mean age > 60 years

3: alcohol not incriminated in etiology

4: rarely metastatic

15. A patient has abdominal pain + jaundice + malena. The diagnosis is

a.Hemobilia

b. Acute cholangitis

c.Carcinoma GB

d. Acute pancreatitis

Test evaluation criteria

"Excellent" ("5") - 91% or more correct answers to test items.

"Good" ("4") - 81-90% of correct answers to test items.

"Satisfactory" ("3") - 71-80% of correct answers to test items.

"Unsatisfactory" ("2") - 70% or less correct answers to test items.

Sample questions for current knowledge monitoring

Appendicitis.

1. Anatomy of the organs of the ileocecal region.

2. Blood supply to the appendix.

3. Options for the location of the appendix.

4. Clinical classification of acute appendicitis.

5. Morphological classification of acute appendicitis.

Cholelithiasis

1. Anatomy of extrahepatic bile ducts.

2. Departments of the gallbladder.
3. Blood supply to the gallbladder.
4. Borders of the Kahlo triangle.
5. Borders of the subhepatic triangle.

Acute pancreatitis.

1. Blood supply to the pancreas.
2. Location and shape of the pancreas, departments.
3. Virunga and Santorini ducts.
4. Etiological forms of acute pancreatitis.
5. Pathogenesis of acute pancreatitis, scheme.

Acute intestinal obstruction.

1. Departments of the gastrointestinal tract. Small intestine.
2. Departments of the gastrointestinal tract. Colon.
3. Blood supply to the small intestine.
4. Blood supply to the colon.
5. Predisposing causes of acute intestinal obstruction.

Peptic ulcer and duodenal ulcer.

1. Anatomical sections of the stomach and duodenum.
2. Ligament apparatus of the stomach.
3. Blood supply of the stomach.
4. Blood supply of the duodenum.
5. Function of the gastric mucosa.

Peritonitis and abdominal trauma

1. Classification.
2. Mannheim Peritonitis Index.
3. Principles of treatment of common purulent peritonitis.
4. Methods of detoxification.
5. Methods of extracorporeal detoxification with peritonitis

Hernia

1. Definition of hernia. Classification of hernia.
2. Anatomy of the inguinal canal.
3. Clinic and diagnosis of inguinal hernia.
4. Type of surgical interventions for inguinal hernia.
5. Anatomy of the deep femoral ring.

Gastroduodenal bleeding non-ulcer genesis

1. Anatomy of the esophagus, stomach, intestines. Features of the blood supply of these organs.
2. Anatomy of the portal vein system.
3. Bleeding from esophageal varicose veins. Features of hemostatic therapy.
4. Bleeding with Mallory-Weiss syndrome. Features of hemostatic therapy.
5. Bleeding with Dyelafua syndrome. Features of hemostatic therapy.

Emergency urology.

1. Renal colic. Etiology and pathogenesis of renal colic.
2. Symptomatology of renal colic.
3. Differential diagnosis with acute diseases of the abdominal organs.
4. Therapeutic measures for renal colic.

5. Acute urinary retention: etiology and pathogenesis of acute urinary retention.

Interview Evaluation Criteria

“Excellent” - the answer is complete, literate, logical; the student is fluent in specialized terminology; answers to additional questions are clear and concise.

“Good” - the answer is not logical enough with single errors in details; answers to additional questions are correct, not clear.

“Satisfactory” - the answer is not enough literate, incomplete, with errors in details; answers to additional questions are not clear enough, with errors in details.

“Unsatisfactory” - the answer is illiterate, incomplete, with gross errors; answers to additional questions are incorrect.

Sample practical skills questions

Tell the execution algorithm

1. Catheterization of the bladder;
2. Gastric sensing;
3. Paracentesis;
4. Puncture of the posterior fornix;
5. Stopping bleeding, bandaging and wound tamponade;
6. Heart massage, artificial respiration;
7. Tracheostomy;
8. Appendectomy;
9. Hernia repair with uncomplicated and strangulated hernia;
10. Closure of the perforation of the stomach and intestines;
11. Overlay gastro and eunostoma;
12. Colostomy;
13. Resection of the small intestine with an anastomosis end to end and side to side;
14. Sanitation and drainage of the abdominal cavity with peritonitis;
15. Imposition of biliodigestive anastomoses;
16. Stopping intra-abdominal bleeding;
17. Opening of abscesses and phlegmon;
18. Imposition of epicistostomy;

Criteria for assessing practical skills

“Excellent” (“5”) - 91% or more correct answers to tasks.

“Good” (“4”) - 81-90% of correct answers to tasks.

“Satisfactory” (“3”) - 71-80% of correct answers to tasks.

“Unsatisfactory” (“2”) - 70% or less correct answers to tasks.

Sample Exam Questions

Appendicitis.

1. Appendicitis. Anatomical and physiological information about the cecum and the appendix. Acute appendicitis. Classification. Pathological forms. Etiology, pathogenesis. Clinic and diagnosis.

2. Features of the clinic, depending on the variant position of the appendix. Acute appendicitis in children, pregnant women and the elderly.

3. Treatment, indications and contraindications for appendectomy, the choice of method of pain relief and quick access. Preparing patients for surgery, management of the postoperative period.
4. Complications of acute appendicitis: appendicular infiltrate, periappendicular abscess, inter-intestinal, subphrenic and pelvic abscess, pylephlebitis. Clinic of various complications; their diagnosis (ultrasound, CT, etc.) and treatment (surgical, ultrasound method of abscess drainage).
5. Peritonitis as a complication of acute appendicitis. Features of surgical intervention, depending on the prevalence of peritonitis. Indications for laparostomy, methods and management of the patient in the postoperative period.

Cholelithiasis

1. Anatomical and physiological information about the liver, gallbladder and bile ducts. Classification of diseases. Research methods of patients with diseases of the liver, gallbladder and bile ducts.
2. Gallstone disease. Epidemiology, frequency. Etiology and pathogenesis of stone formation. Clinic, diagnosis. Differential diagnostics. Treatment (extracorporeal lithotripsy, medical dissolution of stones), indications for surgery.
3. Methods of operation, indications of him. Value of intraoperative research methods to select the method of operation. Laparoscopic cholecystectomy, from a mini-access.
4. Complications of cholelithiasis: choledocholithiasis, cicatricial stenosis of the major duodenal papilla, prolonged strictures of the bile ducts. Causes of these complications. Clinic. Preoperative and intraoperative diagnosis.
5. Treatment. Indications for choledochotomy and methods of its completion (blind suture, external drainage, choledochoduodenostomy, papillosphincterotomy). Endoscopic papillotomy.

Acute pancreatitis.

1. Anatomical and physiological information about the pancreas. Classification of diseases.
2. Acute pancreatitis. Definition of the concept. Etiology and pathogenesis. Classification. Pathological anatomy. Clinic, periods of progressive pancreatic necrosis. Diagnostics: ultrasound, laparoscopy, CT, angiography, percutaneous puncture, enzyme diagnostics.
3. Conservative treatment. Role of cytostatics, stylamine. Medical endoscopy, indications for surgical treatment and types of operations.
4. Purulent complications of acute pancreatitis, diagnosis and treatment. Outcomes of the disease.
5. Chronic pancreatitis, pancreatic cysts. Etiology and pathogenesis of chronic pancreatitis. Classification. Clinic, diagnosis and differential diagnosis. Special diagnostic methods: ultrasound, CT, angiography, percutaneous puncture of the gland. Treatment: conservative and surgical.

Acute intestinal obstruction.

1. Definition of the concept. Classification (by origin, pathogenesis, anatomical localization, clinical course). Methods of research of patients.
2. Dynamic (spastic, paralytic) intestinal obstruction. Etiology, pathogenesis.

3. Dynamic intestinal obstruction as a symptom of acute diseases of the chest, abdominal cavities and retroperitoneal space, chronic intoxication. Clinic, differential diagnosis. Principles of treatment.
4. Mechanical intestinal obstruction. Obturational, strangulation, mixed. Classification of mechanical intestinal obstruction.
5. Obstructive intestinal obstruction. Definition of concepts, causes, pathogenesis. Features of violations of water-electrolyte and acid-base state.

Peptic ulcer and duodenal ulcer.

1. Anatomical and physiological information about the stomach and duodenum. Classification of diseases of the stomach.
2. Methods of examination of patients with diseases of the stomach: secretion, motility, fluoroscopy, esophagoduodenogastroscopy.
3. Duodenal ulcer. Etiology and pathogenesis of the disease. Pathological changes.
4. Stages of development of ulcer disease. Clinic and diagnosis. Methods for the study of motility and various phases of gastric secretion (basal, stimulated).
5. Indications for surgical treatment of chronic duodenal ulcer. Types of operations: resection of the stomach, SPV, draining operations and vagotomy. Methods of gastrectomy: Billroth-1, Hofmeister – Finsterer, Roux.

Peritonitis and abdominal trauma

1. Definition of the concept. Anatomical and physiological information about the peritoneum. Classification of peritonitis (by clinical course, localization, the nature of the effusion, by the nature of the pathogen, by stage).
2. Acute purulent peritonitis. Sources of acute purulent peritonitis. Features of the spread of an abdominal infection in various acute surgical diseases of the abdominal organs. Pathological changes in acute purulent peritonitis, pathogenesis. Significance of abnormal absorption from the abdominal cavity, intestinal paresis, endotoxemia, hydroequilibrium balance and microcirculation in the development of the clinical picture of peritonitis. Clinic, diagnosis, differential diagnosis.
3. Modern principles of complex treatment. Features of surgical intervention. Indications for drainage and tamponade of the abdominal cavity, laparostomy, carrying out program rehabilitation. Role of antibiotics in the complex treatment of peritonitis.
4. The fight against violations of hemodynamics and microcirculation, hydro-ionic disorders, intoxication and intestinal paresis in the postoperative period. Methods of extracorporeal detoxification of the body. Treatment outcomes. Role of emergency management in the early diagnosis and treatment of peritonitis.

Hernia

1. Hernia of the abdomen. Definition of the concept. Elements of a hernia of a stomach. Classification of hernias by origin, localization, course.
2. Frequency of hernia of the anterior abdominal wall. Etiology and pathogenesis. General symptoms of hernia. Diagnostics. Principles of surgical treatment.

3. Main stages of the operation of hernia repair. Contraindications to surgery. Prevention of hernia complications.
4. Complications of hernia: inflammation, invincibility, coprostasis, strangulation. Definition of the concept. Clinic, diagnosis, treatment.
5. Strangulated hernia. Definition of the concept. Mechanism of fecal and elastic infringement. Pathological changes in the strangulated organ. Types of infringement: retrograde, near-wall. Clinic strangulated hernia.

Gastroduodenal bleeding non-ulcer genesis

1. Anatomy of the esophagus, stomach, intestines. Features of the blood supply of these organs.
2. Anatomy of the portal vein system.
3. Bleeding from esophageal varicose veins. Features of hemostatic therapy.
4. Bleeding with Mallory-Weiss syndrome. Features of hemostatic therapy.
5. Bleeding with Dyelafua syndrome. Features of hemostatic therapy.

Semiotics and symptomatology of urological diseases. Instrumental methods survey.

1. Palpation and auscultatory research methods in urology.
2. Causes, clinical presentation and diagnosis of renal colic.
3. Causes, clinical presentation, diagnosis and treatment of acute urinary retention.
4. Types of hematuria. Ddiagnostic value of this symptom. Research needed in case of "painless" gross hematuria.
5. Role of bladder catheterization in the differential diagnosis of anuria and ischuria

Emergency urology.

1. Renal colic. Etiology and pathogenesis of renal colic.
2. Symptomatology of renal colic.
3. Differential diagnosis with acute diseases of the abdominal organs.
4. Therapeutic measures for renal colic.
5. Acute urinary retention: etiology and pathogenesis of acute urinary retention.

Nephrolithiasis.

1. What are the main etiological factors of urolithiasis?
2. What is the clinical significance of determining the chemical composition of calculus?
3. Name the necessary conditions for the extraction of ureteral stones.
4. What happens before urolithiasis - pain or hematuria?
5. Specify the methods of diagnosis and relief of renal colic.

Pyelonephritis (acute and chronic) and nephrogenic hypertension.

1. Differential diagnosis of acute primary secondary pyelonephritis.
2. Ways of infection in the kidney with acute pyelonephritis.
3. Bacteremic shock, its causes and methods of treatment.
4. Causes of chronic pyelonephritis, differential diagnosis of phases: active, latent and remission.
5. Laboratory diagnosis of chronic pyelonephritis.

Tumor of the kidney and bladder.

1. Classification of kidney tumors.
2. Ways to metastasize parenchyma tumors and renal pelvis tumors.
3. Renal and extrarenal cancer symptoms of renal parenchyma.
4. Diagnosis of kidney tumors.
5. Differential diagnosis of kidney tumors with polycystic, solitary cyst, hydronephrosis.

Prostate hyperplasia and prostate cancer.

1. What is BPH in terms of morphogenesis?
2. What happens to the prostate gland itself in BPH?
3. What pathologic and anatomical changes occur in the upper and lower urinary tract in BPH?
4. What are the three stages of the clinical course of the disease?
5. What do we call residual urine symptom and how is it determined?
6. What hormones are used to treat prostate cancer?

Hydronephrosis and abnormal development of the organs of the genitourinary system.

1. Name the types of kidney anomalies. What are the possible complications of their anomalies and what are they caused by?
2. Carry out a differential diagnosis of pelvic or iliac dystopia of the kidney with nephroptosis.
3. Possible complications of nephroptosis, methods of treatment of this disease.
4. Stages of polycystic, methods of its diagnosis and treatment.
5. Methods of diagnosis and treatment of ureterocele.

Tuberculosis of the genitourinary system. Injuries of the genitourinary system.

1. Indications for surgical treatment of closed kidney injury.
2. Methods of diagnosis of kidney injury.
3. Principles of conservative treatment of kidney injury.
4. Types of surgical interventions for kidney injury.
5. Symptoms of intraperitoneal rupture of the urinary p^u-zyr.

Outpatient admission. Andrology.

1. Forms of acute cystitis, treatment methods.
2. Features of the treatment of chronic cystitis.
3. Possible causes of cystalgia.
4. Differential diagnosis of cystitis and cystalgia.
5. Etiological features of varicocele on the right.

Acute and chronic renal failure. Monitoring Academic History diseases.

1. Indicate the causes of pre-renal, renal, post-renal and arena forms of acute renal failure.
2. Classification of acute renal failure by stages.
3. Symptomatology and diagnosis of acute renal failure.
4. Treatment of acute renal failure.
5. Main etiological factors of chronic renal failure.

Evaluation Criteria for an Exam Interview

“Excellent” - the answer is complete, literate, logical; the student is fluent in medical terminology; Answers to additional questions are clear and concise.

“Good” - the answer is not logical enough with single errors in details; answers to additional questions are **correct, but not clear**.

“Satisfactory” - the answer is not enough literate, incomplete, with errors in details; answers to additional questions are not clear enough, with errors in details.

“Unsatisfactory” - the answer is illiterate, incomplete, with gross errors; answers to additional questions are incorrect

Sample cases

Case No. 1

A 69 year old patient with complaints of dull pain in the right iliac region, low-grade fever, was referred to the emergency department of the clinic for inpatient treatment. He got sick 4 days

ago, when he noted the appearance of acute epigastric pain, low-grade fever, nausea. By the 3rd day pain decreased and moved to the right iliac region.

Objectively: the patient is in good physical condition. Pulse is 88 per minute BELL 130 and 80 mm Hg. The tongue is clean, wet. The abdomen during palpation is slightly symmetrically swollen, soft, painful with palpation in the right iliac region, where the study palpable painful, immobile, elastic consistency education. Symptoms of peritoneal irritation are absent. Body temperature is 37.3°.

Blood test. The number of leukocytes is $7.7 \times 10^9 / l$.

The task

1. Make a preliminary diagnosis.
2. Present the classification of the diagnosed disease and its complications.
3. List the main causes of this disease.
4. In case of which diseases is it necessary to conduct a differential diagnosis?
5. Determine the plan of examination of the patient.
6. Tactics of the surgeon in this situation.
7. List the groups of drugs used to treat this form of the disease.
8. Is this patient indicated for physiotherapy treatment?
9. What are the possible options for the development of the clinical situation?

What recommendations will you give to the patient at discharge from the hospital?

Criteria for evaluating the solution of situational problems

“Excellent” - the answer is complete, literate, logical; the student is fluent in medical terminology.

“Good” - the answer is not logical enough with single errors in details; there are some mistakes in medical terminology.

“Satisfactory” - the answer is not enough literate, incomplete, with errors in details; there are errors in medical terminology.

“Unsatisfactory” - the answer is illiterate, incomplete, with gross errors; the student demonstrates ignorance of medical terminology.

Approximate topics of coursework

1. Acute catarrhal appendicitis
2. Acute phlegmonous appendicitis
3. Acute gangrenous appendicitis
4. Acute appendicitis complicated by appendicular infiltrate
5. Acute destructive appendicitis complicated by peritonitis
6. Gallstone disease. Acute calculous cholecystitis
7. Gallstone disease. Mechanical jaundice
8. Peptic ulcer and duodenal ulcer.
9. Peptic ulcer and duodenal ulcer complicated by perforation
10. Peptic ulcer of the stomach and duodenum complicated by bleeding

11. Acute pancreatitis, edematous form
12. Acute destructive pancreatitis (pancreatonecrosis)
13. Acute intestinal obstruction
14. Abdominal trauma
15. Chronic pancreatitis
16. Stomach hernia. Uncomplicated inguinal hernia
17. Stomach hernia. Inguinal hernia complicated by strangulation
18. Stomach hernia. Postoperative ventral hernia, uncomplicated
19. Hernia of the abdomen. Postoperative ventral hernia, complicated by infringement.
20. Bleeding from esophageal varicose veins.
21. Mallory-Weiss syndrome.
22. Semiotics and symptomatology of urological diseases.
23. Instrumental and radiological methods of research in urology.
24. Andrology. The clinic, diagnosis and treatment of prostatitis, hydrocele, varicocele, phimosis, paraphimosis, impotence and male infertility.
25. Urolithiasis. Etiology, pathogenesis, clinic, diagnosis, treatment methods.
26. Bladder cancer. Risk factors, etiology, pathogenesis, morphology, clinic, diagnosis, treatment.
27. Tumors of the kidneys. Risk factors, etiology, pathogenesis, morphology, clinic, diagnosis, treatment.
28. Prostate cancer. Risk factors, etiology, pathogenesis, morphology, clinic, screening, diagnosis, treatment.
29. Prostate adenoma. Etiology, pathogenesis, morphology, clinic, diagnosis, treatment.
30. Hydronephrosis and abnormal development of the organs of the genitourinary system.
31. Acute and chronic renal failure. Etiology, pathogenesis, classification, clinic, diagnosis and treatment.
32. Tuberculosis of the genitourinary system. Pathogenesis, symptomatology, clinical course, methods of diagnostics and treatment, prevention of tuberculosis of the genitourinary system.
33. Injuries of the genitourinary system. Etiology, pathogenesis, classification, clinic, diagnosis, principles of treatment.
34. Acute and chronic pyelonephritis. Etiology, pathogenesis, classification, clinic, diagnosis and treatment.
35. Emergency urology. Acute urinary retention. Hematuria. Renal colic.
36. Nephroptosis. Risk factors, classification, clinic, diagnosis, treatment.

Evaluated activities in the course work

Activities	Points
Analyzing the task formulated as a technical need and all available source data for its implementation, screening redundant characteristics and determining the missing ones	15
Choosing methods for solving problems and justifying the choice	15
Performing the task	15
Analyzing the solution obtained and its qualitative assessment	15
Total	60
Defending course work	40

Activities	Points
Total	100

7. Educational, methodical and informational support of the discipline

a) Basic literature

Greenfield`s surgery: scientific Principles and practice/editors Michael W. Mulholland et al.illustrations by Holly R. Fisher.-5th ed., 2162 p.

b) Additional literature

Manipal Manual of Surgery/ editors K Rajgopal Shenoy, Anitha Shenoy (Nileshwar).- 4th ed., 1196 p.

c) Software and Internet resources

1. Microsoft Windows (DreamSpark/Microsoft Imagine Standart); reg. number 00037FFEBACF8FD7, contract № CД-130712001 of 12.07.2013.

2. Free video lectures - freevideolectures.com

3. EBS 'student Consultant - <http://www.studmedlib.ru>

5. Kaspersky Anti-Virus 2016- 2017, reg. number KL4863RAUFQ, contract № XII-567116 of 29.08.2016.

6. Open source software: LibreOffice; Google Chrome; Adobe Reader; 7zip.

8. Material and technical support of the discipline.

S.No.	Name of special premises and premises for independent work	Equipment of special premises and premises for independent work
1.	Training room number 8, building 18 N.N. Burdenko Penza Regional Clinical Hospital, 1 floor, 12 m2	Laptop - 1 pc. Table teacher - 1 pc. Training table - 1 pc. Wardrobe - 2 pcs. Training board - 1 pc. Chairs - 20 pcs. Couch-1pcs. Negatoscope - 1pc. Visual aids (posters), X-rays Phantom of the female perineum - 1 pc. Phantom male perineum - 1 pc. Phantom of the pelvis with a set of liners - 1 pc. Model for holding cardiopulmonary resuscitation - 1 pc. Surgical Instrument Set N.N. Burdenko Clinical Diagnostic Laboratory Design Bureau, an operating unit, including specialized operating rooms, a laparoscopic KARL STORZ stand, a KARL STORZ laparoscope, a GII electrosurgical dissector; radiology department, X-ray unit ABRIS, MAXIMA CRD, endoscopy unit, OLIMPUS video endoscopy, expert-class ultrasound machines with adapters for biopsy

S.No.	Name of special premises and premises for independent work	Equipment of special premises and premises for independent work
		needle SIEMENS ACUSON -300, set for percutaneous hepaticostomy COOK; devices SKT "AQVILION TOSHIBA-32" and MRI GE Signa HD x 1,5T OKB im. NN Burdenko (on the basis of an agreement on the organization of practical training of students).
2.	computer class building 18 N.N. Burdenko Penza Regional Clinical Hospital Burdenko "1 floor, 12 m2	Multimedia projector "BenQ" Table teacher - 1 pc. Interactive board - 1 pc. Laptop - 1 pc. Chairs - 40 pcs.

The study program of the discipline Departmental Surgery and Urology was compiled in accordance with the requirements of the Federal State Educational Standards of Higher Education in compliance with the recommendations in the field of study 31.05.01 General Medicine.

The program was compiled by:

1. E.G. Feoktistova, Associate Professor

2. N.G. Galkina, Associate Professor

It is prohibited to reproduce the said program in any form without the prior written permission of the department that developed the program.

The programme was approved at the meeting of the Department "Surgery"

Record No. 6 dated « 4 » 03 2016

Head of the department

Professor A.N. Mitroshin

The programme was coordinated with

Dean of the Faculty of General Medicine Moiseva †.Ya. Moiseeva

The program was approved by the methodological committee of the Medical Institute

Record No. 7

dated « 5 » 03 2016

Head of the methodological committee of the

Medical Institute

Professor O.V. Kalmin

Verification and translation

Проверено, верно, соответствует оригиналу
Проверено О.В. Калмин

[illegible]

Shropshire