Application to the work program

Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation

BANK OF ASSESSMENT TOOLS

GENERAL SURGERY

Speciality: **31.05.01 GENERAL MEDICINE**

Department: **FACULTY OF SURGERY AND TRANSPLANTOLOGY**

Form of study: **FULL-TIME**

Nizhny Novgorod
2021

1. Fund of assessment tools for current monitoring of progress, intermediate certification of students in the discipline

This Fund of Evaluation Funds (FOS) for the discipline "General surgery" is an integral part of the work program of the discipline " General surgery". This FOS is subject to all the details of the approval presented in the WPD for this discipline.

2. List of evaluation tools

To determine the quality of mastering the educational material by students in the discipline " General surgery", the following assessment tools are used:

№	Estimator	Brief description of the evaluation tool	Presentation of the evaluation tool in the FOS
1	Essay	The product of the student's independent work, which is a summary in writing of the results of the theoretical analysis of a certain scientific (educational and research) topic, where the author reveals the essence of the problem under study, gives different points of view, as well as his own views on it.	List of essay topics
2	Report	The product of the student's independent work, which is a public performance on the presentation of the results of solving a specific educational, practical, educational, research or scientific topic	Topics of reports, messages
3	Case report	Clinical examination of a surgical patient and registration of the results of the examination in the form of a medical educational history of the disease	List of the main surgical nosologies for writing a medical history
4	Test	A system of standardized tasks that allows you to automate the procedure measuring the level of knowledge and skills of the student	Test fund assignments
5	Business/role play	Joint activity of a group of students and a teacher under the control of a teacher in order to solve educational and professionally oriented tasks through game simulation of a real problem situation. Allows you to evaluate the ability to analyze and solve typical professional problems.	Theme (problem), concept, roles and expected outcome for each game
6	Control work	A tool for testing skills to apply the acquired knowledge to solve problems of a certain type on a topic or section	A set of control tasks by options
7	Situational tasks	A method of control that allows you to assess the criticality of thinking and the degree of assimilation of the material, the ability to apply theoretical knowledge in practice.	Task List
8	Interview	A means of control, organized as a special conversation between a teacher and a student on topics related to the discipline being studied, and designed to clarify the amount of knowledge of the student in a particular section, topic, problem, etc.	Questions on topics / sections of the discipline

3. List of competencies indicating the stages of their formation in the process of mastering the educational program and types of assessment tools

Code and wording of competence	Stage formation of competence	Controlled sections of the discipline	Evaluation tools
UC-8 GPC-1,4,6,7 PC-1,2,3,4,5,6,8,15,22	Current	Section 1. Introduction to surgery Topic 1.1. The subject and tasks of general surgery, the place of discipline in the system of higher medical education Topic 1.2. The role of Russian scientists in the formation and development of the national school of general surgery Topic 1.3. Ethical and deontological aspects in surgical activity	Essay Report Case report Test Business/role play Control work Situational tasks
		Topic 1.4. Methodology for collecting medical and paramedical information Topic 1.5. Methodology for the implementation of experimental and clinical studies	Essay Report Case report Test Business/role play Control work Situational tasks
UC-8 GPC-1,4,6,7 PC-1,2,3,4,5,6,8,15,22		Section 2. General questions of surgery. Topic 2.1. Desmurgy Topic 2.2. Transport immobilization Topic 2.3. Non-operative surgical technique Topic 2.4. Asepsis Topic 2.5. Antiseptics Topic 2.6. Bleeding and hemostasis Topic 2.7. Transfusion of blood components	Essay Report Case report Test Business/role play Control work Situational tasks
UC-8 GPC-1,4,6,7 PC-1,2,3,4,5,6,8,15,22		Section 3. Emergency conditions in surgery Topic 3.1. Endogenous intoxication in surgery Topic 3.2. Water and electrolyte disturbances Topic 3.3. Critical vitality Topic 3.4. Terminal and shock states Topic 3.5. Pain and pain relief	Essay Report Case report Test Business/role play Control work Situational tasks
UC-8 GPC-1,4,6,7 PC-1,2,3,4,5,6,8,15,22		Section 4. Fundamentals of surgery for purulent diseases Topic 4.1. Purulent diseases of the skin, subcutaneous tissue and glandular organs Topic 4.2. Purulent diseases of the hand and foot Topic 4.3. Purulent diseases of cellular spaces Topic 4.4. Purulent diseases of the serous cavities Topic 4.5. Purulent diseases of bones and joints Topic 4.6. Anaerobic surgical infection Topic 4.7. Specific surgical infection Topic 4.8. General purulent infection	Essay Report Case report Test Business/role play Control work Situational tasks
UC-8 GPC-		Section 5. Fundamentals of injury surgery Topic 5.1. Wounds and wound healing	Essay Report

1,4,6,7 PC-1,2,3,4,5,6,8,15,22		Topic 5.2. Mechanical injury Topic 5.3. Thermal damage Topic 5.4. The main forms of injuries to the head, chest and abdomen	Case report Test Business/role play Control work Situational tasks
UC-8 GPC-1,4,6,7 PC-1,2,3,4,5,6,8,15,22		Section 6. Fundamentals of Clinical Surgery Topic 6.1. Curation of surgical patients Topic 6.2. Fundamentals of surgery for arterial blood flow disorders Topic 6.3. Fundamentals of surgery for disorders of venous and lymphatic blood flow Topic 6.4. Fundamentals of Surgical Oncology Topic 6.5. Fundamentals of plastic surgery and transplantology Topic 6.6. Fundamentals of surgery for parasitic diseases Topic 6.7. Fundamentals of malformation surgery	Essay Report Case report Test Business/role play Control work Situational tasks
UC-8 GPC-1,4,6,7 PC-1,2,3,4,5,6,8,15,22		Section 7. Stages of treatment of surgical patients Topic 7.1. First medical care Topic 7.2. Ambulatory surgery Topic 7.3. Preoperative period Topic 7.4. Surgery Topic 7.5. Postoperative period	Essay Report Case report Test Business/role play Control work Situational tasks
UC-8 GPC-1,4,6,7 PC-1,2,3,4,5,6,8,15,22	Intermediate	Section 1. Introduction to surgery. Section 2. General questions of surgery. Section 3. Emergency conditions in surgery Section 4. Fundamentals of surgery for purulent diseases Section 5. Fundamentals of injury surgery Section 6. Fundamentals of Clinical Surgery Section 7. Stages of treatment of surgical patients	Test Situational tasks Interview

4. The content of the evaluation means of current control

Current control is carried out by the teacher of the discipline when conducting classes in the form of: essay, report, case report, test, business/role play, control work, situational tasks, exam paper interview.

4.1 Topics of essays for assessing competencies: UC-8, GPC - 1, GPC-4, GPC-6, GPC-7, PC-1, PC-2, PC-3 PC-4, PC05, PC-6, PC-8, PC-15, PC-22

1. The concept of surgery and surgical diseases, the relationship of surgery with other disciplines. Brief history of surgery.
2. Antiseptics. History of antiseptics. Types of antiseptics.
3. Asepsis. Kinds. Fight against hospitalism. Prevention.
4. Bleeding, classification, symptomatology.
5. Local anesthesia, types, indications for use.
6. Immunological aspects in the transfusion of blood and its components.
7. Wounds, classification, types of wound healing.
8. Types of vitality of the body's vital functions. Shock, terminal states, acute respiratory, renal, cardiovascular insufficiency in surgical patients.
9. Fracture healing, delayed fracture consolidation, false joint, treatment.
10. Skin plasty for burns. Types, indications.
11. Modern principles of prevention and treatment of purulent diseases.
12. Purulent-inflammatory diseases of the subcutaneous tissue and cellular spaces.
13. Acute hematogenous osteomyelitis. Clinic, diagnosis, treatment.
14. Diabetic foot - pathogenesis, clinical manifestations and treatment.

15. Sepsis, clinical forms of the course. Treatment.
16. Acute and chronic disorders of arterial circulation. Diagnosis and treatment.
17. Surgical treatment of oncological diseases. Radical, palliative, extended and combined operations.
18. The concept of organ and tissue transplantation. Immunological aspects of transplantology.
19. Preoperative preparation of the patient.
20. Postoperative complications, their prevention and treatment.

4.2. Report topics for competency assessment: UC-8, GPC - 1, GPC-4, GPC-6, GPC-7, PC-1, PC-2, PC-3 PC-4, PC05, PC-6, PC-8, PC-15, PC-22

1. N.I. Pirogov, role and merits in the development of surgery and anesthesia, military field surgery.
2. Fundamentals of rational antibiotic therapy.
3. Preparation of the hands of the surgeon and the operating field. New means for the treatment of hands and the surgical field.
4. Diagnosis of external and internal bleeding.
5. Local anesthesia, types, indications for use.
6. Indications for blood transfusion, dosage, complications.
7. Primary surgical treatment of wounds. Types of seams.
8. Treatment of a purulent wound, depending on the phase of the course of the wound process.
9. The concept of shock: hemorrhagic, anaphylactic, septic, traumatic, burn, blood transfusion, hemolytic.
10. Syndrome of prolonged tissue compression. Clinic, diagnostics, first aid, treatment.
11. Indications for surgical treatment of closed and open fractures.
12. Burn disease. Periods of development, treatment.
13. Classification of surgical infection. The concept of mixed infection.
14. Purulent skin diseases.
15. Purulent peritonitis, principles of treatment.
16. Phases of osteoarticular tuberculosis, treatment.
17. Necrosis, gangrene, bedsores and their treatment.
18. Combined and complex treatment of malignant tumors.
19. Transplantation of the kidney, heart, liver. Prostheses and artificial organs.
20. Pre- and postoperative period.

4.3. Writing a case history for competency assessment: UC-8, GPC - 1, GPC-4, GPC-6, GPC-7, PC-1, PC-2, PC-3 PC-4, PC05, PC-6, PC-8, PC-15, PC-22

Work at the bedside of the patient: collection of complaints, anamnesis, examination of the objective status. Work with medical records. Registration of the results of the examination of a surgical patient in the form of a medical educational history of the disease.

4.4. Situational for assessing competencies: UC-8, GPC - 1, GPC-4, GPC-6, GPC-7, PC-1, PC-2, PC-3 PC-4, PC05, PC-6, PC-8, PC-15, PC-22

Situational task 1

A patient with a lacerated wound of the anterior surface of the left thigh was delivered to the surgical hospital. The doctor on duty, excising the edges of the wound, stopped the bleeding, washed the wound with furatsilin and sutured the skin. Is everything done right?

Situational task 2

During the operation, a patient with a post-injection abscess of the left buttock underwent a wide dissection of the abscess, evacuation of the purulent contents with an electric suction, the cavity was washed with antiseptic solutions, after which a sterile cotton-gauze dressing was applied. Is the amount of surgery sufficient? If not, what needs to be done? What type of antiseptic should be used?

Situational task 3

After repositioning the dislocation of the left shoulder, the paramedic put a scarf bandage on the patient's left shoulder and sent the patient to outpatient treatment. Is everything done right?

Situational task 4

After falling on his right hand, the patient felt a sharp pain in his right shoulder. After the examination, the traumatologist found a gross deformity of the right shoulder joint, the absence of active movements in it, a sharp pain during passive movements, the shoulder was fixed in a state of abduction. What is your diagnosis? Your actions?

Situational task 5

A patient with a thermal burn of the 2nd degree of the right hand was admitted to the clinic. What bandage should be applied?

Situational task 6

The patient with burns of both lower extremities was admitted 20 minutes after the accident. BP - 150/90 mm Hg. Art., pulse 120 in 1 minute, rhythmic. Burn stage?

Situational task 7

After applying a plaster bandage for a fracture of the bones of the forearm, the patient developed swelling of the hand. Pain intensified, sensitivity to the hand is reduced. What can this condition indicate and what measures are necessary in this case?

Situational task 8

A 36-year-old woman came to the emergency room, who, getting off the bus, sprained her left ankle joint. From her words, she felt a sharp pain, a darkening in her eyes. On examination, it was revealed that the contours of the joint were smoothed, the tissues were edematous, with moderate pain on palpation. Active and passive movements in the ankle joint are sharply limited due to severe pain. There is no crepitation. There are no bone lesions on the radiograph. What is your diagnosis and action?

Situational task 9

Sterile bix with dressing material was opened in compliance with all asepsis rules, 5 napkins were taken from it. What is the name of such a bix and what are the rules for working with it in the future?

Situational task 10

A patient with gastric ulcer complicated by bleeding was admitted to the surgical department. The BCC deficit was 35%. In order to replenish blood loss, an emergency blood transfusion is indicated. What is the required minimum of laboratory tests (samples) to be performed, without which blood transfusion is unacceptable?

Situational task 11

Patient B. with severe Botkin's disease developed acute bleeding from the upper gastrointestinal tract (stomach?) while taking prednisolone. The patient's condition is extremely

serious. Pulse 132 beats per minute, blood pressure 70/40 mm Hg. Does the patient need a blood transfusion? If yes, why and in what way? What complications are possible in this case of blood transfusion?

Situational task 12

A patient came to the emergency department with complaints of a wound in the lower leg of the right thigh, 2 hours ago he was bitten by an unknown dog. Objectively: there is a wound with jagged edges 4*1.5*0.6 cm on the outer surface in the lower part of the right thigh, it does not bleed. How much assistance should be provided?

Situational task 13

A patient came to you with complaints of pain in 1 finger of the left hand, an hour ago he injured his finger while working with a circular saw. Objectively: there is an irregularly shaped wound with uneven edges on the palmar surface of the 1st finger, slight bleeding. What additional research is needed and further tactics?

Situational task 14

During the dressing of a patient with a purulent wound, the surgeon treated the surgical field from the center expanding to the periphery with iodonate twice. Is the surgical wound properly treated?

Situational task 15

You are the doctor of the ambulance team arrived at the scene of the accident. Examination of the victim revealed a wound penetrating into the pleural cavity. What bandage should be applied?

Situational task 16

When examining the victim at the scene, an ambulance doctor found that there is an open fracture of the leg bones on the right, and profuse ongoing bleeding. What should an emergency doctor do?

Situational task 17

A 25-year-old patient was delivered to the surgical department with complaints of pain in the abdomen and the left side of the chest in the lower section. In history, the patient received a blunt trauma to the abdomen on the left. Objectively: the skin and mucous membranes are pale. In the left hypochondrium, on palpation, the tension of the muscles of the left half of the abdomen. Pain radiates to the left collarbone and shoulder. The patient cannot lie in a horizontal position and tries to get up all the time. An urgent blood test: erythrocytes - 2.8 × 1012 / l, hemoglobin - 78 g / l. Your diagnosis and tactics of further treatment of the patient.

Situational task 18

In traumatological department from the scene of a road traffic accident (RTA) was delivered to the traumatological department. On examination, the patient was unconscious, with multiple abrasions on his forehead. Blood pressure - 70/40 mm Hg. Pulse - 140 beats per minute, weak filling. On the front surface of the right thigh there is a lacerated wound 5*4 cm, in the depth of which a bone fragment is visible. A sharp curvature of the axis of the limb was noted. What is your diagnosis? What method of treatment should be applied?

Situational task 19

A 13-year-old boy, playing hockey, fell on the palm of his outstretched right hand. Pain in the lower third of the forearm. On examination, there is swelling in the area of the wrist joint and the distal third of the forearm, pain, deformity, limitation of pronation-supination of the

forearm and movements in the wrist joint. Pain intensifies in the projection of the lower third of the radius with axial load on the forearm. How much first aid should be given to the victim? What additional diagnostic and therapeutic measures should be taken at the trauma center?

Situational task 20

A patient with a closed fracture of both bones of the left leg is being treated in a hospital for four months. At the next control X-ray examination, it was found that there were no signs of callus formation on the X-ray, there was a significant diastasis of bone fragments. What is the reason for this phenomenon?

Situational task 21

A patient came to the emergency department with complaints of pain in the left hand, 2 days ago he injured his hand with broken glass. Objectively: on the palmar surface there is a wound 2.0/0.5/0.5 cm with a fibrin coating, there is edema, hyperemia around, there are lines of hyperemia on the forearm. What is your diagnosis, treatment tactics?

Situational task 22

The doctor on duty performed surgical treatment of a bruised wound of the right thigh. After processing, a defect of the integument was formed, which was difficult to match by suturing. What mistakes were made and their likely consequences?

Situational task 23

In a 45-year-old patient, a granulating wound on the thigh 26 days ago cleared up, filled with granulations, no discharge. The edges of the wound are sclerotic. Is it possible to speed up the healing, what will you prescribe?

Situational task 24

A patient in the postoperative period had suppuration of the surgical wound. By the 15th day of treatment, the wound was completely cleared of purulent-necrotic discharge, filled with pink granulations. The wound is deep, its edges parted. What is the treatment strategy for the patient?

Situational task 25

The victim from the construction site was delivered to the traumatological department. From the anamnesis it was established that the patient fell from a height of four meters to his feet. Complains of back pain. Limb function is not impaired. When bending the trunk forward and to the side, pain in the lower back increases. Your actions?

Situational task 26

A patient with severe obstructive jaundice was taken for surgery. During the operation, the gallbladder and stones of the common bile duct were removed. In the postoperative period, there was marked bleeding from the surgical wound. At the same time, the surgeon claims that he performed a thorough hemostasis. What type of bleeding does the patient have and what is its cause?

Situational task 27

A patient with severe anemia (erythrocytes - 1.2×1012/l) was taken to the emergency room. During the survey, it was found that the patient had no injury, the stool was of a normal color. There is a large hematoma in the right iliac region. The patient notes that earlier for no reason, and sometimes after a minor injury, he had extensive hemorrhages under the skin and in the joints. What type of bleeding does the patient have and what is its possible cause?

Situational task 28

Patient A., 57 years old, underwent an emergency operation: closure of a perforated gastric ulcer. What bandage and for what purpose should be applied to the laparotomy wound?

Situational task 29

A patient with closed fractures of the right femur and left tibia was delivered to the traumatological department. The accompanying ambulance doctor reported that the patient had been injected with narcotic painkillers. What should the patient do?

Situational task 30

The victim was taken to the local hospital with a traumatic brain injury. The victim was prescribed treatment, including: polyglucin, osmodiuretics, antibiotics and sedatives. Was everything set up correctly?

4.5. Test questions for assessing competencies: UC-8, GPC - 1, GPC-4, GPC-6, GPC-7, PC-1, PC-2, PC-3 PC-4, PC05, PC-6, PC-8, PC-15, PC-22

1. Which of the drugs should be recommended for candidomycosis?
   a) monomycin;
   b) sulfadimezin;
   c) nystatin;
   d) streptomycin;
   e) penicillin.

2. The purulent wound was drained with a tampon with a hypertonic saline solution. What type of antiseptic is used?
   a) chemical;
   b) biological;
   c) mechanical;
   d) physical;
   e) mixed.

3. What is a mechanical antiseptic?
   a) irrigation of the wound with a solution of hydrogen peroxide;
   b) drainage of the wound with a gauze swab;
   c) removal of non-viable tissues from the wound;
   d) immobilization of the limb with a plaster cast.

4. Which of the listed therapeutic measures are related to the methods of biological antiseptics?
   a) primary surgical treatment of the wound;
   b) washing the wound with hydrogen peroxide;
   c) intramuscular administration of streptomycin;
   d) oral administration of sulfadimethoxine;
   e) protein diet.

5. What is the essence of physical antiseptics?
   a) increase the immunity of the patient;
   b) weaken the pathogenic properties of microbes;
   c) kill microbes in the wound;
   d) create in the wound unfavorable conditions for the development of microbes;
   e) destroy microbial spores in the wound.

6. Give the most complete correct answer: bleeding is an outpouring of blood:
a) to the external environment;
b) in the body cavity;
c) in body tissues;
d) in tissues, body cavities or in the external environment;
e) into the external environment and body cavities.

7. What classification most fully reflects the various manifestations of bleeding?
a) anatomical, by reason of occurrence, by clinical manifestations, taking into account the time of occurrence;
b) anatomical, physiological, taking into account the time of appearance, due to the appearance;
c) due to the appearance, anatomical, physiological, according to clinical manifestations, taking into account the time of appearance;
d) anatomical, physiological, clinical, taking into account the time of appearance;
e) etiological, anatomical, physiological, clinical.

8. What is a hematoma?
a) accumulation of blood limited to tissues;
b) hemorrhage in parenchymal organs;
c) accumulation of blood in the joint cavity;
d) blood impregnation of soft tissues;
e) accumulation of blood in the pleural or abdominal cavity.

9. What are the main groups divided into all methods of stopping bleeding?
a) temporary, final;
b) physical, chemical;
c) mechanical, biological
d) reliable, unreliable;
e) pre-medical, medical.

10. A vascular suture for the purpose of hemostasis is applied in case of damage:
a) capillaries;
b) arterioles;
c) venule;
d) any vessels;
e) main vessels.

11. What is a blood group?
a) a set of leukocyte antigens;
b) whey proteins;
c) a set of erythrocyte antigens;
d) a set of acquired antibodies;
e) a set of immune antibodies.

12. What is the importance of antigens and antibodies of the ABO system in blood transfusion practice?
a) characterize the state of the organism;
b) determine the compatibility of transfused blood;
c) are of no fundamental importance;
d) allow to determine the required amount of blood transfusion;
e) all of the above are true.

13. What is the name of the antigen-antibody reaction in determining the Rh factor of blood?
    a) pseudoagglutination;
    b) panagglutination;
    c) isoagglutination;
    d) heteroagglutination;
    e) homoagglutination.

14. When transfused blood type:
    a) is checked before the first blood transfusion;
    b) checked before each blood transfusion;
    c) not checked, enough data in the passport;
    d) not checked, enough data in the medical history;
    e) not checked, history data is sufficient.

15. When transfusing blood to patients who are in a state of anesthesia:
    a) compatibility tests are carried out in full;
    b) no biological test is carried out;
    c) only a biological test is carried out;
    d) compatibility is determined only by the ABO system;
    e) compatibility is determined only by the Rh factor.

16. Name the phases of shock:
    a) fainting, collapse;
    b) initial, intermediate, terminal;
    c) lightning fast, acute;
    d) erectile, terminal;
    e) erectile, torpid.

17. For traumatic shock is uncharacteristic:
    a) acidosis;
    b) alkalosis;
    c) hyperkalemia;
    d) hyponatremia;
    e) hypochloremia.

18. As a result of prolonged compression of the limbs, all can be observed, except:
    a) injury to the nerve trunks;
    b) ischemia of a limb or its segment;
    c) venous congestion;
    d) traumatic asphyxia;
    e) intravascular coagulation.

19. Specify the main factors that determine the severity of toxicosis in patients with prolonged compression syndrome:
    a) swelling of the injured limb;
    b) myoglobinemia and myoglobinuria;
    c) hyperkalemia, hyponatremia;
    d) hypercreatinemia and hyperphosphatemia;
    e) an excess of histamine and adenylic acid in the blood.

20. For the period of acute renal failure in the syndrome of prolonged compression, all are characteristic, except:
a) increase in anemia;
b) a sharp decrease in diuresis up to anuria;
c) hyperkalemia and hypercreatinemia;
d) hemodilution;
e) hypokalemia and polyuria.

21. Specify the symptom of soft tissue injury of the head:
a) vomiting;
b) loss of consciousness;
c) amnesia;
d) anisocoria;
e) subcutaneous hematoma.

22. Specify the symptoms of mild traumatic brain injury:
a) convulsions, coma;
b) headache, nausea, increased heart rate;
c) blood in the cerebrospinal fluid, congestive optic papilla;
d) amnesia, anisocoria;
e) vomiting, bradycardia, headache.

23. CSF leakage from the ear after a craniocerebral injury is a symptom of what injury?
a) brain injury
b) concussion
c) fracture of the cranial vault
d) fracture of the base of the skull
e) intracranial bleeding

24. What is characteristic of external valvular / strain / pneumothorax?
a) emphysema of soft tissues of the wound area;
b) mediastinal balloting;
c) compression of the lung of the opposite side;
d) displacement of the mediastinum towards the collapsed lung;
e) displacement of the mediastinum in the opposite direction.

25. What is characteristic of external open pneumothorax?
a) collapse of the lung on the side of the injury;
b) collapse of the lung on the damaged side;
c) mediastinal balloting;
d) displacement of the mediastinum towards damage;
e) displacement of the mediastinum in the opposite direction.

26. With a closed injury of the abdominal cavity with a rupture of the bladder, the most informative method of investigation is:
a) survey radiography of the abdominal cavity;
b) laparoscopy;
c) contrast cystography;
d) irrigoscopy;
e) general urinalysis.

27. The most common dislocation is:

a) lower jaw
b) clavicle;
c) shoulder;
d) hips;
e) in the ankle

28. The most common congenital dislocation is:
a) shoulder
b) forearms;
c) in the wrist joint;
d) hips;
e) the main phalanx of the first finger.

29. A symptom of a dislocation is:
a) change in the absolute length of the limb;
b) change in the relative length of the limb;
c) pathological mobility in the damaged joint;
d) crepitus;
e) subcutaneous emphysema.

30. The patient has an open fracture of the leg bones due to a blow by the front bumper of a car. What type of fracture is most likely in this case?
a) hammered;
b) compression;
c) multisplintered;
d) detachable;
e) helical.

31. Name the symptom of a closed bone fracture:
a) subcutaneous emphysema;
b) pathological mobility;
c) increase in the absolute length of the limb;
d) bleeding;
e) spring resistance in the nearest joint.

32. Specify the element of first aid at the scene of an accident for a victim with a fracture of a long tubular bone:
a) use the Beler tire;
b) anesthetize the fracture site;
c) perform reposition of fragments;
d) immobilize the limb with a transport tire;
e) perform skeletal traction.

33. Specify the time of fracture reposition in a patient with shock symptoms:
a) after performing a novocaine blockade of the fracture area;
b) after removing the patient from the state of shock;
c) after the start of intravenous transfusion;
d) immediately after the delivery of the patient to the hospital;
e) at the time of first aid.

34. Of the local symptoms with second-degree burns, all are noted, except:
a) soreness;

b) hyperemia;
c) bubbles;
d) edema;
e) hypoesthesia.

35. Burn shock is characterized by:
a) weakly expressed erectile phase;
b) pronounced erectile phase;
c) the absence of a torpid phase;
d) increased CVP;
e) increase in BCC.

36. At the scene of the incident, the victim in a state of clinical death from exposure to electric current is shown all the measures except:
a) artificial lung ventilation;
b) closed heart massage;
c) injection into the cavity of the heart 6-7 ml of a 7.5% solution of potassium chloride;
d) defibrillation of the heart;
e) tracheotomy.

37. The main cause of degenerative changes and tissue necrosis in cold injury is:
a) plasma loss;
b) paralysis of nerve endings;
c) muscle dysfunction;
d) violation of blood flow;
e) stop sweating.

38. The reactive period during frostbite includes the time:
a) direct exposure to cold;
b) from the beginning of the action of cold to warming;
c) warming up;
d) after the restoration of body temperature;
e) from the beginning of the action of cold to the rejection of the scab.

39. According to infection, wounds are distinguished:
a) purulent, aseptic, poisoned;
b) aseptic, scalped, purulent;
c) bitten, freshly infected, aseptic;
d) clean, freshly infected, infected;
e) purulent, freshly infected, aseptic.

40. Many factors contribute to the development of infection in the wound, except:
a) hematomas;
b) blood loss;
c) shock;
d) exhaustion;
e) the absence of foreign bodies.

41. Under the primary surgical treatment of the wound should be understood:
a) excision of the edges and bottom of the wound;
b) opening pockets and streaks;
c) removal of purulent discharge;

d) excision of the edges, walls and bottom of the wound;
e) washing the wound with an antiseptic; hemostasis.

42. The primary delayed suture is applied to the wound at the following times:
a) 3-4th day;
b) 5-6th day;
c) 8-15th day;
d) immediately after the primary surgical treatment;
e) 20-30th day.

43. What is called acute osteomyelitis?
a) purulent inflammation of the fascial spaces of the extremities;
b) purulent inflammation of the articular bag;
c) tuberculous lesions of the vertebrae;
d) purulent inflammation of the bone marrow;
e) specific inflammation of bone tissue.

44. One of the most important components of treatment for sepsis is:
a) massage;
b) antibiotic therapy;
c) physiotherapy exercises;
d) physiotherapeutic procedures;
e) vitamin therapy.

45. Typical local signs of gas gangrene are:
a) inflammatory reaction, necrosis, edema, intoxication;
b) absence of inflammatory reaction, edema, necrosis;
c) edema, lymphangitis;
d) elephantiasis;
e) leukocytosis, bacteremia, subfascial phlegmon.

46. The leading role in the pathogenesis of tetanus is played by the exotoxin secreted by the pathogen:
a) streptokinase;
b) tetanohemolysin;
c) hyaluronidase;
d) leukocidin;
e) tetanospasmin.

47. What joints are most often affected in the osteoarticular form of tuberculosis?
a) interphalangeal, wrist, ankle;
b) intervertebral, sacroiliac;
c) knee, hip, shoulder;
d) all of the above;
e) joints are not affected by tuberculosis.

48. With conservative treatment of trophic ulcers of the limb, the following are necessary:
a) bed rest, position with a lowered limb;
b) cessation of the outflow of discharge from the ulcer into the bandage;
c) careful dressing of the ulcerative surface and skin around the ulcer;
d) dressings with salicylic ointment;
e) applying a warm compress to the ulcer.

49. What feature is not characteristic of a malignant tumor?

a) spreads through the lymphatic vessels;
b) sprouts neighboring tissues;
c) can exist for the whole life of the patient;
d) develops quickly and for no apparent reason;
e) after removal of the tumor, a relapse occurs.

50. Remote associated skin grafting according to V.P. Filatov is a plastic method:

a) stalked flap;
b) bridge flap;
c) arterized skin-fat flap;
d) round migrating stalked flap;
e) split skin flap.

№ test task	№ response standard	№ test task	№ response standard	№ test task	№ response standard
1	c	21	e	41	d
2	d	22	b	42	b
3	c	23	d	43	d
4	c	24	e	44	b
5	d	25	c	45	b
6	d	26	c	46	e
7	a	27	c	47	c
8	a	28	d	48	c
9	a	29	b	49	c
10	e	30	c	50	a
11	c	31	b		
12	b	32	d		
13	c	33	b		
14	b	34	e		
15	a	35	c		
16	e	36	e		
17	b	37	d		
18	d	38	b		
19	b	39	e		
20	e	40	e		

4.6. Topics of control works for assessing competencies: UC-8, GPC - 1, GPC-4, GPC-6, GPC-7, PC-1, PC-2, PC-3 PC-4, PC05, PC-6, PC-8, PC-15, PC-22

1. Examination of surgical patient, medical documents. Rules of records in a case report.
2. Diagnosis of internal and external bleeding.
3. Electro trauma. Pathogenesis, features. Clinical presentation. Local and general treatment.
4. Methods of patient examination.
5. Diagnosis of the degree of blood lost.
6. Frostbite. Classification. Pathogenesis. Clinical presentation. Local and general treatment.
7. The role of laboratory, instrumental and physical examination.
8. Bleeding into tissues and cavities. Types. Symptoms. Treatment.

9. Chemical burns. Types treatment.

10. Outpatient card and case report.

11. Blood transfusion historic data.

12. Inhalation and respiratory burns. The radiation injury. Sun and heat exposure. Clinical manifestations. Treatment.

13. Surgical deontology. The concept of deontology as necessary element of surgical action.

14. Human antigen-antibody (ABO) system. Blood grouping.

15. Purulative surgery of skin, subcutaneous tissue, and tissue interspace. Cellulites. Erysipelas. Etiology. Pathogenesis. Diagnosis. Types. Clinical presentation. Treatment.

16. Antisepsis. Classification. Types.

18. Rh-factor system. Rh-factor determination.

19. Abscess. Etiology. Pathogenesis. Diagnosis. Clinical presentation. Treatment.

20. Role of the using the antibiotics in surgery.

21. Indications for blood transfusion, contraindications for planned blood substitutes transfusion.

22. Phlegmon. Etiology. Pathogenesis. Diagnosis. Treatment.

23. Chemical and biological antisepsis.

24. Up-to-data rules of blood transfusion and blood components.

25. Bolls. Carbuncles. Etiology. Symptoms. Treatment.

26. Physical and mechanical antisepsis.

27. Blood substitutes. Classification. Mechanism of action. Rules of blood substitutes transfusion.

28. Mastitis. Classification. Etiology. Symptoms. Treatment.

29. Mechanical antisepsis. Methods of the wound drainage. Hospital infection, methods of prevent.

30. Methods and techniques of blood transfusion.

31. Peritonitis classification. Phases. Etiology. Pathogenesis. Diagnosis. Principles of the treatment of peritonitis. Tasks of operative treatment. Principles of postoperative treatment. Prognosis.

32. Antisepsis. History Methods the one.

33. Right blood transfusion. Mechanism of action. Rules of the transfusion. Tests.

33. Infection of the wrist and hand. Acute paronychia. Pulp space. Flexor classification. Etiology. Diagnosis. Treatment.

34. Asepsis of operation's members and operative field.

35. Wounds. Classification. Debridment.

36. Empyema of the pleura. Pathogenesis. Classification. Diagnosis. Local and general manifestation. Treatment.

37. Asepsis of the hand of the surgeon.

38. Wound process. The course of wound process (periods).

39. Mediastinitis. Etiology. Pathogenesis. Diagnosis. Clinical presentation. Treatment.

40. Drains and tampons. Types. Indications for using.

41. Types of wound healing. Factors affecting the wound healing process.

42. Osteomyelitis. Types. Classification. Pathologic and clinical considerations. Diagnosis. Treatment.

43. Sterilization of the surgical instrument. Control of the sterilization.

44. Wound management. Rules of the wound's debridement.

45. Bone joint tuberculosis. Classification. Phases. Pathologic and clinical considerations. Diagnosis (including X-ray examination). Treatment.

46. Organizing of the autoclave and the dry-heat sterilizer. Work regimen.

47. Modern principles of management of the purulent wounds.

48. Siberian ulcer, wound diphtheria. Diagnosis. Treatment.

49. Hospital infection, methods of it prevention.

50. Penetrating wound of the thorax. Mechanism of injury, pathophysiology, initial treatment. Pneumothorax, types. Treatment.

51. Acute pyogenic arthritis. Etiology. Pathologic considerations. Symptoms. Diagnosis. Treatment.

52. Contact infection, prophylaxis.

53. Surgical drains and packing.

54. Tetanus. Pathology. Etiology. Clinical features. Types. Prophylaxis. Treatment.

55. Sterilization of the dressing sutures.

56. Immediately life-threating injures (airway obstruction, tension pneumothorax, open pneumothorax, massive hemothorax, cardiac tamponade). Clinical presentation. Treatment.

57. Gas gangrene. Pathology. Etiology. Clinical feature. Prophylaxis. Treatment.

58. Implantation infection, prophylaxis.

59. Management of penetrating and blunt abdominal trauma (mechanism, primary surgery and resuscitation, secondary surgery and formal assessment)

60. Actinomycosis. Etiology. Pathology. Clinical features. Types. Diagnosis. Treatment.

61. Local anaesthesia. Types of local anaesthesia. Local anaesthetics. Possible complications.

62. Traumatology. Traumatism. Types. Prophylaxis.

63. Basic surgical blood disturbances. Basic disturbances of blood circulation. Necrosis, ulcers, fistulae, dry and moist gangrene. Definition. Diagnosis. Prophylaxis. Treatment.

64.Techniques of local anaesthesia.

65. Initial management of the acutely injured patient (priorities, steps in the initial resuscitation).

66. Decubitus. Etiology. Pathogenesis. Prophylaxis. Treatment.

67. Types of general anaesthesia. Up-to-date condition of anaesthesiology. Basic substances used in narcosis.

68. Strains. Definition, incidence and etiology, clinical manifestation. Management.

69. Sepsis. Definition. Classification. Etiology. Pathogenesis. General and local treatment. Septic shock. Features. Treatment.

70. Premedication. General anaesthesia usage. Most typical complications.

71. Sprains. Definition, incidence and etiology. Clinical manifestations. Treatment.

72. Oncology. Definitions. Cancer terminology. Incidence, mortality and survival rates. Risk factors for cancer.

73. General disturbances of life activity in surgical patients. Terminal condition. Preagony, agony, clinical death.

74. Fractures. Classification, clinical manifestation, management.

75. Neoplastic transformation (oncogenesis). Biology of neoplastic cells. Differentiating benign from malignant tumours.

76. Syncope. Collapse. Clinical presentation. Treatment.

77. Dislocations. Classification. Definition. Incidence and etiology. Clinical manifestations. Treatment.

78. Diagnostic procedures for oncological patients (biopsy, imaging studies).

80. Concept of surgery infection and its manifestation. Definitions. Infections. Portals of infections. Cross-infection of surgical wounds preoperative ones.

81. Fractures. Types. Classification. Risk factors. Etiology. Initial diagnosis and initial management (transport immobilisation, pipes, rules of the applying).

82. Multimodality cancer therapy (radiation therapy, chemotherapy and immunotherapy, adjuvant therapy). Definitions of the associative, combinative and complex therapy.

83. Concept of surgery infection and its manifestations. Definitions. Types of infections. Portals of infections. Cross-infection of surgical wounds preoperative ones.

84. Splints and braces (definition, types, rules of the using).

85. Principles of the cancer surgery (curative, other surgical resections, palliative surgery).

86. Preoperative phase. Definitions. Principles of preoperative preparation of the surgical patients.

87. Hospital management for patients with fractures of the long bones (non-pharmacological, interventions, pharmacological, special medical-surgical procedures: casts, extension (skin and skeletal), fracture fixation (external and internal).

88. Mastitis. Classification. Etiology. Symptoms. Treatment.

89. Intraoperative phase. Definitions. Classifications of surgeries. Common surgical positions.

90. Outcomes and possible complications of the fractures of long bones.

91. Osteomyelitis. Types. Classification. Pathologic and clinical considerations. Diagnosis. Treatment.

92. Postoperative phase. Definitions. Possible postoperative complications. Prophylaxis.

93. Crush syndrome. Pathogenesis. Clinical presentations. Treatment. Traumatic toxicosis. Pathogenesis.

94. Plastic surgery. Definitions. Skin plastic surgery. Classification. Types. Skin grafts. Types of the flaps (local and distant).

95. General disturbances of life activity in surgical patients. Terminal condition. Preagony, agony, clinical death.

96. Thermal and chemical burns. Classification of burns, diagnosis of severity and treatment.

97. Transplantation. Definitions. Problems of rejection. The area of organ replacement. Tissue and organ preservation.

4.7. Role/business games for competency assessment: UC-8, GPC - 1, GPC-4, GPC-6, GPC-7, PC-1, PC-2, PC-3 PC-4, PC05, PC-6, PC-8, PC-15, PC-22

1. Role/business game "Putting on operating clothes" with the participation of a surgeon, an operating room nurses, operating room nurses

a) the beginning of the trading day of 4 scheduled operations

b) prepare the operating room for operations under aseptic conditions

c) a nurse, putting on a clean suit, a dressing gown, an apron, a protective mask in the material room andgloves, carries out preliminary wet cleaning of operating furniture and floor, include es thirty protected sources of ventilation and UVI air. Places under the direction of the operating room sister necessary equipment and supplies, biks, medicines and antiseptics, provides the operating sister with the necessary sterile or disinfected items using forceps;

d) the operating sister puts on in the material room an operating suit, shoe covers (sabo) and goggles, in the preoperative room - a cap and a mask, after which it processes (washes) hands and goes to the operating room; in the operating room, she receives from the nurse or takes out biksa (packaging) a sterile operating gown and puts it on with the help of a nurse, observing the rules for maintaining the sterility of clothes Putting on sterile rubber gloves on hands over the sleeves of the gown, the nurse arranges the necessary instruments and consumables on the operating table, maintaining their sterility. Then he helps the surgeon and assistants to dress for the operation.

e) the surgeon and his assistants perform the same sequence of disinfection actions hands, putting on operating gowns and gloves, the nurse and the nurse help him, observing the rules for filing while maintaining the sterility of the clothes and hands of the operating team

2. Role/business game " Primary surgical treatment of an accidental wound ", Bandaging of a purulent wound" with the participation of a surgeon, an operating nurse, an operating nurse.

a) the beginning of the trading day of 4 scheduled operations

b) prepare the operating room for operations under aseptic conditions

c) a nurse, putting on a clean suit, gown, apron, protective mask and gloves, carries out preliminary wet cleaning of operating furniture and floor, includes protected sources of ventilation and UVI air. Places under the direction of the operating room sister necessary equipment and supplies, biks, medicines and antiseptics, provides the operating sister with the necessary sterile or disinfected items using forceps

d) the operating sister puts on in the material room an operating suit, shoe covers (sabo) and goggles, in the preoperative room - a cap and a mask, after which processes (washes) hands and goes to the operating room; in the operating room, she takes from the nurse or takes out a sterile operating gown from the bix (package) and puts it on with the help of the nurse, observing the rules for maintaining the sterility of clothes. Putting sterile rubber gloves on her hands over the sleeves of the gown, the nurse arranges the necessary instruments and consumables on the operating table, maintaining their sterility. Then helps the surgeon and assistants to dress for the operation

e) the surgeon and his assistants perform the same sequence of disinfection actions hands, putting on operating gowns and gloves, the nurse and the nurse help him, observing the rules for supplying while maintaining the sterility of the clothes and hands of the operating team.

f) after preparation of the operating team and processing of the operating field (wound), anesthesia of the wound and its primary surgical treatment with the imposition of a primary deaf seam. The operation ends with the application of an aseptic bandage.

5. The content of the assessment means of intermediate certification: test, situational tasks, interview

Intermediate certification in the 5th semester of the 3th is carried out in the form of a credit

Intermediate certification in the 6th semester of the 3th is carried out in the form of an exam

5.1 The list of control tasks and other materials necessary for assessing knowledge, skills and experience: tests in sections test tasks, situational tasks and interview questions.

5.1.1. Test questions with answer options for the test and exam in the discipline "General Surgery" are presented in paragraph 4.5

5.1.2. The list of questions for the interview at the exam in the discipline "General Surgery":

1. Concept of surgery and surgical diseases. Short history of surgery.
2. Development of modern surgery. Basic directions.
3. Examination of surgical patient. Medical documents. Rules of making records in a case report.
4. Methods of patient examination.
5. The role of laboratory, instrumental and physical examinations.
6. Out-patient card and disease history.
7. Surgical deontology. The concept of deontology as a necessary element of surgical action.
8. Antisepsis. Classification, types.
9. Rules of using antibiotics in surgery. Possible complications.
10. Clinical and biologic antisepsis.
11. Physical and mechanical antisepsis.
12. Mechanical antisepsis. Methods of wound drainage.
13. Antisepsis. History. Methods of the one.
14. Asepsis of operation's members and operative field.
15. Asepsis of the surgeon`s hand.
16. Drains and tampons. Types. Indications for using.
17. Sterilization of the surgical instruments. Control over sterilization.

18. Handling the autoclave and the dry-heat sterilizer. Work regimen.
19. Hospital infection, methods of its prevention.
20. Contact infection, prophylaxis.
21. Sterilization of dressings and sutures.
22. Implantation infection, prophylaxis.
23. Bleeding. Classification. Symptoms.
24. Temporary and final hemostasis.
25. Diagnosis of internal and external bleeding.
26. Diagnosis of the degree of the blood loss.
27. Bleeding into tissues and cavities. Types. Symptoms. Treating.
28. Local anesthesia. Types of local anesthesia. Local anesthetics. Possible complications.
29. Techniques of local anesthesia.
30. Types of general anesthesia. Up-to- date condition of anesthesiology. Basic substances used in narcosis.
31. Premedication. General anesthesia usage. Most typical complications.
32. Blood transfusion. Historic data.
33. Man's antigen-antibody (ABO) system. Blood groups determination.
34. Rh-factor system. Rh-factor determination.
35. Indications for blood transfusion. Contraindications for plan blood transfusion. Possible complications.
36. Up-to-data rules of blood transfusion and blood components.
37. Blood substitutes. Classification. Mechanism of action. Rules of blood substitutes transfusion.
38. Methods and techniques of blood transfusion.
39. Correct blood transfusion. Mechanism of action. Rules of transfusion. Tests.
40. Wounds. Classification (Russian, UK). Debridment.
41. Wound process. The course of wound process (periods).
42. Types of wound healing. Factors affecting the wound healing process.
43. Wound management. Rules of the wound's debridement.
44. Modern principles of management of the purulent wounds.
45. Penetrating wound of the thorax. Mechanism of injury, pathophysiology, initial treatment. Pneumothorax, types. Treatment.
46. Surgical drains and packing.
47. Immediately life-treating injuries (airway obstruction, tension pneu¬mothorax, open pneumothorax, massive hemothorax, cardiac tamponade). Clinical presentation. Treatment.
48. Management of penetrating and blunt abdominal trauma (mechanism, pri¬mary surgery and resuscitation, secondary surgery and formal assessment
49. General disturbances of life activity in surgical patients. Terminal condition. Preagony, agony, clinical death.
50. Shock: causes, pathogenesis, phases. Clinical picture, diagnosis. Treatment.
51. Syncope. Collapse. Clinical presentation. Treatment.
52. Traumatology. Traumatism. Types. Prophylaxis.
53. Initial management of the acutely injured patient (priorities, steps in the initial resuscitation).
54. Strains. Definition, incidence and etiology, clinical manifestations. Ma¬nagement.
55. Sprains. Definition, incidence and etiology, clinical manifestations. Treatment.
56. Tear of the rotator cuff. Definition, incidence and etiology, clinical manifestations, management.
57. Contusions. Definition, incidence and etiology, clinical manifestation. Treatment.
58. Dislocations. Classification, definition, incidence and etiology, clini¬cal manifestations. Treatment.

59. Fractures. Types. Classification. Risk factors, etiology, initial diagnosis and initial management (transport immobilization, types, rules of applying).
60. Splints and braces (definition, types, rules of using).
61. Hospital management of patients with fractures of the long bones (nonpharmacologic, interventions, pharmacologic, special medical-surgical procedures: casts, traction (skin and skeletal), fracture fixation (external and internal).
62. 11. Outcomes and possible complications of the fractures of the long bones.
63. 12. Crush-syndrome. Pathogenesis. Clinical presentations. Treatment.
64. 13. Traumatic toxicosis. Pathogenesis.
65. Thermal and chemical burns. Classification of burns, diagnosis of severity and treatment.
66. Burn shock. Pathogenesis. Special features. Treatment.
67. Burn disease. Pathogenesis. Phases. Clinical presentation. Local and general treatment. Possible complications.
68. Electrotrauma. Pathogenesis. Special features. Clinical presentation. Treatment.
69. Frostbite. Classification. Pathogenesis. Clinical presentation. Local and general treatment.
70. Chemical burns. Types. Treatment.
71. Inhalation and respiratory burns. The radiation injury. Sun and heat overexposure. Clinical manifistations. Treatment.
72. Concept of surgery infection and its manifestation. Definitions. Types of infections. Portals of infection. Cross-infection of surgical wou¬nds, preoperative ones.
73. Hospital infections. Precautions.
74. Purative surgery of skin, subcutaneous tissue and tissue interspace. Cellulites. Erysipelas. Etiology. Pathogenesis. Diagnosis. Types. Clinical presentation. Treatment.
75. Abscess. Etiology. Pathogenesis. Diagnosis. Clinical presentations. Treat¬ment.
76. Phlegmona. Etiology. Pathogenesis. Diagnosis. Symptoms. Treatment.
77. Bolls. Carbuncles. Etiology. Symptoms. Treatment.
78. Mastitis. Classification. Etiology. Clinical presentation. Treatment.
79. Peritonitis. Classification. Phases. Etiology. Pathogenesis. Diagnosis. Principles of the treatment of peritonitis. Tasks of operative treatment. Principles of postoperative treatment. Prognosis.
80. Infection of the wrist and hand. Acute paronychia. Pulp space. Flexor tendon sheath infection. Web space infection. Pulmar space infection. Classification. Etiology. Diagnosis. Treatment.
81. Empyema of the pleura. Pathogenesis. Classification. Diagnosis. Local and general manifestations. Treatment.
82. Mediastinitis. Etiology. Pathogenesis. Diagnosis. Clinical presentation Treatment.
83. Osteomyelitis. Types. Classification. Pathologic and clinical consi¬derations. Diagnosis. Treatment.
84. Bone joint tuberculosis. Classification. Phases. Pathologic and clinical considerations. Diagnosis (including X-ray examination). Treat¬ment.
85. Siberian ulcer, wound diphtheria. Diagnosis. Treatment.
86. Acute pyogenic arthritis. Etiology. Pathologic considerations. Symptoms .Diagnosis. Treatment.
87. Tetanus. Pathology. Clinical features. Grades. Prevention. Treatment.
88. Gas gangrene. Pathology. Etiology. Clinical features. Prophylaxis. Treatment.
89. Actinomycosis. Etiology. Pathology. Clinical features. Types. Diagnosis. Treatment.
90. Basic surgical blood disturbances. Basic disturbances of blood circulation. Necrosis, ulcers, fistulae, dry and moist gangrene. Definition Diagnosis. Prophylaxis. Treatment.
91. Decubitus. Etiology. Pathogenesis. Prophylaxis. Treatment.
92. Sepsis. Definition. Classification. Etiology. Pathogenesis. General and local treatment. Septic shook. Special features. Treatment.

93. Oncology. Definitions. Cancer terminology. Incidence, mortality, and sur¬vival rates. Risk factors for cancer.
94. Neoplastic transformation (oncogenesis). Biology of neoplastic cells. Differentiating benign from malignant tumors.
95. Clinical manifestations of cancer. Staging of cancer (TNM system). Ways of the metastatic spreading.
96. Diagnostic procedures for oncologic patients (biopsy, imaging studies).
97. Multimodality cancer therapy (radiation therapy, chemotherapy and
98. immunotherapy, adjuvant therapy). Definitions of the associative, combined, and complex therapy.
99. Principles of the cancer surgery (curative, other surgical resections). Palliative surgery.
100. Plastic surgery. Definitions. Skin plastic surgery. Classification. Types. Skin grafts. Types of the flaps (local and distant).
101. Transplantation. Definitions. Problems of rejection. The era of organ replacement. Tissue and organ preservation.
102. Preoperative phase. Definitions. Principles of preoperative prepara¬tion of the surgical patients.
103. Intraoperative phase. Definitions. Classifications of surgeries. Common surgical positions.
104. Postoperative phase. Definitions. Possible postoperative complications. Prophylaxis.
105. Examination of surgical patient, medical documents. Rules of records in a case report.
106. Diagnosis of internal and external bleeding.
107. Electro trauma. Pathogenesis, features. Clinical presentation. Local and general treatment.
108. Methods of patient examination.
109. Diagnosis of the degree of blood lost.
110. Frostbite. Classification. Pathogenesis. Clinical presentation. Local and general treatment.
111. The role of laboratory, instrumental and physical examination.
112. Bleeding into tissues and cavities. Types. Symptoms. Treatment.
113. Chemical burns. Types treatment.
114. Outpatient card and case report.
115. Blood transfusion historic data.
116. Inhalation and respiratory burns. The radiation injury. Sun and heat exposure. Clinical manifestations. Treatment.
117. Surgical deontology. The concept of deontology as necessary element of surgical action.
118. Human antigen-antibody (ABO) system. Blood grouping.
119. Purulative surgery of skin, subcutaneous tissue, and tissue interspace. Cellulites. Erysipelas. Etiology. Pathogenesis. Diagnosis. Types. Clinical presentation. Treatment.
120. Antisepsis. Classification. Types.
121. Rh-factor system. Rh-factor determination.
122. Abscess. Etiology. Pathogenesis. Diagnosis. Clinical presentation. Treatment.
123. Role of the using the antibiotics in surgery.
124. Indications for blood transfusion, contraindications for planned blood substitutes transfusion.
125. Phlegmon. Etiology. Pathogenesis. Diagnosis. Treatment.
126. Chemical and biological antisepsis.
127. Up-to-data rules of blood transfusion and blood components.
128. Bolls. Carbuncles. Etiology. Symptoms. Treatment.

129. Physical and mechanical antisepsis.
130. Blood substitutes. Classification. Mechanism of action. Rules of blood substitutes transfusion.
131. Mastitis. Classification. Etiology. Symptoms. Treatment.
132. Mechanical antisepsis. Methods of the wound drainage. Hospital infection, methods of prevent.
133. Methods and techniques of blood transfusion.
134. Peritonitis classification. Phases. Etiology. Pathogenesis. Diagnosis. Principles of the treatment of peritonitis. Tasks of operative treatment. Principles of postoperative treatment. Prognosis.
135. Antisepsis. History Methods the one.
136. Right blood transfusion. Mechanism of action. Rules of the transfusion. Tests.
137. Infection of the wrist and hand. Acute paronychia. Pulp space. Flexor classification. Etiology. Diagnosis. Treatment.
138. Asepsis of operation's members and operative field.
139. Wounds. Classification. Debridment.
140. Empyema of the pleura. Pathogenesis. Classification. Diagnosis. Local and general manifestation. Treatment.
141. Asepsis of the hand of the surgeon.
142. Wound process. The course of wound process (periods).
143. Mediastinitis. Etiology. Pathogenesis. Diagnosis. Clinical presentation. Treatment.
144. Drains and tampons. Types. Indications for using.
145. Types of wound healing. Factors affecting the wound healing process.
146. Osteomyelitis. Types. Classification. Pathologic and clinical considerations. Diagnosis. Treatment.
147. Sterilization of the surgical instrument. Control of the sterilization.
148. Wound management. Rules of the wound's debridement.
149. Bone joint tuberculosis. Classification. Phases. Pathologic and clinical considerations. Diagnosis (including X-ray examination). Treatment.
150. Organizing of the autoclave and the dry-heat sterilizer. Work regimen.
151. Modern principles of management of the purulent wounds.
152. Siberian ulcer, wound diphtheria. Diagnosis. Treatment.
153. Hospital infection, methods of it prevention.
154. Penetrating wound of the thorax. Mechanism of injury, pathophysiology, initial treatment. Pneumothorax, types. Treatment.
155. Acute pyogenic arthritis. Etiology. Pathologic considerations. Symptoms. Diagnosis. Treatment.
156. Contact infection, prophylaxis.
157. Surgical drains and packing.
158. Tetanus. Pathology. Etiology. Clinical features. Types. Prophylaxis. Treatment.
159. Sterilization of the dressing sutures.
160. Immediately life-threating injures (airway obstruction, tension pneumothorax, open pneumothorax, massive hemothorax, cardiac tamponade). Clinical presentation. Treatment.
161. Gas gangrene. Pathology. Etiology. Clinical feature. Prophylaxis. Treatment.
162. Implantation infection, prophylaxis.
163. Management of penetrating and blunt abdominal trauma (mechanism, primary surgery and resuscitation, secondary surgery and formal assessment)
164. Actinomycosis. Etiology. Pathology. Clinical features. Types. Diagnosis. Treatment.
165. Local anaesthesia. Types of local anaesthesia. Local anaesthetics. Possible complications.

166. Traumatology. Traumatism. Types. Prophylaxis.
167. Basic surgical blood disturbances. Basic disturbances of blood circulation. Necrosis, ulcers, fistulae, dry and moist gangrene. Definition. Diagnosis. Prophylaxis. Treatment.
168. Techniques of local anaesthesia.
169. Initial management of the acutely injured patient (priorities, steps in the initial resuscitation).
170. Decubitus. Etiology. Pathogenesis. Prophylaxis. Treatment.
171. Types of general anaesthesia. Up-to-date condition of anaesthesiology. Basic substances used in narcosis.
172. Strains. Definition, incidence and etiology, clinical manifestation. Management.
173. Sepsis. Definition. Classification. Etiology. Pathogenesis. General and local treatment. Septic shock. Features. Treatment.
174. Premedication. General anaesthesia usage. Most typical complications.
175. Sprains. Definition, incidence and etiology. Clinical manifestations. Treatment.
176. Oncology. Definitions. Cancer terminology. Incidence, mortality and survival rates. Risk factors for cancer.
177. General disturbances of life activity in surgical patients. Terminal condition. Preagony, agony, clinical death.
178. Fractures. Classification, clinical manifestation, management.
179. Neoplastic transformation (oncogenesis). Biology of neoplastic cells. Differentiating benign from malignant tumours.
180. Syncope. Collapse. Clinical presentation. Treatment.
181. Dislocations. Classification. Definition. Incidence and etiology. Clinical manifestations. Treatment.
182. Diagnostic procedures for oncological patients (biopsy, imaging studies).
183. Concept of surgery infection and its manifestation. Definitions. Infections. Portals of infections. Cross-infection of surgical wounds preoperative ones.
184. Fractures. Types. Classification. Risk factors. Etiology. Initial diagnosis and initial management (transport immobilisation, pipes, rules of the applying).
185. Multimodality cancer therapy (radiation therapy, chemotherapy and immunotherapy, adjuvant therapy). Definitions of the associative, combinative and complex therapy.
186. Concept of surgery infection and its manifestations. Definitions. Types of infections. Portals of infections. Cross-infection of surgical wounds preoperative ones.
187. Splints and braces (definition, types, rules of the using).
188. Principles of the cancer surgery (curative, other surgical resections, palliative surgery).
189. Preoperative phase. Definitions. Principles of preoperative preparation of the surgical patients.
190. Hospital management for patients with fractures of the long bones (non-pharmacological, interventions, pharmacological, special medical-surgical procedures: casts, extension (skin and skeletal), fracture fixation (external and internal).
191. Mastitis. Classification. Etiology. Symptoms. Treatment.
192. Intraoperative phase. Definitions. Classifications of surgeries. Common surgical positions.
193. Outcomes and possible complications of the fractures of long bones.
194. Osteomyelitis. Types. Classification. Pathologic and clinical considerations. Diagnosis. Treatment.
195. Postoperative phase. Definitions. Possible postoperative complications. Prophylaxis.
196. Crush syndrome. Pathogenesis. Clinical presentations. Treatment. Traumatic

toxicosis. Pathogenesis.

197. Plastic surgery. Definitions. Skin plastic surgery. Classification. Types. Skin grafts. Types of the flaps (local and distant).

198. General disturbances of life activity in surgical patients. Terminal condition. Preagony, agony, clinical death.

199. Thermal and chemical burns. Classification of burns, diagnosis of severity and treatment.

200. Transplantation. Definitions. Problems of rejection. The area of organ replacement. Tissue and organ preservation.

6. Criteria for evaluating learning outcomes

For credit:

Learning Outcomes	Evaluation criteria	
	Not credited	Passed
Completeness of knowledge	The level of knowledge is below the minimum requirements. There were gross errors.	The level of knowledge in the amount corresponding to the training program. Minor errors may be made
Availability of skills	When solving standard problems, the basic skills were not demonstrated. There were gross errors.	Demonstrated basic skills. Typical tasks are solved, all tasks are completed. Minor errors may be made.
Availability of skills (possession of experience)	When solving standard problems, basic skills were not demonstrated. There were gross errors.	Demonstrated basic skills in solving standard problems. Minor errors may be made.
Motivation (personal attitude)	Educational activity and motivation are poorly expressed, there is no qualitative readiness to solve the assigned tasks	Learning activity and motivation are manifested, readiness to perform the assigned tasks is demonstrated.
Characteristics of the formation of competence	Competence is not fully formed. The available knowledge, skills and abilities are not enough to solve practical (professional) problems. Re-learning required	The formation of competence meets the requirements. The available knowledge, skills and motivation are generally sufficient to solve practical (professional) problems.
Competence level	Low	Medium/High

Criteria for evaluating learning outcomes

For testing:

Rating "5" (Excellent) - points (100-90%)
Rating "4" (Good) - points (89-80%)
Grade "3" (Satisfactory) - points (79-70%)
Less than 70% - (Unsatisfactory) - Grade "2"

For exam:

Learning Outcomes	Evaluation criteria	
	Not credited	Passed

Completeness of knowledge	The level of knowledge is below the minimum requirements. There were gross errors.	The level of knowledge in the amount corresponding to the training program. Minor errors may be made
Availability of skills	When solving standard problems, the basic skills were not demonstrated. There were gross errors.	Demonstrated basic skills. Typical tasks are solved, all tasks are completed. Minor errors may be made.
Availability of skills (possession of experience)	When solving standard problems, basic skills were not demonstrated. There were gross errors.	Demonstrated basic skills in solving standard problems. Minor errors may be made.
Motivation (personal attitude)	Educational activity and motivation are poorly expressed, there is no qualitative readiness to solve the assigned tasks	Learning activity and motivation are manifested, readiness to perform the assigned tasks is demonstrated.
Characteristics of the formation of competence	Competence is not fully formed. The available knowledge, skills and abilities are not enough to solve practical (professional) problems. Re-learning required	The formation of competence meets the requirements. The available knowledge, skills and motivation are generally sufficient to solve practical (professional) problems.
Competence level	Low	Medium/High

A complete set of assessment tools for the discipline "Hospital Surgery" is presented on the portal of the LMS of the Volga Research Medical University
https://sdo.pimunn.net/course/view.php?id=569

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