Khanty-Mansiysk Autonomous Okrug-Ugra "Surgut State University"

| Approved by |
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| Deputy Rector for Academic Affa |
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| E.V. Konovalova |

"16" June 2022, Record No.6

Faculty Surgery, Urology

Syllabus

Department Surgical diseases

Curriculum

s310501-ЛечДело-20-1.pli.xml Specialty 31.05.01 General Medicine

Qualification **General Practitioner**

Full-time Form of education

Total (in credits) 6

Total academic hours 216 Control: 8^{th} term including:

150 Classes Self-study 39 Control hours 27

Course outline in terms

| Academic year (Term) Weeks | 4 (4.7) | | 4(4.8) 12 | | То | tal |
|----------------------------|-------------------------|-----|------------------|-----|-----|-----|
| Types of classes | Cur | Syl | Cur | Syl | Cur | Syl |
| Lectures | 16 | 16 | 16 | 16 | 32 | 32 |
| Practical | 64 | 64 | 54 | 54 | 118 | 118 |
| Self-study | 28 | 28 | 11 | 11 | 39 | 39 |
| Control hours | - | - | 27 | 27 | 27 | 27 |
| Total | 108 | 108 | 108 | 108 | 216 | 216 |

| The Syllabus is compiled by: PhD in Medical Sciences (Surgery), Associate Professor, Zorkin A. A |
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| The Syllabus Faculty Surgery, Urology |
| Developed in accordance with Federal State Educational Standard: |
| Federal State Educational Standard of higher education in the specialty 31.05.01 General medicine (Order of the Ministry of Education and Science of the Russian Federation on August, 12, 2020 №988) |
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| Based on the Curriculum: 31.05.01 GENERAL MEDICINE Specialization: General Medicine Approved by the Academic Council of Surgut State University, "16" June 2022, Record No.6 |
| The Syllabus was approved by the department Surgical diseases |

Head of Department, Doctor of Medicine, Professor Darvin V.V.

| 1. COURSE OBJECTIVES |
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| 1.3 The aim of mastering the discipline "Faculty Surgery" is to develop the ability to make a diagnosis, condudifferential diagnostics and solve tactical issues in the main nosological forms of surgical pathology, including urgent, in their typical and complicated course with substantiation of personalized diagnostic, therapeutic and preventive measures from the standpoint of evidence-based medicine, as well as knowledge of modern principles providing emergency medical care for urgent surgical diseases and conditions and their complications, including 1.4 The objective of the course is the development of students' personal qualities and the formation of general cultur (general scientific, social and personal, instrumental), general professional and professional competencies accordance with the Federal Educational Standards of Higher Education. |
| 2. COURSE OVERVIEW |
| Course code (in curriculum) 51.0.04 |
| 2.1 Assumed background knowledge: |
| X-Ray diagnostics |
| Pathological anatomy |
| Biochemistry |
| Pathological physiology |
| Pharmacology |
| Propedeutics of Internal Medicine |
| Human anatomy |
| Histology, embryology, cytology |
| Normal physiology |
| Microbiology, Virology |
| Topographic anatomy, operative surgery |
| General surgery |
| Urology |
| 2.2 Post requisites: |
| Oncology, radiation therapy |
| Faculty therapy |
| Obstetrics |
| Gynecology |
| Hospital therapy (5 course) |
| Hospital therapy (6 course) |
| Hospital surgery. Pediatric surgery |
| Hospital surgery |
| 3. COMPETENCES UPON COMPLETION OF THE COURSE (MODULE) |
| PC-8.2: Maintains medical records, including in electronic form |
| Knowledge: |
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| Abilities: |
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| Skills: |
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| PC-5.1: Demonstrates knowledge of the mechanisms of action, methods of application of pharmacotherapy, |
| therapeutic nutrition, medical devices and methods of non-drug treatment, palliative and personalized medical care |
| Knowledge: |
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| Abilities: |
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| Skills: |
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| PC-5.2: He will treat various categories of patients with diseases on an outpatient basis, in hospitals and centers of high-tech medical care (HMP) with the use of drugs, medical devices and medical nutrition, taking into account the clinical picture, in accordance with current procedures, standards of medical care, clinical guidelines (treatment protocols) |
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| Knowledge: |
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| Abilities: |
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| Skills: |
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| PC-5.4: Demonstrates knowledge of side effects of drugs, methods of their administration, knowledge of the duration of their use and assesses the effectiveness and safety of pharmacotherapy, medical nutrition and the use of non-drug treatment, medical nutrition, palliative care |
| Knowledge: |
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| Abilities: |
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| Skills: |
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| PC-3.3: Conducts early and differential diagnosis of diseases |
| Knowledge: |
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| Abilities: |
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| Skills: |
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| PC-3.4: Carries out routing and management of patients on the basis of current legislation (standards, procedures for the provision of medical care, Clinical guidelines) |
| Knowledge: |
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| Abilities: |
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| Skills: |
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| PC-1.1: Demonstrates knowledge about etiology, pathogenesis, diagnostic criteria (clinical - subjective, physical, laboratory, instrumental) determines the patient's main pathological conditions, symptoms, disease syndromes and diagnoses nosological |
| forms Knowledge: |
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| Abilit | ties: |
|--------|--|
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| Skills | : |
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| DC 1 | 2. Conducts differential diagnostics evaluates the prognesis (short, medium, and long term) of the source of the |
| | 2: Conducts differential diagnostics, evaluates the prognosis (short-, medium- and long-term) of the course of the se, reveals complications of acutely arisen and complications of chronic diseases |
| | vledge: |
| | |
| Abilit | u. |
| ADIII | ues: |
| | |
| Skills | • |
| OKIIIS | • |
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| L | |
| 3.1 | By the end of the course students must: know: |
|).1 | 1. Etiology, pathogenesis, diagnostic criteria (clinical - subjective, physical, laboratory, instrumental), the main |
| | pathological conditions, symptoms, syndromes of surgical diseases, classification of nosological forms in accordance |
| | with the International Statistical Classification of Diseases and Health Problems, X - XI revisions |
| | , and the second |
| | 2. Principles of differential diagnosis and prognosis of the course of surgical diseases, diagnosis of acute complications |
| | and complications of chronic diseases. |
| | 3. Clinical manifestations of surgical diseases, methods of examination and clarifying diagnostics, as well as their |
| | peculiarities in pregnant women and elderly and senile persons. |
| | 4. The principles of routing and management of surgical patients on the basis of current legislation (standards, |
| | procedures for the provision of medical care, Clinical guidelines), treatment on an outpatient basis, in hospitals and high- |
| | tech medical care (HMP) centers with the use of drugs, medical devices and medical nutrition taking into account the |
| | clinical picture, in accordance with current procedures, standards of medical care, clinical guidelines (treatment |
| | protocols). |
| | 5. Mechanisms of action, methods of application of pharmacotherapy, medical nutrition, medical devices and methods of |
| | non-drug treatment, palliative and personalized medical care in surgical patients. |
| | 6. Side effects of drugs, methods of their administration, knowledge of the duration of their use, criteria for the |
| | effectiveness and safety of pharmacotherapy, medical nutrition and the use of non-drug treatment, medical nutrition, |
| | palliative care in surgical patients. |
| | 7. Principles of maintaining medical records, including in electronic form |
| | |
| 3.2 | be able to: |
| | 1. To identify the main pathological conditions, symptoms, syndromes of surgical diseases in a patient on the basis of physical, laboratory and instrumental data. |
| | 2. To carry out differential diagnostics, to assess the prognosis (short-, medium- and long-term) of the course of a surgical |
| | disease, to identify acute complications and complications of chronic diseases. |
| | 3. Conduct an examination of a surgical patient (collect and analyze the patient's complaints, data of his anamnesis, physica |
| | data based on the results of the examination, determine the necessary examination plan, evaluate the parameters of laboratory |
| | instrumental, pathological and anatomical and other research methods in order to diagnose diseases, evaluate the prognosis of its course and outcomes. |
| | 4. Formulate a preliminary and clinical diagnosis in accordance with the International Statistical Classification of Diseases and |
| | Health Problems X - XI revisions and current clinical classifications; |
| | 5. Conduct early diagnosis and differential diagnosis of surgical diseases. |
| | 6. Carry out the routing and management of surgical patients in accordance with the current legislation (standards, procedure. |
| | for the provision of medical care, Clinical guidelines). |
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| | 7. To prescribe pharmacotherapy, medical nutrition, the use of medical devices and methods of non-drug treatment, palliative |
|---|---|
| , | and personalized medical care for surgical diseases, taking into account the side effects of drugs, to assess the effectiveness and |
| | safety of pharmacotherapy, nutritional therapy and the use of non-drug treatment, palliative care. |

8. Carry out treatment for various categories of patients with surgical diseases on an outpatient basis, in hospitals and high-tech medical care (HMP) centers with the use of drugs, medical devices and medical nutrition, taking into account the clinical picture, in accordance with current procedures, standards of medical care, clinical guidelines (treatment protocols);

8. Maintain medical records, including in electronic form

3.3 have skills of:

- 1. Methods of early diagnosis and differential diagnosis of surgical diseases, emergency conditions in surgery and complications, incl. in pregnant women and elderly and old people.
- 2. Methods of physical, laboratory and instrumental examination of surgical patients, emergency conditions in surgery and complications, incl. in pregnant women and elderly and old people.
- 3. The methodology for making a preliminary and clinical diagnosis in accordance with the International Statistical Classification of Diseases and Health Problems X XI revisions and current clinical classifications.
- 4. Organization of routing and management of surgical patients on the basis of current legislation (standards, procedures for the provision of medical care, Clinical guidelines).
- 5. Methods of drug and surgical treatment, medical nutrition, medical devices and methods of non-drug treatment, palliative and personalized medical care for surgical diseases on an outpatient basis, in hospitals and centers of high-tech medical care (HMP) with the use of drugs, medical devices and medical nutrition, taking into account the clinical picture, in accordance with current procedures, standards of medical care, clinical guidelines (treatment protocols).
- 6. Keeping medical records, including in electronic form.

| | 4. STRUCTURE AND CONTENTS OF THE COURSE (MODULE) | | | | | | | | | |
|------------|--|------------------|-------------------|---|--|----------------|------------------------------|--|--|--|
| Class Code | Topic /class type/ | Term/Ac. year | Academic hours | Competences | Literature | Inter activ | Notes | | | |
| | 1. Faculty surgery | 7 | | | | | | | | |
| 1.1 | History of surgery. The principles of organizing surgical care in the Russian Federation. /Lecture/ | 7 | 2 | | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Conspectus | | | |
| 1.2 | Acquaintance with the organization and principles of operation of the surgical hospital. Examination of a surgical patient. Registration of medical documentation in a surgical hospital. The program of examination and treatment of a patient with a surgical profile. /Practical classes / | 7 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Oral quiz practical skill | | | |
| 1.3 | Methods for the diagnosis and differential diagnosis of acute surgical diseases of the abdominal organs. / Lecture / | 7 | 2 | | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Conspectus | | | |
| 1.4 | Traditional and minimally invasive surgical technologies in the treatment of acute surgical diseases of the abdominal organs. / Lecture / | 7 | 2 | | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Conspectus | | | |
| 1.5 | Acute appendicitis and its complications /Lecture/ | 7 | 2 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Conspectus | | | |

| 1.6 | Acute appendicitis /Practical classes/ | 7 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | 1 | Oral quiz, case- study, test, practical skill |
|------|--|---|---|---|--|---|---|
| 1.7 | Complicated acute appendicitis /Practical classes/ | 7 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Oral quiz, case- study, test, practical skill |
| 1.8 | Acute appendicitis /Self-study/ | 7 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Essay |
| 1.9 | Acute calculous cholecystitis and its complications. /Lecture/ | 7 | 2 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Conspectus |
| 1.10 | Acute calculous cholecystitis /Practical classes/ | 7 | 8 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | 1 | Oral quiz, case- study, test, practical skill |
| 1.11 | Complicated acute calculous cholecystitis /Practical classes/ | 7 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Oral quiz, case- study, test, practical skill |
| 1.12 | Acute calculous cholecystitis /Self-study/ | 7 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Essay |
| 1.13 | Acute intestinal obstruction /Lecture/ | 7 | 2 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Conspectus |
| 1.14 | Acute intestinal obstruction /Practical classes/ | 7 | 8 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Oral quiz, case- study, test, practical skill |
| 1.15 | Acute intestinal obstruction /Self-study/ | 7 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Essay |
| 1.16 | Acute pancreatitis and its complications /Lecture/ | 7 | 2 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | | Conspectus |

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| 1.17 | Acute pancreatitis and its | 7 | 8 | PK-1.1 PK- 1.2 | | 1 | Oral quiz, case- |
| | complications /Practical classes/ | | | PK-3.3 PK-3.4 | L2.1, L2.2, E1, | | study, test, practical skill |
| | | | | PK- 5.1 PK-5.2 | E2, E3, E4, E5 | | practical skill |
| | | | | PK-5.4 PK- 8.2 | | | |
| 1.18 | Acute pancreatitis and its | 7 | 4 | PK-1.1 PK- 1.2 | L1.1, L1.2, | | Essay |
| 1.10 | complications /Self-study/ | , | | PK-3.3 PK-3.4 | L2.1, L2.2, E1, | | Lissay |
| | complications (see study) | | | PK- 5.1 PK-5.2 | E2. F3, E4, E5 | | |
| | | | | PK-5.4 PK- 8.2 | E2, E3, E4, E3 | | |
| | | | | 1 K 3.4 I K 0.2 | | | |
| 1.19 | Gastric and duodenal ulcer | 7 | 4 | PK-1.1 PK- 1.2 | L1.1, L1.2, | 1 | Oral quiz, case- |
| | /Practical classes/ | | | PK-3.3 PK-3.4 | L2.1, L2.2, E1, | | study, test |
| | | | | PK- 5.1 PK-5.2 | E2, E3, E4, E5 | | practical skill |
| | | | | PK-5.4 PK- 8.2 | , -, , - | | |
| | | | | | | | |
| 1.20 | Complications of peptic ulcer: | 7 | 4 | | L1.1, L1.2, | | Oral quiz, case- |
| | bleeding, perforation, penetration, | | | PK-3.3 PK-3.4 | L2.1, L2.2, E1, | | study, test, |
| | stenosis, malignancy | | | PK- 5.1 PK-5.2 | E2, E3, E4, E5 | | practical skill |
| | /Practical classes/ | | | PK-5.4 PK- 8.2 | | | |
| 1.21 | Complications of peptic ulcer: | 7 | Δ | PK-1.1 PK- 1.2 | 111112 | | E |
| 1.21 | bleeding, perforation, penetration, | 1 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 | L1.1, L1.2, | | Essay |
| | stenosis, malignancy /Self-study/ | | | | L2.1, L2.2, E1, | | |
| | steriosis, manghaney /Ben study/ | | | PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | E2, E3, E4, E5 | | |
| | | | | | | | |
| 1.22 | Stomach and duodenal ulcer | 7 | 4 | | L1.1, L1.2, | | Oral quiz, case- |
| | postgastrectomy and postvagotomy | | | PK-3.3 PK-3.4 | L2.1, L2.2, E1, | | study, test, |
| | complications and syndromes / Practical classes / | | | PK- 5.1 PK-5.2 | E2, E3, E4, E5 | | practical skill |
| | | | | PK-5.4 PK- 8.2 | | | |
| 1.23 | Abdominal hernias. | 7 | 8 | | L1.1, L1.2, | | Oral quiz, case- |
| | Complications of hernias /Practical | | | PK-3.3 PK-3.4 | L2.1, L2.2, E1, | | study, test, |
| | classes/ | | | PK- 5.1 PK-5.2 | E2, E3, E4, E5 | | practical skill |
| | | | | PK-5.4 PK- 8.2 | | | |
| 1.24 | Abdominal hernias. | 7 | 4 | | L1.1, L1.2, | | Essay |
| | Complications of hernias /Self- | | | PK-3.3 PK-3.4 | L2.1, L2.2, E1, | | |
| | study/ | | | | E2, E3, E4, E5 | | |
| | | | | PK-5.4 PK- 8.2 | | | |
| 1.25 | Peritonitis /Lecture/ | 7 | 2 | PK-1.1 PK- 1.2 | | | Conspectus |
| | | | | | L2.1, L2.2, E1, | | |
| | | | | PK- 5.1 PK-5.2 | E2, E3, E4, E5 | | |
| | | | | PK-5.4 PK- 8.2 | | | |
| 1.26 | Peritonitis /Practical classes/ | 7 | 4 | PK-1.1 PK- 1.2 | | 1 | Oral quiz, case- |
| | | | | | L2.1, L2.2, E1, | | study, test, practical skill |
| | | | | PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | E2, E3, E4, E5 | | pi acucai skili |
| 1.05 | D :: ': 'G 10 : 1 / | 7 | | | 11111 | | |
| 1.27 | Peritonitis /Self-study/ | 7 | 4 | PK-1.1 PK- 1.2 | | | Essay |
| | | | | PK-3.3 PK-3.4 | L2.1, L2.2, E1, | | |
| | | | | PK- 5.1 PK-5.2 | E2, E3, E4, E5 | | |
| | | | | PK-5.4 PK- 8.2 | 111716 | | |
| 1.28 | Final lesson /Practical classes/ | 7 | 4 | PK-1.1 PK- 1.2 | | | Oral quiz, |
| | | | | PK-3.3 PK-3.4 | L2.1, L2.2, E1, | | practical skill |
| | | | | PK- 5.1 PK-5.2 | E2, E3, E4, E5 | | |
| | 3. Faculty surgery | 8 | | PK-5.4 PK- 8.2 | | | 1 |
| | 5. Faculty surgery | ō | | | | | |
| 2.1 | Fundamentals of Surgical | 8 | 2 | PK-1.1 PK- 1.2 | L1.1, L1.2, | | Conspectus |
| | Treatment of Heart | | | PK-3.3 PK-3.4 | L2.1, L2.2, E1, | | |
| | | | | | | | |
| | Diseases/Lecture/ | | | PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | E2, E3, E4, E5 | | |

| 2.2 | Supervision of surgical patients /Practical classes/ | 8 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Oral quiz, case- study, test, practical skill |
|------|---|---|---|---|--|---|
| 2.3 | Diagnosis and treatment of acute lower limb ischemia. /Lecture/ | 8 | 2 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Conspectus |
| 2.4 | Pathology of the aorta. Aneurysm. Acute arterial ischemia (thrombosis, embolism). /Practical classes/ | 8 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Oral quiz, case- study, test, practical skill |
| 2.5 | Diagnostics and treatment of chronic lower limb ischemia. /Lecture/ | 8 | 2 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Conspectus |
| 2.6 | Atherosclerotic arterial disease. Obliterating arterial disease. /Practical classes/ | 8 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Oral quiz, case- study, test, practical skill |
| 2.7 | Obliterating arterial disease. /Self-study/ | 8 | 3 | | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Essay |
| 2.8 | Chronic venous insufficiency/Lecture/ | 8 | 2 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Conspectus |
| 2.9 | Diseases of the venous system. Varicose veins. Acute thrombophlebitis. Postthrombophlebitis syndrome. /Practical classes/ | 8 | 8 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Oral quiz, case- study, test, practical skill |
| 2.10 | Diseases of the venous system. Varicose veins. Acute thrombophlebitis. Postthrombophlebitis syndrome. /Self-study/ | 8 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L2.1, L2.2, E1, | Essay |
| 2.11 | Complications of diabetes mellitus in surgical practice /Lecture/ | 8 | 2 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Conspectus |
| 2.12 | Surgical complications of diabetes mellitus/Practical classes/ | 8 | 4 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Oral quiz, case- study, test, practical skill |
| 2.13 | Questions of surgical treatment of uncomplicated and complicated gastroduodenal ulcers/Lecture/ | 8 | 2 | | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Conspectus |
| 2.14 | Chest trauma/Lecture/ | 8 | 2 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Conspectus |
| 2.15 | Abdominal trauma/Lecture/ | 8 | 2 | | L1.1, L1.2, L2.1, L2.2, E1, E2, E3, E4, E5 | Conspectus |

| 2.16 | Chest trauma. Abdominal trauma /Practical classes/ | 8 | 12 | PK-1.1 PK- 1.2 L1.1, L1.2, PK-3.3 PK-3.4 L2.1, L2.2, E1, PK- 5.1 PK-5.2 E2, E3, E4, E5 PK-5.4 PK- 8.2 | Oral quiz, case- study, test, practical skill |
|------|---|---|----|--|---|
| 2.17 | Purulent diseases of the lungs and pleura /Practical classes/ | 8 | 4 | PK-1.1 PK- 1.2 L1.1, L1.2, PK-3.3 PK-3.4 L2.1, L2.2, E1, PK- 5.1 PK-5.2 E2, E3, E4, E5 PK-5.4 PK- 8.2 | Oral quiz, case- study, test, practical skill |
| 2.18 | Acute mediastinitis /Practical classes/ | 8 | 4 | PK-1.1 PK- 1.2 L1.1, L1.2, PK-3.3 PK-3.4 L2.1, L2.2, E1, PK- 5.1 PK-5.2 E2, E3, E4, E5 PK-5.4 PK- 8.2 | Oral quiz, case- study, test, practical skill |
| 2.19 | Thyroid disease /Practical classes/ | 8 | 4 | PK-1.1 PK- 1.2 L1.1, L1.2, PK-3.3 PK-3.4 L2.1, L2.2, E1, PK- 5.1 PK-5.2 E2, E3, E4, E5 PK-5.4 PK- 8.2 | Oral quiz, case- study, test, practical skill |
| 2.20 | Thyroid disease /Self-study/ | 8 | 4 | PK-1.1 PK- 1.2 L1.1, L1.2, PK-3.3 PK-3.4 L2.1, L2.2, E1, PK- 5.1 PK-5.2 E2, E3, E4, E5 PK-5.4 PK- 8.2 | Essay |
| 2.21 | Final lesson, defense of medical history/Practical classes/ | 8 | 6 | PK-1.1 PK- 1.2 L1.1, L1.2, PK-3.3 PK-3.4 L2.1, L2.2, E1, PK- 5.1 PK-5.2 E2, E3, E4, E5 PK-5.4 PK- 8.2 | Defense of medical history |
| 2.22 | Exam | 8 | 27 | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 L2.1, L2.2, E1, E2, E3, E4, E5 | Oral quiz, case- study, test, practical skill |

| | 5. FUND OF ASSESSMENT TOOLS | | | | | |
|------|-----------------------------|---|----------------|--|--|--|
| | 5.1. Tests and tasks | | | | | |
| Supp | lement 1 | | | | | |
| | | | 5 | 5.2. Topics for written papers | | |
| Supp | lement 1 | | | | | |
| | | | 5.3. F | UND OF ASSESSMENT TOOLS | | |
| Supp | lement 1 | | | | | |
| - 11 | | | | 5.4. List of assessment tools | | |
| Samp | ole tasks, essa | ays, tests, case probl | ems | | | |
| _ ^ | | DULE) RESOUR | | | | |
| | | , | | | | |
| | | | (| 6.1. Recommended Literature | | |
| | | | | 6.1.1. Core | | |
| | Authors | Title | Publish., year | Quantity | | |
| L1.1 | M.A. | The Course of | fM.: GEOTAR- | Режим доступа: https://www.studentlibrary.ru/book/ISBN9785970439272.html | | |
| | | Faculty (Analitical) | | | | |
| | | Surgery in Pictures Tables and Schemes | | | | |
| | edited by | Tables and Schemes [Электронный | | | | |
| | professor S. | | | | | |
| | V. | | | | | |
| L1.2 | A. V. | | lM.: GEOTAR- | Режим доступа: https://www.studentlibrary.ru/book/ISBN9785970456644.html | | |
| | | Patients | Media , 2020. | | | |
| | Yu. V. | [Электронный | | | | |
| | Kondusova, I. A. | pecypcj | | | | |
| | ı. A. Poletayeva | | | | | |
| | and others; | | | | | |
| 1 | edited by A. | | | | | |

| | 6.1.2. Supplementary | | | | | |
|------|---|--|----------------------------|---|--|--|
| | Authors | Title | Publish., year | Quantity | | |
| L2.1 | Gostishchev V.K. | General surgery [Электронный ресурс] / The manual 220 р. | M.: GEOTAR-Media, 2020. | Режим доступа: https://www.studentlibrary.ru/book/ISBN9785970454398.html | | |
| L2.2 | Merzlikin N.V. | The Medical History of a Surgical Patient | M.: GEOTAR-Media, 2018. | Режим доступа: https://www.studentlibrary.ru/book/ISBN9785970444658.html | | |
| | | | 6.2. Internet resour | rces | | |
| E1 | FreeMedica | alJournals | | | | |
| E2 | E2 Blackwell Synergy | | | | | |
| E3 | MedLine. | | | | | |
| E4 | New Engla | New England Journal of Medicine. | | | | |
| E5 | PubMed Ce | PubMed Central (PMC). | | | | |
| | | | 6.3.1 Software | | | |
| 6.3. | 1.1 Operation | al system Microsoft, appli | ed programs pack Microsoft | Office | | |
| 6.3. | 6.3.1.2 Internet access (Wi-Fi) | | | | | |
| | 6.3.2 Information Referral systems | | | | | |
| 6.3. | 6.3.2.1 E-data bases: РГБ, Orbicon, Medline. | | | | | |
| 6.3. | 6.3.2.2 Student Consultant http://www.studmedlib.ru | | | | | |

| 8. Course manuals | |
|-------------------|--|
| Supplement 2 | |

ASSESSMENT TOOLS

Syllabus

FACULTY SURGERY

Qualification Specialist

Specialty 31.05.01 General Medicine

Form of education Full-time
Designer Department Surgical diseases

Graduate Department Internal Deseases

Sample tasks and tests

Stage I: Formative assessment

1.1 Sample of oral quiz for formative assessment

Topic 1. Acquaintance with the organization and principles of operation of the surgical hospital. Examination of a surgical patient. Registration of medical documentation in a surgical hospital. The program of examination and treatment of a patient with a surgical profile.

- 1. Organization principles of the surgical care in Russia.
- 2. The organization of the department of the surgical hospital.
- 3. The organization of the operating unit in the surgical hospital.
- 4. Sterile Zone.

Topic 2. Acute appendicitis.

- 1. Etiology and pathogenesis of acute appendicitis.
- 2. Clinical features of acute appendicitis.
- 3. Clinical features, courses and tactics in treatment of acute appendicitis of children, pregnant women, the elderly people.
- 4. Diagnosis of acute appendicitis.
- 5. Surgical treatment of acute appendicitis. Type of operations.
- 6. Rehabilitation of a patient with acute appendicitis.

Topic 3. Complicated acute appendicitis.

- 1. Appendicular infiltration. Classification, clinical features, tactics, treatment.
- 2. Appendiceal abscess. Classification, clinical features, tactics, treatment.
- 3. Abscess of the abdominal cavity. Classification, clinical features, tactics, treatment.
- 4. Subdiaphragmatic abscess. Classification, clinical features, tactics, treatment.
- 5. Subhepatic abscess. Classification, clinical features, tactics, treatment.
- 6. The Douglas pouch abscess. Classification, clinical features, tactics, treatment.
- 7. Pylephlebitis. Classification, clinical features, tactics, treatment.
- 8. Postoperative complications after appendectomy and their treatment.

Topic 4. Cholelithiasis. Acute cholecystitis.

- 1. Etiology and pathogenesis of acute cholecystitis.
- 2. Clinical features of acute cholecystitis.
- 3. Clinical features, courses and tactics in acute parasitic cholecystitis treatment.
- 4. Diagnosis of acute cholecystitis.
- 5. Surgical treatment of acute cholecystitis. Types of operations
- 6. Rehabilitation of a patient with acute cholecystitis.

Topic 5. Complicated acute cholecystitis.

- $1. \quad \text{Subhepatic infiltration and abscess. Features of surgical treatment in acute cholecy stitis.}\\$
- 2. Mechanical jaundice in acute cholecystitis. Causes, diagnosis, methods of correction.
- 3. Purulent cholangitis. Etiopathogenesis, clinical features, diagnosis, treatment.
- 4. Methods of external and internal drainage of the bile ducts.
- 5. Current methods of diagnosis and treatment of mechanical jaundice.

Topic 6. Acute intestinal obstruction.

- 1. Etiology and pathogenesis of acute intestinal obstruction.
- 2. Classification of acute intestinal obstruction.
- 3. Differences of strangulation and obturation intestinal obstruction.
- 4. Clinical features of various forms of acute intestinal obstruction.
- 5. Current methods of diagnosis of acute intestinal obstruction.
- 6. Principles of conservative treatment of acute intestinal obstruction.
- 7. Current principles of surgical treatment of acute intestinal obstruction. Indications for surgical treatment. Types of operations.
- 8. Rehabilitation of acute intestinal obstruction.
- 9. Management of a stoma patient.

Topic 7. Acute pancreatitis and its complications.

- 1. Etiology and pathogenesis of acute pancreatitis.
- 2. Classification of acute pancreatitis.
- 3. Clinical features of acute pancreatitis.
- 4. Current methods of diagnosis of acute pancreatitis.
- 5. Principles of conservative treatment of acute pancreatitis.
- 6. Current principles of surgical treatment of acute pancreatitis. Indications for surgical treatment. Types of operations.
- 7. Features of surgical tactics in acute biliary pancreatitis.
- 8. Prognosis for acute pancreatitis.
- 9. Rehabilitation for acute pancreatitis.

Topic 8. Gastric and duodenal ulcer.

- 1. Etiology and pathogenesis of gastric ulcer and duodenal ulcer.
- 2. Classification of gastric ulcer and duodenal ulcer.
- 3. Methods of diagnosis of gastric ulcer and duodenal ulcer.
- 4. Clinical manifestations of peptic ulcer disease of stomach and duodenum.
- 5. Principles of therapeutic treatment of gastric ulcer and duodenal ulcer.
- 6. Principles of surgical treatment of gastric ulcer and duodenal ulcer. Types of operations.
- 7. Gastric resection in peptic ulcer. Types of operations.

Topic 9. Complications of peptic ulcer: bleeding, perforation, penetration, stenosis, malignancy.

- Bleeding gastroduodenal ulcer. Classification, clinical features, diagnosis, treatment.
- 2. Peptic ulcer bleeding according to Forrest and Gorbashko classification. Practical value of classifications.
- 3. The diagnosis and treatment algorithm for peptic ulcer bleeding.
- 4. Current principles of endoscopic hemostasis for peptic ulcer bleeding.
- 5. Indications for surgical treatment of ulcerative bleeding. Types of operations.
- 6. Infusion-transfusion therapy for peptic ulcer bleeding. Current infusion environments.
- 7. The role of antisecretory drugs in the treatment and prevention of recurrence of ulcerative bleeding.
- 8. Perforated ulcer. Classification, clinical features, diagnosis. Surgical treatment of perforations of gastric ulcers and duodenal ulcers.
- 9. The Taylor method in perforated ulcer treatment.
- 10. Penetration of gastric ulcer. Clinical features, diagnosis.
- 11. Surgical treatment of penetrating ulcer.
- 12. Gastric stenosis of ulcerative etiology. Classification, clinical features, diagnosis, differential diagnosis. Methods of surgical treatment.
- 13. Malignant ulcers. Features of pathogenesis and clinical picture.

Topic 10. Stomach and duodenal ulcer postgastrectomy and postvagotomy complications and syndromes

- 1. Peptic ulcer of the stomach stump, small intestine and gastroenteroanastomosis. Modern methods of diagnosis and treatment.
- 2. Cancer of the stomach stump. Modern methods of diagnosis and treatment.
- 3. Syndrome of the adductor loop. Modern methods of diagnosis and treatment.
- 4. Early and late dumping syndrome. Modern methods of diagnosis and treatment.
- 5. Postvagotomy syndromes. Modern methods of diagnosis and treatment. Differential diagnosis. Indications for surgical treatment. Types of operations.

Topic 11. Hernia. Complications of hernias.

- 1. Etiology and pathogenesis of ventral hernias.
- 2. Clinical manifestations of hernias.
- 3. Classification of hernias.
- 4. Types of hernias complications.
- 5. Current and traditional types of hernia surgery.
- 6. Inguinal hernia. Classification, types of operations.
- 7. Femoral hernia. Classification, types of operations.
- 8. Umbilical hernia. Type of operations.
- 9. Postoperative ventral hernias. Classification, types of operations.
- 10. Surgery features for hernia infringement.
- 11. Signs of strangulated organs.
- 12. Rehabilitation of a patient with hernia after surgery and conservative medical treatment.

Topic 12. Peritonitis.

- 1. Etiology and pathogenesis of peritonitis.
- 2. Classification of peritonitis.
- 3. Clinical features of various forms of peritonitis.
- 4. Current methods of diagnosis of peritonitis.
- 5. Treatment of complex treatment of peritonitis.
- 6. Current principles of surgical treatment of peritonitis. Indications for surgical treatment. Types of operations.
- 7. Intensive care of peritonitis.
- 8. Prognosis of peritonitis.
- 9. Rehabilitation in case of peritonitis.

Topic 13. Pathology of the aorta. Aneurysm. Acute arterial ischemia (thrombosis, embolism).

- 1. Aneurysms of the thoracic aorta. Features of the clinic, diagnosis and treatment.
- $2.\ Complications$ of aneurysms of the abdominal aorta. Diagnostics and treatment.
- 3. Modern surgical technologies in the treatment of abdominal aortic aneurysms.
- 4. Causes and clinic of acute arterial obstruction of the main arteries of the lower extremities.
- 5. Methods of diagnosis and treatment for acute arterial obstruction of the main arteries of the lower extremities ..

Topic 14. Atherosclerotic arterial disease. Obliterating arterial disease.

- 1. Obliterating atherosclerosis of the arteries of the lower extremities. Etiology, pathogenesis. Classification. Clinical features. Current principles of diagnosis and treatment. Types of operations. Invasive arterial surgery for arterial occlusions. Indications, types of operations.
- 2. Leriche's Syndrome. Etiology, pathogenesis. Classification. Clinical features. Current principles of diagnosis and treatment. Types of operations.
- 3. Obliterating endarteritis of the vessels of the lower extremities. Etiology, pathogenesis. Classification. Clinical features. Current principles of diagnosis and treatment. Types of operations. Prevention.

Topic 15. Diseases of the venous system. Varicose veins. Acute thrombophlebitis. Postthrombophlebitis syndrome.

- 1. Varicose veins of the lower extremities. Etiology, pathogenesis. Classification. Clinical features. Current principles of diagnosis and treatment. Types of operations. Invasive vein surgery for varicose veins. Indications, types of operations.
- 2. Acute thrombophlebitis. Etiology, pathogenesis. Classification. Clinical features. Current principles of diagnosis and treatment. Conservative treatment of acute thrombophlebitis. Indications for surgical treatment. Types of operations.
- 3. Acute phlebothrombosis. Etiology, pathogenesis. Classification. Clinical features. Current principles of diagnosis and treatment. Conservative treatment of acute phlebothrombosis. Indications for surgical treatment. Types of operations.
- 4. Principles of prophylaxis of pulmonary embolism with thrombosis of the veins of the lower extremities. Medical and surgical prevention.
- 5. Post-thrombotic syndrome. Etiology, pathogenesis. Classification. Clinical features. Current principles of diagnosis and treatment. Conservative treatment. Indications for surgical treatment. Types of operations.

Topic 16. Surgical complications of diabetes mellitus.

- 1. Complications of diabetes mellitus within the competence of the surgeon.
- 2. Pseudoperitonitis in diabetes.
- 3. Purulent-inflammatory diseases of the skin and subcutaneous tissue.
- 4. Anaerobic non-clostridial soft tissue infection in diabetes.
- 5. The concept of diabetic foot syndrome.
- 6. Syndrome of mutual burden.
- 7. Peculiarities of performing surgical interventions for diabetes.

Topic 17. Chest trauma. Abdominal trauma.

- 1. Classification of trauma to the chest and abdomen.
- 2. What are the features of the main symptoms and syndromes in traumatic chest injuries?
- 3. What are the indications and possible complications when performing intercostal, paravertebral, cervical vagosympathetic, retrosternal blockades?
- 4. What are the stages of pleural cavity drainage according to Bulau?
- 5. What are the main clinical symptoms with closed damage to the abdomen?
- 6. How are the treatment algorithms for open injuries presented?
- 7. What are the indications and possible complications when performing pelvic, paravertebral and epidural anesthesia?
- 8. What are the main stages of laparocentesis and laparoscopy?

Topic 18. Purulent diseases of the lungs and pleura.

- 1. Etiology and pathogenesis of suppurative diseases of the lungs and pleura.
- 2. Classification of suppurative diseases of the lungs and pleura.
- 3. Clinical features of various forms of suppurative diseases of the lungs and pleura.
- 4. Current methods of diagnosis of suppurative diseases of the lungs and pleura.
- 5. Treatment of complex suppurative diseases of the lungs and pleura.
- 6. Current principles of surgical treatment of suppurative diseases of the lungs and pleura. Indications for surgical treatment. Types of operations.
- 7. Diagnosis and treatment of acute purulent pleurisy.
- 8. Diagnosis and treatment of chronic pleural empyema.
- 9. Diagnosis and treatment of acute abscess and lung gangrene.
- 10. Diagnosis and treatment of chronic lung abscess.
- 11. Prognosis for suppurative diseases of the lungs and pleura.
- 12. Rehabilitation for suppurative diseases of the lungs and pleura

Topic 19. Acute mediastinitis.

- 1. Definition of the concept of "mediastinitis".
- 2. Etiology and pathogenesis of the development of mediastinitis.
- 3. Classification of mediastinitis.
- 4. The clinical picture of mediastinitis.
- 5. Methods of laboratory and instrumental diagnostics of mediastinitis.
- 6. Regulations for the treatment of a patient with mediastinitis.
- 7. Features of the surgical treatment of mediastinitis.

Topic 20. Thyroid disease.

- 1. Etiology and pathogenesis of thyroid disease.
- 2. Classification of thyroid diseases.

- Current methods of diagnosis of thyroid diseases.
- 4. Thyroid nodule. Etiopathogenesis, classification, clinical features, diagnosis, treatment.
- 5. Diffuse toxic thyroid nodule. Etiopathogenesis, classification, clinical features, diagnosis, treatment. Current methods of relief of thyrotoxicosis.
- 6. Emergency care for thyrotoxic crisis and acute hypoparathyroidism.
- 7. Thyroid cancer. Etiopathogenesis, classification, clinical features, diagnosis, treatment. Types of operations and features of their performance.
- 8. Riedel and Hashimoto's thyroiditis. Etiopathogenesis, classification, clinical features, diagnosis, treatment. Types of operations and features of their performance.
- 9. Rehabilitation of thyroid diseases in the postoperative period.

1.2 Sample of essay topics for formative assessment

Topic 1. Familiarity with the organization and principles of the surgical hospital. Anamnesis of surgical patients.

- 1. Principles of organization of outpatient and inpatient surgical care in Russia.
- 2. Sterile zones.
- Current suture materials.

Topic 4. Cholelithiasis. Acute cholecystitis.

- 1. Features of diagnosis and treatment of acute cholecystitis in elderly people and decompensation of background somatic pathology.
- 2. Features of the clinic, course and tactics in acute parasitic cholecystitis.
- 3. Surgical treatment of acute cholecystitis.
- 4. Accelerated rehabilitation of a patient with acute cholecystitis.

Topic 7. Acute pancreatitis.

- 1. Modern methods of diagnosis of acute pancreatitis.
- 2. Principles of conservative treatment of acute pancreatitis.
- 3. Modern principles of surgical treatment of acute pancreatitis.
- 4. Features of surgical tactics in acute biliary pancreatitis.
- 5. Tactics for acute fluid accumulations in acute pancreatitis.
- 6. Tactics for pancreatogenic shock.
- 7. Tactics for enzymatic peritonitis in acute pancreatitis.

Topic 19. Chest and abdominal trauma.

- 1. Tension pneumothorax, clinical features, diagnosis and treatment.
- 2. Treatment of coagulated hemothorax
- 3. Traumatic injuries of the diaphragm, types, diagnosis, treatment
- 4. Injury to the heart.
- 5. Peculiarities of treatment of victims with bilateral hemopneumothorax as a result of multiple rib fractures.
- 6. Autohemotransfusion for chest and abdominal trauma.
- 7. Injuries to the duodenum, features of diagnosis and treatment
- 8. Injuries of the pancreas, features of diagnosis and treatment
- 9. Organ-preserving surgery for trauma to the parenchymal organs of the abdomen.
- 10. Second-look technology in the surgery of abdominal injuries

Topic 22. Thyroid diseases.

- 1. Modern methods of diagnosing thyroid diseases.
- 2. Nodular goiter. Medical and diagnostic algorithm.
- 3. Modern methods of arresting thyrotoxicosis.
- 4. Emergency care for thyrotoxic crisis
- 5. Emergency care for acute hypoparathyroidism.
- 6. Riedel's and Hashimoto's thyroiditis. Medical and diagnostic algorithm. Types of operations and features of their implementation.
- 7. Rehabilitation for diseases of the thyroid gland in the postoperative period.

1.3 Sample of case-study for formative assessment

1. A patient with a 35-week pregnancy experienced severe pain in the right iliac fossa pain, vomiting, temperature 37.8 C. The tongue is dry, with white fur. The uterus is palpated. In the right half of the abdomen, there is sharp pain, defensive muscle tension, positive symptom of Shchyotkin-Blumberg is determined during palpation. Symptom of Pasternack is negative. Diagnosis. Treatment.

Answer. Acute appendicitis. Uncomplicated pregnancy 35 weeks. Emergency appendectomy under general anesthesia is indicated.

2. A 26-year-old patient was admitted on the 4th day of illness. The collected anamnesis and clinical picture at the time of examination do not raise doubts that the patient has acute appendicitis. However, in the right iliac region, a dense immobile formation measuring 10 x 12 cm is clearly defined, adjacent to the iliac crest, painful on palpation. The general condition of the patient is quite satisfactory, the peritoneal symptoms are not expressed. What diagnosis will you make? How will you treat the patient?

Answer. Appendicular infiltration (dense). Conservative treatment is shown - a gentle diet, antibacterial therapy with broad-spectrum drugs, anti-inflammatory therapy, physiotherapy. Delayed appendectomy no earlier than 2 months after discharge.

3. A patient, an obese woman, 78 years old, was admitted on the 3rd day from the onset of the disease - an attack of acute cholecystitis. He has been suffering from calculous cholecystitis for more than 20 years. The attacks are frequent and difficult, however, given the patient's age, and most importantly, the presence of such contraindications as severe pulmonary insufficiency, stage IIb circulatory insufficiency, chronic renal failure and obesity, the patient had not been offered surgery before. Despite

vigorous conservative treatment, the inflammatory process progressed, and there was a threat of perforation of the gallbladder. What should be the tactics of the surgeon?

Answer. Emergency surgical treatment - under local anesthesia, perform cholecystostomy (open or puncture) with sanitation of the gallbladder. Continue intensive therapy with broad-spectrum antibiotics, daily sanitation of the gallbladder cavity with antiseptics.

- 4. A 78-year-old patient has overweight, type 2 diabetes mellitus, diabetic foot syndrome, neuro-ischemic form, occlusion of the superficial femoral artery at the level of the middle third, total wet gangrene of the foot. Hyperemia of the skin extends to the middle third of the lower leg. Body temperature 38.4, leukocytes 15.2, stab 12%, ESR 40 mm / h. With amputation of the lower limb at the level of the upper third of the thigh, after dissection of the skin and subcutaneous tissue, it was revealed that there is a pronounced edema of the subcutaneous tissue and fascia of the thigh. How should the operation be completed? Treatment? Answer. Muscles-antagonists are sutured over the sawdust of the femur, on the fascia, subcutaneous tissue and skin, hold sutures, which should be tied over the tampons. Change of tampons daily. When edema is eliminated secondary sutures on the stump of the thigh. Massive ABT. Application of NPVT-therapy.
- 5. A 60-year-old patient complains of paresthesia, cold snap of the left foot, intermittent claudication at 200 meters. On examination, the absence of hair on the lower limb, pale skin color is noted. The foot is cool to the touch, tactile sensitivity and movements in the joints are preserved, pulsation is detected only on the femoral artery. What is your diagnosis? How will you treat the patient?

Answer. Obliterating atherosclerosis of the vessels of the lower extremities. Occlusion of the femoral-popliteal segment. Ischemia II B stage. Surgical treatment - femoral-popliteal bypass or endarterectomy with plastic or stenting after arteriography, Doppler sonography and a course of infusion rheological therapy in preparation for surgery.

- 6. The patient has a festering pseudocyst of the pancreas, diagnosed by ultrasound, CT, clinically. What is the treatment tactics. Answer. On an emergency basis, external drainage of the pseudocyst is shown (possibly by puncture under the control of ultrasound), followed by staged sanitation of the purulent cavity with antiseptics. Antibacterial therapy.
- 7. As a matter of urgency, you had to operate on a 56-year-old patient for acute intestinal obstruction. The patient's condition is moderate. Adhesive obstruction was assumed before the operation, but when examining the abdominal cavity, a tumor of the cecum was found. No visible metastases are detected. The tumor is 10x8 cm in size, mobile. Below her intestines are in a collapsed state, and the small intestine is sharply stretched, overflowing with intestinal contents and gases. Which operational guide is shown in this case.

Answer. The performance of an extended right-sided hemicolectomy with lymph node dissection and the imposition of a primary ileotransverse anastomosis is shown.

- 8. A 36-year-old patient suffers from varicose veins of the lower extremities. Two days ago, there was soreness along the veins in the lower leg. The skin is hyperemic, edematous. Large saphenous vein in the form of a cord. There is no swelling in the foot and lower leg. What is your diagnosis? Tactics? Answer. Acute thrombophlebitis of the superficial veins of the leg. Conservative therapy (elastic bandage, phlebotonics, heparin, rheological drugs). When the process spreads above the knee joint, the Troyanov-Trendelenburg operation (crossectomy) is an emergency procedure.
- 9. A 25-year-old patient during surgery revealed diffuse purulent peritonitis with interloop abscesses caused by perforation of the duodenal ulcer 5 days ago. There is no ulcerative history. He has no concomitant diseases. The condition is extremely serious with a predominance of vascular insufficiency. What tactics should be taken? How much primary surgery should the patient perform? Justify your tactics. Suggest the amount of intensive care.

Answer. Preoperative preparation in the conditions of emergency unit - infusion, vasopressors. Emergency operation - suturing of the perforated hole, debridement, drainage of the abdomen, then maintenance according to the program of relaparotomy. Complex intensive therapy in the intensive care unit, massive antibacterial and antisecretory therapy, infusion, vasopressors, correction of poliorgan dysfunction by hardware methods. Gastric resection is absolutely not indicated.

10. A 66-year-old patient is diagnosed with post-traumatic pleurisy on the right. During puncture, purulent contents were obtained. What are your actions in this case? Forecast. Answer. Active drainage of the pleural cavity with systemic antibiotic therapy and anti-inflammatory therapy is sufficient. Staged sanitation of the pleural cavity with antiseptics may be required.

1.4 Sample tests (with keys) for formative assessment

- 1. IF A PATIENT IS DIAGNOSED WITH PERITONITIS, YOU MUST:
 - A. Use the technique of the operation method of Volkovich Dyakonov
 - B. Use the technique of the operation method of Lenander
 - C. Lower median laparotomy
 - D. Mid-median laparotomy
- 2. YOUR TACTICS FOR APPENDICULAR ABSCESS
- A. Endolymphatic drug administration.
- B. Emergency surgery.
- B. Physiotherapy treatment.
- D. Laparoscopy followed by the introduction of antibacterial drugs.
- 3. THE PAIN DISAPPEARANCE AND THE APPEARANCE OF MELENA IN DUODENAL ULCER IS CHARACTERISTIC FOR
- A. Pyloroduodenal stenosis
- B. Perforation of the ulcer
- C. Malignant ulcer
- D. Bleeding
- E. Penetration of the ulcer into the pancreas
- 4. WITH CONTINUED BLEEDING FROM AN ULCER, IT IS SHOWN

- A. Emergency operation only
- B. Planned surgery
- C. Immediate endoscopic hemostasis, if it is ineffective emergency surgery
- D. Conservative therapy
- 5. IN DIAGNOSED PERFORATION OF GASTRODUODENAL ULCER CORRECT TACTICS IS
- A. Emergency surgery
- B. Conservative treatment
- C. Planned surgery after additional examination
- 6. FOR KIDNEY TRAUMA HEMATURIA IS
- A. Initial
- B. Terminal
- C. Total
- D. Microhaematury
- 7. X-RAY CHEST TRAUMA SYMPTOMS
- A. broken ribs
- B. subcutaneous emphysema
- C. haemothorax
- D. pneumothorax
- E. all
- 8. THE MOST COMMON CAUSE OF ACUTE CHOLECYSTITIS IN MEN IS
- A. Cholelithiasis
- B. Parasitosis
- C. Liver tumors
- D. Tumors of the biliar tract
- E. Goodpascher Syndrome
- 9. THE MOST COMMON CAUSE OF ACUTE PANCREATITIS IN MEN IS
- A. abdominal trauma
- B. use of corticosteroids
- C. alcohol
- D. chronic cholecystitis
- E. liver cirrhosis
- 10. SCOPE OF SURGERY FOR HASHIMOTO'S THYROIDITIS IS
- A. Thyroidectomy
- C. Subtotal thyroid resection
- B. Hemithyroidectomy
- D. Resection of thyroid lobe

1.5 Sample practical skill for formative assessment

- 1. Collect complaints, anamnesis, physical examination of a patient with surgical or urological pathology, interpret the results.
- 2. Justify the preliminary diagnosis based on the examination of a specific patient.
- 3. Formulate a plan for additional (paraclinical) examinations in a specific patient.
- 4. Interpret the available results of additional (paraclinical) examinations in a particular patient.
- 5. Suggest and justify treatment tactics for a particular patient.
- 6. Write a list of prescriptions for a particular patient and justify the indications for the use of the medications

II Stage: midterm assessment (graded credit)

Midterm assessment is carried out in the form of graded credit. Tasks for the exam include one theoretical points and one problem.

| | Tasks for competence assessment «Knowledge» | Task type |
|---------|---|--------------|
| List of | theoretical points | -theoretical |
| 1. | Acute appendicitis: definition of the concept, epidemiology, etiology, pathogenesis, classification | |
| 2. | Acute appendicitis: clinical picture, symptoms of acute appendicitis (Kocher, | |
| | Shchetkin-Blumberg, Voskresensky, Rovzing, Sitkovsky, Bartomier- | |
| | Michelson, Obraztsov, Cope (psoas symptom)) | |
| 3. | Acute appendicitis: methods of treatment, surgical tactics (access for acute | |
| | appendicitis), postoperative management | |
| 4. | Acute appendicitis: early complications of acute appendicitis | |
| 5. | Acute appendicitis: late complications of acute appendicitis | |
| 6. | Acute appendicitis: clinical features depending on the location of the appendix. | |
| | Differential diagnosis of acute appendicitis | |
| 7. | Acute appendicitis: atypical forms, features of the clinical picture in children, | |
| | pregnant women, the elderly | |

- 8. Acute appendicitis: appendicular infiltrate (definition, clinical presentation, diagnosis, differential diagnosis, treatment), outcomes
- 9. Acute appendicitis: appendicular abscess (definition, clinical picture, diagnosis, differential diagnosis, treatment)
- 10. Hernias of the anterior abdominal wall: definition of a hernia, etiology, classification of hernias of the anterior abdominal wall, predisposing and producing factors, prevention of hernia formation
- 11. Inguinal hernias: anatomy of the inguinal canal (groin, inguinal triangle, inguinal gap), classification of inguinal hernias
- 12. Inguinal hernia: the clinical picture of an inguinal hernia, diagnosis, diagnostic methods (manual, instrumental), differential diagnosis
- 13. Inguinal hernia: methods of surgical treatment, types of hernioplasty: plastic surgery of the posterior wall of the inguinal canal with local tissues, tension-free types of plastic
- 14. Femoral hernias: anatomy of the femoral canal, features of the clinical course of femoral hernias
- 15. Femoral hernia: clinical presentation, diagnosis, surgical treatment, postoperative management
- 16. Umbilical hernia: clinical picture, diagnosis, differential diagnosis, methods of surgical treatment, postoperative management
- 17. Infringement of a hernia: definition of the concept, types of infringement, clinical picture, methods of treatment, tactics of the surgeon in case of spontaneous reduction, prevention of infringement
- 18. Perforated gastric and duodenal ulcer: clinical presentation, diagnosis, treatment, surgical tactics (including indications and contraindications for gastric resection)
- 19. Pyloroduodenal stenosis: causes, classification, clinical presentation, diagnosis, methods of treatment
- 20. Gastrointestinal bleeding: etiology, clinical and endoscopic classification according to Forest, clinical picture depending on the degree of blood loss, diagnosis, differential diagnosis
- 21. Gastrointestinal bleeding: methods of treatment, indications for emergency surgical treatment, endoscopic methods of stopping bleeding, prevention
- 22. Gallstone disease: etiology, pathogenesis, types of gallstones, prevention, epidemiology
- 23. Gallstone disease: chronic calculous cholecystitis (clinical picture, diagnosis, treatment methods)
- 24. Cholelithiasis: acute cholecystitis (classification, clinical picture, methods of treatment)
- 25. Cholelithiasis: choledocholithiasis (definition, clinical picture, diagnosis, treatment)
- 26. Gallstone disease: cholangitis (definition of the concept, clinical picture, Charcot triad, diagnosis, treatment)
- 27. Acute pancreatitis: definition of the concept, epidemiology, etiology, pathogenesis, prevention of acute pancreatitis
- 28. Acute pancreatitis: classification, clinical picture depending on the form and phase, diagnosis, differential diagnosis
- 29. Acute pancreatitis, early complications: classification, methods of prevention and treatment
- 30. Acute pancreatitis, late complications: classification, methods of prevention and treatment
- 31. Acute pancreatitis: methods of treatment, indications for surgical treatment
- 32. Acute intestinal obstruction: definition, epidemiology, etiology, pathogenesis, classification
- 33. Acute small bowel obstruction: etiology, clinical presentation, principles of surgical treatment
- 34. Acute obstructive colonic obstruction: etiology, clinical presentation, principles of surgical treatment
- 35. Peritonitis: etiopathogenesis, classification, treatment principles

| Tasks for competence assessment «Abilities» | Task type |
|--|------------|
| Sample Case – study, practical skills | -practical |
| 1. A patient with a clearly limited appendicular infiltrate, low-grade fever and a | |

significantly improved condition during treatment on the 5th day of admission and on the 10th day from the onset of the disease suddenly developed severe abdominal pain, the temperature began to rise, thirst appeared, tachycardia, the tongue became dry. There was a single vomiting. The abdomen is swollen, sharply painful in all parts, the abdominal wall is limited in mobility during breathing, the Shchetkin-Blumberg symptom is determined. Leukocytosis increased from 10, 0 to 18, 0. What complication did the patient have? What should be done?

Answer. Abscess formation of appendicular infiltrate. Emergency operation - opening, drainage of the abscess. ABT.

- 2. 1.Collect complaints, anamnesis, physical examination of a patient with or urological pathology, interpret the results.
 - 2. Write a list of prescriptions for a particular patient and justify the indications for the use of the medications

midterm assessment (examination)

Midterm assessment is carried out in the form of exam. Tasks for the exam include two theoretical points and one problem.

| | Tasks for competence assessment «Knowledge» | Task type | |
|----------------------------|--|-----------|--|
| List of theoretical points | | | |
| 1. | Acute appendicitis: definition of the concept, epidemiology, etiology, | | |
| | pathogenesis, classification. | | |
| 2. | Acute appendicitis: clinical picture, symptoms of acute appendicitis (Kocher, | | |
| | Shchetkin-Blumberg, Voskresensky, Rovzing, Sitkovsky, Bartomier- | | |
| | Michelson, Obraztsov, Cope (psoas symptom)). | | |
| 3. | Acute appendicitis: methods of treatment, surgical tactics (access for acute | | |
| 4 | appendicitis), postoperative management. | | |
| 4. | Acute appendicitis: complications of the disease and the postoperative period. | | |
| _ | Diagnostic and treatment methods. | | |
| 5. | Acute appendicitis: clinical features depending on the location of the appendix. Differential diagnosis of acute appendicitis. | | |
| 6. | Acute appendicitis: atypical forms, features of the clinical picture in children, | | |
| 0. | pregnant women, the elderly. | | |
| 7. | · · | | |
| | diagnosis, differential diagnosis, treatment), outcomes. | | |
| 8. | Acute appendicitis: appendicular abscess (definition, clinical picture, | | |
| | diagnosis, differential diagnosis, treatment). | | |
| 9. | Hernias of the anterior abdominal wall: definition of a hernia, etiology, | | |
| | classification of hernias of the anterior abdominal wall, predisposing and | | |
| | producing factors, prevention of hernia formation. | | |
| 10. | Inguinal hernias: anatomy of the inguinal canal (groin, inguinal triangle, | | |
| | inguinal gap), classification of inguinal hernias. | | |
| 11. | Inguinal hernia: the clinical picture of an inguinal hernia, diagnosis, diagnostic | | |
| 10 | methods (manual, instrumental), differential diagnosis. | | |
| 12. | Inguinal hernias: methods of surgical treatment, types of hernioplasty: plasty | | |
| | of the posterior wall of the inguinal canal with local tissues, tension-free | | |
| 12 | plastics. Femoral hernias: anatomy of the femoral canal, features of the clinical course | | |
| 13. | of femoral hernias. | | |
| 14 | Femoral hernias: clinical presentation, diagnosis, surgical treatment, | | |
| 1 1. | postoperative management. | | |
| 15. | Umbilical hernia: clinical presentation, diagnosis, differential diagnosis, | | |
| | methods of surgical treatment, postoperative management. | | |
| 16. | Infringement of a hernia: definition of the concept, types of infringement, | | |
| | clinical picture, methods of treatment, tactics of the surgeon in case of | | |

- spontaneous reduction, prevention of infringement.
- 17. Hernia irreducibility: definition of the concept, clinical picture, methods of treatment, prevention of irreducibility.
- 18. Gallstone disease: epidemiology, etiology, pathogenesis, types of gallstones, prevention.
- 19. Cholelithiasis: chronic calculous cholecystitis (clinical picture, diagnosis, methods of treatment).
- 20. Cholelithiasis: choledocholithiasis (definition of the concept, clinical picture, diagnosis, treatment).
- 21. Cholelithiasis: acute cholecystitis (classification, clinical picture, methods of treatment.)
- 22. Cholelithiasis: cholangitis (definition of the concept, clinical picture, Charcot triad, diagnosis, treatment).
- 23. Acute pancreatitis: definition of the concept, epidemiology, etiology, pathogenesis, prevention of acute pancreatitis.
- 24. Acute pancreatitis: classification, clinical picture depending on the form and period, diagnosis, differential diagnosis.
- 25. Acute pancreatitis: methods of treatment, indications for surgical treatment.
- 26. Acute pancreatitis, early complications: classification, methods of prevention and treatment.
- 27. Acute pancreatitis, late complications: classification, methods of prevention and treatment.
- 28. Perforated gastric and duodenal ulcer: clinical presentation, diagnosis, treatment, surgical tactics (including indications and contraindications for gastric resection)
- 29. Gastrointestinal bleeding: etiology, clinical and endoscopic classification according to Forest, clinical picture depending on the degree of blood loss, diagnosis, differential diagnosis.
- 30. Gastrointestinal bleeding: methods of treatment, indications for emergency surgical treatment, endoscopic methods of stopping bleeding, prevention.
- 31. Pyloroduodenal stenosis: causes, classification, clinical picture, diagnosis, methods of treatment.
- 32. Penetration and malignancy of gastroduodenal ulcers. Features of the clinical picture. Diagnostic and treatment methods. Types of operations.
- 33. Acute intestinal obstruction: definition of the concept, epidemiology, etiology, pathogenesis, classification.
- 34. Acute obstructive colonic obstruction: etiology, clinical picture, principles of surgical treatment.
- 35. Peritonitis: etiopathogenesis, classification, principles of treatment.
- 36. Modern approaches to surgical treatment and intensive care of generalized perionitis.
- 37. Local peritonitis. Views. Clinical manifestations. Features of diagnosis and treatment.
- 38. Purulent lung diseases. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Diagnostics. Treatment. Forecast.
- 39. Purulent diseases of the pleura. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Diagnostics. Treatment. Forecast.
- 40. Acute mediastinitis. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Diagnostic errors. Survey program. Treatment tactics: indications for surgery, choice of surgical access, volume of surgery. Postoperative management.
- 41. Injury to the chest and abdomen. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The concept of isolated, multiple, combined and combined trauma. The principles of organizing assistance to victims of chest and abdominal injuries in peacetime.
- 42. Traumatic pneumothorax. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Diagnostics. Treatment. Forecast.
- 43. Traumatic hemothorax. Definition. Etiology. Epidemiology. Pathogenesis.

- Classification. The clinical picture of the disease. Diagnostics. Treatment. Forecast.
- 44. Heart damage. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Features of diagnosis and treatment. Complications of heart damage and their prevention. Forecast.
- 45. Lung damage. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Features of diagnosis and treatment. Complications of lung injuries and their prevention. Forecast.
- 46. Damage to the diaphragm. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Features of diagnosis and treatment. Complications of diaphragm injuries and their prevention. Forecast.
- 47. Liver damage. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Features of diagnosis and treatment. Complications of liver damage and their prevention. Forecast.
- 48. Spleen injury. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Features of diagnosis and treatment. Complications of spleen injury and their prevention. Forecast.
- 49. Damage to the hollow organs of the abdomen. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Features of diagnosis and treatment. Complications of injuries to the hollow organs of the abdomen and their prevention. Forecast.
- 50. Damage to the retroperitoneal organs (duodenum and pancreas). Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Features of diagnosis and treatment. Complications of retroperitoneal injuries and their prevention. Forecast.
- 51. Obliterating atherosclerosis of the vessels of the lower extremities: etiology, epidemiology, pathogenesis, classification of chronic ischemia of the lower extremities, prevention.
- 52. Obliterating atherosclerosis of the vessels of the lower extremities: classification of chronic ischemia of the lower extremities, clinical picture, modern principles of diagnosis and treatment, prevention.
- 53. Obliterating atherosclerosis of the vessels of the lower extremities: damage to the main arteries, Leriche syndrome, clinical picture, methods of diagnosis, methods of treatment.
- 54. Obliterating endarteritis: etiology, epidemiology, pathogenesis, classification of chronic ischemia of the lower extremities, features of the clinical picture, principles of diagnosis and treatment, prevention.
- 55. Modern principles of diagnosis and surgical treatment of aortic aneurysms.
- 56. Modern principles of diagnostics and surgical treatment of heart diseases.
- 57. Acute arterial obstruction: etiology, classification, clinical picture.
- 58. Acute arterial obstruction: classification, methods of diagnosis and treatment.
- 59. Varicose veins of the lower extremities: etiology, epidemiology, pathogenesis, functional tests (Troyanov-Trendelenburg, Perthes, Pratt 2), prevention;
- 60. Varicose veins of the lower extremities: clinical picture, diagnostic methods, functional tests, principles of treatment.
- 61. Thrombophlebitis of the superficial veins of the lower extremities: clinical picture, methods of diagnosis and treatment, prevention.
- 62. Deep vein thrombosis of the lower extremities: clinical picture, differential diagnosis, methods of treatment, ileofemoral thrombosis prevention of pulmonary embolism.
- 63. Postthrombophlebitic syndrome: pathogenesis, clinical picture, degree of venous insufficiency, methods of diagnosis and treatment, prevention.
- 64. Modern principles of surgical treatment of venous diseases and chronic venous insufficiency.
- 65. Surgical complications of diabetes mellitus (diabetic foot). Definition.

- Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Diagnostics. Treatment. Forecast.
- 66. Nodular lesions of the thyroid gland. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Diagnostics. Treatment. Forecast.
- Diffuse toxic goiter. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Diagnostics. Treatment. Forecast.
- 68. Thyroiditis. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Diagnostics. Treatment. Forecast
- 69. Dumping syndrome. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Diagnostics. Treatment. Forecast
- 70. Loop adductor syndrome. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Diagnostics. Treatment. Forecast.
- 71. Peptic ulcers of the anastomoses and jejunum. Definition. Etiology. Epidemiology. Pathogenesis. Classification. The clinical picture of the disease. Diagnostics. Treatment. Forecast.

Tasks for competence assessment «Abilities»

Sample of Tests, Case – study, practical skills

- 3. 1. YOUR TACTICS FOR AN INCREDIBLE HERNIA
 - A. Cleansing enema.
 - B. The introduction of antispasmodics.
 - C. Emergency operation.
 - D. Observation of the patient.
 - E. Try to correct the hernial protrusion.
- 2.A PATIENT WITH A BACKGROUND OF ACUTE PAIN IN THE RIGHT UNDERFRINK APPEARED JAINT, PALPING AN INCREASED PAINFUL GALL BLADDER. THE MOST PROBABLE DIAGNOSIS IS
- A. Acute hepatitis
- B. Dyskinesia of the biliary tract
- C. Acute cholecystitis, choledocholithiasis
- D. Cancer of the gallbladder
- E. Echonococcosis of the liver.
 - 4. 1.A patient with a clearly limited appendicular infiltrate, low-grade fever and a significantly improved condition during treatment on the 5th day of admission and on the 10th day from the onset of the disease suddenly developed severe abdominal pain, the temperature began to rise, thirst, tachycardia appeared, the tongue became dry. There was a single vomiting. The abdomen is swollen, sharply painful in all parts, the abdominal wall is limited in mobility during breathing, the Shchetkin-Blumberg symptom is determined. Leukocytosis increased from 10, 0 to 18, 0. What complication did the patient have? What should be done? Answer: Abscess formation of the appendicular infiltrate with a breakthrough of the abscess into the abdominal cavity. Widespread peritonitis. An emergency operation after preoperative preparation is shown laparotomy, debridement, drainage of the abdominal cavity, delimiting abscess tamponade. Infusion, antibacterial therapy.
 - 2.Patient P. 32 years old applied to the outpatient surgery center with complaints of recurrent protrusion, discomfort in the groin area on the left with prolonged walking and physical exertion. He considers himself to be sick for 3 years. Previously, he did not seek medical help.

On an objective examination, the skin is of a normal color. No pathology of the respiratory or cardiovascular pathology was revealed. The abdomen is not swollen, participates in breathing, soft on palpation, painless in all parts. In the upright position of the patient there is a protrusion of the abdominal wall, movable, soft-elastic consistency, in a horizontal position it disappears. The external inguinal ring is expanded to 3 cm. The symptom of a cough push is positive. Answer: Uncomplicated

Task type

-practical

- left inguinal hernia. Surgical treatment is shown in a planned manner hernia repair with prosthetic tension-free plasty according to Liechtenstein. Rehabilitation limiting physical activity for at least 3 months, rational employment.
- 5. 1.Collect complaints, anamnesis, physical examination of a patient with surgical or urological pathology, interpret the results.
 - 2. Write a list of prescriptions for a particular patient and justify the indications for the use of the medications

METHODOLOGICAL GUIDELINES FOR LEARNING OUTCOMES ASSESSMENT

Stage: Formative assessment

Formative assessment is a regular checking of student academic progress during the academic term. It is performed in various oral and written forms (quizzes, essays, checking of home assignments, compilation of cases, self-study, colloquiums, and testing). During formative assessment, the teacher monitors the level of student's academic progress according to the curriculum identifying lack of knowledge, or misunderstanding.

The tasks of formative assessment are aligned with the Curriculum and Syllabus.

1. Guidelines for assessing the oral quiz:

In assessing the teacher takes into account:

- knowledge and understanding of the subject matter;
- activity during the class;
- consistency of presentation;
- argumentation of the answer, the level of independent thinking;
- ability to link theoretical and practical principles with future professional activity.

Assessment criteria:

| Type | Assessed | Assessment criteria | Grade |
|-------------|--|--|-----------|
| of the task | competences | | |
| Oral | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates a comprehensive, systematic and indepth knowledge of the academic material; has learned the required and additional resources. The student demonstrates a consistent and thorough understanding of the required knowledge, concepts, skills of the material learned, and their significance for future profession. | Excellent |
| | PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 | The student demonstrates a comprehensive knowledge of the | Good |

| PK- 8.2 | academic material; has learned the required and additional resources. The student demonstrates a consistent understanding of the required knowledge, concepts, skills of the material learned, but makes minor errors. | |
|---|---|--------------------|
| PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates basic knowledge necessary for further study; has learned basic recommended literature. The student operates with inaccurate formulating, has difficulties in the independent answers, makes significant mistakes but is able to correct them under the guidance of a teacher. | Satisfact ory |
| PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student does not know the obligatory minimum or demonstrates gaps in knowledge of the academic material, makes major mistakes or gives completely wrong answers. | Unsatisfa ctory |

2. Guidelines for case-study assessment:

Assessment criteria:

| Typ e of the | Assessed competences | Assessment criteria | Grade |
|------------------|--|---|-----------|
| task | | | |
| Cas e - study | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student correctly and solves the case-study task, demonstrating deep knowledge. There are no errors in logical reasoning and solution, the problem is solved in a rational way. The right answer is obtained, ways are clearly described. | Excellent |
| | | The student correctly solves the case-study task, demonstrating | Good |

| | deep knowledge. There are minor errors in logical reasoning and solution, the problem is solved in a rational way. The right answer is obtained, ways are clearly described. | | |
|--|---|------|------------|
| | The student correctly solves the case-study task, demonstrating basic knowledge. There are significant errors in logical reasoning and solution. The student demonstrates difficulties, but still is able to solve a case-study task. | ry | Satisfacto |
| PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student incorrectly solves the case-study task, makes significant mistakes. The student is not able to solve a case-study. | tory | Unsatisfac |

3. Guidelines for test assessment.

Assessment criteria:

The results are assessed in a four-grading scale: "excellent", "good", "satisfactory", "unsatisfactory".

| Type of the task | Assessed competences | Assessment criteria | Grade |
|------------------|--|------------------------|----------------|
| Test | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 | 80 – 100% | Excellent |
| | PK- 8.2 | 66 – 80% | Good |
| | | 46 – 65% | Satisfactory |
| | | Less Than 46% | Unsatisfactory |

4. Guidelines for the assessment of practical skills:

Assessment of practical skills based on simulation or participation of third parties may include a demonstration of manipulation, response to the questions of the task;

- assessment of practical skills at the bedside may include a demonstration of detection and / or interpretation of signs, symptoms, methods of examination and treatment;
- -the task may include a brief introduction, questions, and list of practical skills for demonstration (according to Curriculum).

In assessing the teacher takes into account:

- knowledge and understanding of the subject matter;
- ability to apply theoretical knowledge into practice;
- the level of formed practical skills;
- reasoning and response style;

- rationale for data selection, additional tests, differential diagnosis and/or choice of treatment, level of clinical thinking.

Assessment criteria:

| Type of the | Assessed | Assessment | Grade |
|------------------|--|--|--------------|
| task | competences | criteria | |
| Practical skills | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student correctly demonstrates practical skills on the model with a deep knowledge of the material. There are no mistakes in the demonstration and the used technique. The indications and conditions used in this method are clearly described. | Excellent |
| | | The student demonstrates practical skills on the model with slight inaccuracies. There are insignificant mistakes in the demonstration and the used technique. The indications and conditions used in this method are clearly described. | Good |
| | | The student demonstrates practical skills on the model with inaccuracies. There are significant mistakes in the demonstration and the used technique. The | Satisfactory |

| | indications and conditions used in this method are clearly described. | |
|--|---|----------------|
| PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates practical skills on the model with significant mistakes. The indications and conditions used in this method are not described. | Unsatisfactory |

5. Guidelines for the case history assessment:

In assessing the teacher takes into account:

- 1. knowledge and understanding of the subject matter;
- 2. compliance of the case history with the methodological requirements of the department;
- 3. literacy, logic, and style of writing;
- 4. reasoning and interpretation of additional survey data;
- 5. differential diagnosis and/or its rationale, choice of treatment, practical recommendations;
- 6. level of independent thinking;
- 7. ability to link theory and practice.

The criteria for case history assessment:

- 1. The subjective examination of the patient (complaints, anamnesis).
- 2. The objective examination of the patient.
- 3. Planning and interpreting additional methods of examination.
- 4. Differential diagnosis, clinical diagnosis, its rationale.
- 5. Purpose of treatment.
- 6. Epicrisis.

Assessment criteria:

| Type of | Assessed | Assessment criteria | Grade |
|-----------------|--|--|---------------|
| the task | competences | | |
| Case history | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates a comprehensive, systematic and deep knowledge of material, the ability to gather complaints, anamnesis, to conduct an objective examination of the patient, to assign additional methods of examination for this pathology, to | Excellen t |

| 1 PK- 1.2 PK-3.3 PK- PK- 5.1 PK-5.2 PK-5.4 8.2 | conduct a differential diagnosis and make diagnosis, prescribe treatment in accordance with modern concepts of medical science, use the main and additional literature. The student demonstrates a comprehensive and systematic knowledge of material, the ability to gather complaints, anamnesis, to conduct an objective examination of the patient, to assign additional methods of examination for this pathology, to conduct a differential diagnosis and make diagnosis, prescribe treatment in accordance with modern concepts of medical science, use the main and additional literature. The student makes single | Good |
|--|---|-----------|
| | mistakes in medical terminology, single stylistic mistakes and inconsistences in the text, inaccuracies of subjective or objective examination of the patient. The student demonstrates insufficient ability to use the data of objective examination in the formulation and solving therapeutic and diagnostic problems. | |
| 1 PK- 1.2 PK-3.3 PK- PK- 5.1 PK-5.2 PK-5.4 8.2 | The student demonstrates a basic knowledge required for further study, the ability to gather complaints, anamnesis, to conduct an objective examination of the patient, to assign additional methods of examination for this pathology, to conduct a differential diagnosis and make diagnosis, prescribe treatment in accordance with modern concepts of medical science, use the main and additional literature. | Satisfact |
| | The student makes multiple mistakes in medical terminology, | |

| | multiple stylistic mistakes and inconsistences in the text, errors of subjective or objective examination of the patient. The student demonstrates insufficient ability to use the data of objective examination in the formulation and solving therapeutic and diagnostic problems, but has abilities to eliminate the mistakes under the guidance of a teacher. | |
|--|---|--------------------|
| PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student has significant gaps in knowledge of the basic material, has made fundamental mistakes in examining a patient, is not able to make a differential diagnosis, assign diagnostic and therapeutic measures for the pathology. | Unsatisf actory |

6. Essay requirements:

- 1) Volume: 1500-300 words,
- 2) Contents structure:
- Introduction
- prove the relevance of the chosen topic
- point out the purpose of the essay
- give a summary of the main points
- Body
- use information obtained from different sources during the research
- show inaccuracy of the opposite points of view
- Conclusion
- List of references

The essay assumes usage of several specialized sources (at least 8-10 publications, monographs, the reference media, manuals). Preference is given to the publications in specialized medical journal and monographs including foreign databases.

Assessment criteria:

| Тур | Assessed | Assessment criteria | Grade |
|----------|---|---------------------------------|-----------|
| e of the | competences | | |
| task | | | |
| | | | |
| Essay | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The requirements are fulfilled: | Excellent |
| | | - the problem is formulated and | |

| | its relevance is proved; | |
|---|---|--------------|
| | - the various approaches to problem are presented; | |
| | - conclusions are formulated; | |
| | - the subject is thoroughly studied; | |
| | - volume is observed; | |
| | - design requirements are observed; | |
| | - correct answers to additional questions are given. | |
| PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The main are fulfilled with some mistakes: | Good |
| | - inaccuracies in material statement; | |
| | - no logical sequence in judgments; | |
| | - volume is not observed; | |
| | - errors in design requirements; | |
| | - incomplete answers are given to additional questions in the process of defense. | |
| | There are significant deviations from requirements: | Satisfactory |
| | - topic is only partially explored; | |
| | - mistakes in contents of the paper; | |
| | - mistakes in answers to additional questions; | |
| | - no conclusion is given at the process of defense. | |
| PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The essay is not prepared at all. | Unsatisfa |

| | The subj | ect of the essay is not | ctory |
|--|----------------|-------------------------|-------|
| | explored, | significant | |
| | misunderstandi | ing of a topic. | |
| | | _ | |

Stage: midterm assessment (graded credit)

Methodological guidelines for summative assessment (graded credit)

Examination is held in the oral form and includes several stages:

- oral quiz (the card includes one question);
- case-study task;
- demonstration of practical skills with the use of the simulator.

Requirements for the student:

- 1) regularly attend classes; the absence from classes is not allowed without good reason;
- 2) in case of absence from classes the student has to work out passed classes;
- 3) the student has to hand over written papers on time;
- 4) the student has successfully passed all colloquiums provided by the plan;
- 5) in case the student has been negatively assessed on the colloquium, he/she should try to pass it again;
 - 6) during the test week the student has to hand over all the tasks (clinical case).

The students are allowed to take examinations in case of all the tests passed and no academic debts (on the basis of the academic records).

The students are not allowed to take examination:

- with unpassed tests on the discipline;
- with missed classes, debts on the discipline;
- with 5 (five) and more debts for the previous term;
- with one debt for earlier terms for more than a year.

Recommendations for the graded credit assessment:

| Type of the | Assessed | Assessment | Grade |
|-------------|--|---|-----------|
| task | competences | criteria | |
| Oral quiz | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates comprehensive, systematic and profound knowledge of the subject, can independently perform the tasks provided by the program; who has a good knowledge of the main literature and familiar with the additional literature recommended by the | Excellent |

| | program; demonstrates creative abilities in understanding, statement and use of material of the studied discipline, faultlessly answers not only questions of the card, but also additional questions within the main program, correctly performs a practical task. | |
|--|--|--------------|
| PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student has good knowledge of material of the studied discipline; can successfully perform the tasks provided by the program; has a good knowledge of the main literature recommended by the program; answers all questions of the card, correctly performs a practical task, but makes some mistakes. | Good |
| PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates knowledge of material for further study; can cope with the tasks provided by the program; familiar with the main recommended literature; makes mistakes when performing examination tasks, but | Satisfactory |

| | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | has necessary knowledge for their elimination under the supervision of the teacher. The student demonstrates poor knowledge of the material, makes significant mistakes in performance of the tasks provided by the program. | Unsatisfactory |
|--------------|--|---|----------------|
| Case - study | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student correctly and fully solves the case-study task, demonstrating deep knowledge. There are no errors in logical reasoning and solution, the problem is solved in a rational way. The right answer is obtained, ways are clearly described. | Excellent |
| | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student correctly solves the case-study task, demonstrating deep knowledge. There are minor errors in logical reasoning and solution, the problem is solved in a rational way. The right answer is obtained, ways are clearly described. | Good |
| | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student correctly solves the case-study task, demonstrating basic knowledge. There are significant errors in logical reasoning and solution. The student demonstrates difficulties, but still is | Satisfactory |

| | | able to solve a case- | |
|------------------|---|--|----------------|
| | | study task. | |
| | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student incorrectly solves the case-study task, makes significant mistakes answering most of the questions of the case-study. The student is not able to solve a case-study. | Unsatisfactory |
| Practical skills | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student correctly demonstrates practical skills on the model with a deep knowledge of the material. There are no mistakes in the demonstration and the used technique. The indications and conditions used in this method are clearly described. | Excellent |
| | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates practical skills on the model with slight inaccuracies. There are insignificant mistakes in the demonstration and the used technique. The indications and conditions used in this method are clearly described. | Good |
| | PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates practical skills on the model with inaccuracies. There are significant mistakes in the | Satisfactory |

| | demonstration and the used technique. The indications and conditions used in this method are clearly described. | |
|--|--|----------------|
| PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates practical skills on the model with significant mistakes. The indications used in this method are not described. | Unsatisfactory |

Chart of the examination grade assessment:

| Tasks | Assessed | Grade | Score |
|--------------------------------------|---|----------------|-------|
| | competences | | |
| Theoretical point (Oral quize) | PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 | Excellent | 5 |
| point (Oral quize) | PK- 8.2 | Good | 4 |
| | | Satisfactory | 3 |
| | | Unsatisfactory | 2 |
| | | Unsatisfactory | 2 |
| Practical task (case studies) | PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | Excellent | 5 |
| (case studies) | | Good | 4 |
| | | Satisfactory | 3 |
| | | Unsatisfactory | 2 |
| Practical task (Practical skills) | PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 | Excellent | 5 |
| | PK- 8.2 | Good | 4 |
| | | Satisfactory | 3 |
| | | Unsatisfactory | 2 |
| Total | PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 | Excellent | 14-15 |
| | PK- 8.2 | Good | 11-13 |

| Satisfactory | 8-10 |
|----------------|------|
| Unsatisfactory | 0-7 |

Stage: midterm assessment (examination)

Methodological guidelines for summative assessment (examination)

Examination is held in the oral form and includes several stages:

- oral quiz (the card includes two questions);
- case-study task;
- demonstration of practical skills with the use of the simulator.

Requirements for the student:

- 1) regularly attend classes; the absence from classes is not allowed without good reason;
- 2) in case of absence from classes the student has to work out passed classes;
- 3) the student has to hand over written papers on time;
- 4) the student has successfully passed all colloquiums provided by the plan;
- 5) in case the student has been negatively assessed on the colloquium, he/she should try to pass it again;
 - 6) during the test week the student has to hand over all the tasks (clinical case).

The students are allowed to take examinations in case of all the tests passed and no academic debts (on the basis of the academic records).

The students are not allowed to take examination:

- with unpassed tests on the discipline;
- with missed classes, debts on the discipline;
- with 5 (five) and more debts for the previous term;
- with one debt for earlier terms for more than a year.

Recommendations for the examination assessment:

| Type of the | Assessed | Assessment | Grade |
|-------------|--|-------------------------|-----------|
| task | competences | criteria | |
| Oral quiz | PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 | The student | Excellent |
| | PK- 8.2 | demonstrates | |
| | | comprehensive, | |
| | | systematic and | |
| | | profound knowledge | |
| | | of the subject, can | |
| | | independently | |
| | | perform the tasks | |
| | | provided by the | |
| | | program; who has a | |
| | | good knowledge of | |
| | | the main literature and | |
| | | familiar with the | |
| | | additional literature | |

| <u> </u> | 4 4 .4 | |
|--|---|--------------|
| | recommended by the | |
| | program; | |
| | demonstrates creative | |
| | abilities in | |
| | understanding, | |
| | statement and use of | |
| | material of the studied | |
| | discipline, faultlessly | |
| | answers not only | |
| | questions of the card, | |
| | but also additional | |
| | questions within the | |
| | | |
| | main program, | |
| | correctly performs a | |
| | practical task. | |
| PK-1.1 PK- 1.2 PK-3.3 PK- | The student has | Good |
| 3.4 PK- 5.1 PK-5.2 PK-5.4 | good knowledge of | 3000 |
| PK- 8.2 | material of the studied | |
| | | |
| | discipline; can | |
| | successfully perform | |
| | the tasks provided by | |
| | the program; has a | |
| | good knowledge of | |
| | the main literature | |
| | recommended by the | |
| | program; answers all | |
| | questions of the card, | |
| | correctly performs a | |
| | practical task, but | |
| | makes some mistakes. | |
| | | |
| | | |
| | | |
| PK-1.1 PK- 1.2 PK-3.3 PK- | The student | Catiafactom |
| PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 | The student | Satisfactory |
| | demonstrates | Satisfactory |
| 3.4 PK- 5.1 PK-5.2 PK-5.4 | demonstrates knowledge of material | Satisfactory |
| 3.4 PK- 5.1 PK-5.2 PK-5.4 | demonstrates knowledge of material for further study; can | Satisfactory |
| 3.4 PK- 5.1 PK-5.2 PK-5.4 | demonstrates knowledge of material for further study; can cope with the tasks | Satisfactory |
| 3.4 PK- 5.1 PK-5.2 PK-5.4 | demonstrates knowledge of material for further study; can cope with the tasks provided by the | Satisfactory |
| 3.4 PK- 5.1 PK-5.2 PK-5.4 | demonstrates knowledge of material for further study; can cope with the tasks provided by the program; familiar | Satisfactory |
| 3.4 PK- 5.1 PK-5.2 PK-5.4 | demonstrates knowledge of material for further study; can cope with the tasks provided by the | Satisfactory |
| 3.4 PK- 5.1 PK-5.2 PK-5.4 | demonstrates knowledge of material for further study; can cope with the tasks provided by the program; familiar | Satisfactory |
| 3.4 PK- 5.1 PK-5.2 PK-5.4 | demonstrates knowledge of material for further study; can cope with the tasks provided by the program; familiar with the main | Satisfactory |
| 3.4 PK- 5.1 PK-5.2 PK-5.4 | demonstrates knowledge of material for further study; can cope with the tasks provided by the program; familiar with the main recommended | Satisfactory |
| 3.4 PK- 5.1 PK-5.2 PK-5.4 | demonstrates knowledge of material for further study; can cope with the tasks provided by the program; familiar with the main recommended literature; makes | Satisfactory |

| | | avamination to also best | |
|--------------|--|---|----------------|
| | | examination tasks, but has necessary knowledge for their elimination under the supervision of the teacher. | |
| | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates poor knowledge of the material, makes significant mistakes in performance of the tasks provided by the program. | Unsatisfactory |
| Case - study | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student correctly and fully solves the case-study task, demonstrating deep knowledge. There are no errors in logical reasoning and solution, the problem is solved in a rational way. The right answer is obtained, ways are clearly described. | Excellent |
| | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student correctly solves the case-study task, demonstrating deep knowledge. There are minor errors in logical reasoning and solution, the problem is solved in a rational way. The right answer is obtained, ways are clearly described. | Good |
| | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student correctly solves the case-study task, demonstrating basic knowledge. There are significant errors in logical reasoning and solution. The student demonstrates | Satisfactory |

| | | difficulties, but still is able to solve a casestudy task. | |
|------------------|--|--|----------------|
| | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student incorrectly solves the case-study task, makes significant mistakes answering most of the questions of the case-study. The student is not able to solve a case-study. | Unsatisfactory |
| Practical skills | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student correctly demonstrates practical skills on the model with a deep knowledge of the material. There are no mistakes in the demonstration and the used technique. The indications and conditions used in this method are clearly described. | Excellent |
| | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates practical skills on the model with slight inaccuracies. There are insignificant mistakes in the demonstration and the used technique. The indications and conditions used in this method are clearly described. | Good |
| | PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | The student demonstrates practical skills on the model with inaccuracies. There are significant | Satisfactory |

| PK-1.1 PK- 1.2 PK-3.3 PK-3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | mistakes in the demonstration and the used technique. The indications and conditions used in this method are clearly described. The student demonstrates practical skills on the model with significant mistakes. The indications and conditions used in this method are not described. | Unsatisfactory |
|--|--|----------------|
| | described. | |

Chart of the examination grade assessment:

| Tasks | Assessed | Grade | Score |
|-----------------------------------|---|----------------|-------|
| | competences | | |
| Theoretical point № 1 (Oral | PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 | Excellent | 5 |
| answer) | PK- 8.2 | Good | 4 |
| | | Satisfactory | 3 |
| | | Unsatisfactory | 2 |
| Theoretical point № 2 (Oral | PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 PK- 8.2 | Excellent | 5 |
| answer) | | Good | 4 |
| | | Satisfactory | 3 |
| | | Unsatisfactory | 2 |
| Practical task (case studies) | PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 | Excellent | 5 |
| | PK- 8.2 | Good | 4 |
| | | Satisfactory | 3 |
| | | Unsatisfactory | 2 |
| Practical task (Practical skills) | PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 | Excellent | 5 |
| (2 Tuestour Skillo) | PK- 8.2 | Good | 4 |

| | Satisfactory | 3 | |
|-------|--|----------------|-------|
| | | Unsatisfactory | 2 |
| Total | Total PK-1.1 PK- 1.2 PK-3.3 PK- 3.4 PK- 5.1 PK-5.2 PK-5.4 | Excellent | 18-20 |
| | PK- 8.2 | Good | 15-17 |
| | | Satisfactory | 11-14 |
| | | Unsatisfactory | 8-10 |