

No. LD-21

**Federal State Budgetary Educational Institution of Higher Education "North Ossetia
State Medical Academy" of the Ministry of Health of the Russian Federation**

Department surgical diseases No. 1

APPROVED
Minutes of the meeting
Central coordination
Educational and methodological council
"May, 23rd 2023 No. 5

ASSESSMENT MATERIALS

By discipline "General Surgery"

Main professional educational program of higher education - specialty program in specialty
05/31/01 General Medicine,
Approved on May 24, 2023

For 3rd year students

By specialty 05/31/01 General medicine

Reviewed and approved at a department meeting

From May 22, 2023 (protocol No. 10)

Head of the department _____

Vladikavkaz, 2023

STRUCTURE OF ASSESSMENT MATERIALS

1. Title page
2. Structure of assessment materials
3. Reviews of evaluation materials
4. Passport of evaluation materials
5. Set of assessment materials:
 - Questions for the module
 - Questions for the exam
 - bank of situational tasks
 - standards of test tasks (with title page and table of contents)
 - exam papers

**FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF HIGHER
EDUCATION "NORTH OSSETIAN STATE MEDICAL ACADEMY" OF THE MINISTRY
OF HEALTH OF THE RUSSIAN FEDERATION**

**REVIEW
for assessment materials**

By discipline general surgery

For 3rd year students

By specialty 05/31/01 General medicine

Evaluation materials were compiled at the Department of Surgical Diseases No. 1

Based on the work program of the discipline “General Surgery”

And meet the requirements Federal State Educational Standard for Higher Education in specialty 05/31/01 General Medicine, approved by the Ministry of Education and Science of the Russian Federation" August 12, 2020 No. 988

Evaluation materials include:

- Questions for the module,
- Questions for the exam,
- Bank of situational tasks,
- Standards of test tasks (with title page and table of contents),
- Exam papers

Bank of situational problems include the tasks themselves and answer templates. All tasks correspond to the work program of the discipline General Surgery, the competencies formed during its study, and cover all its sections. The bank contains answers to everyone situational tasks.

Test task standards include the following elements: test tasks, answer templates. All tasks correspond to the work program of the discipline General Surgery, the competencies formed during its study, and cover all its sections. The difficulty of the tasks varies. The number of tasks for each section of the discipline is sufficient for testing knowledge and eliminates repeated repetition of the same question in different versions. The standards contain answers to all test tasks.

The number of exam tickets is sufficient to conduct the exam and eliminates the repeated use of the same ticket during the exam within one day. Examination tickets are made on uniform forms in a standard form, on paper of the same color and quality. The exam ticket includes 4 questions. The wording of the questions coincides with the wording of the list of questions submitted for the exam. The content of the questions on one ticket relates to various sections of the work program of the discipline, allowing you to more fully cover the material of the discipline.

In addition to theoretical questions, a bank of situational tasks (tests, prescriptions, radiographs, electrocardiograms, etc.) is offered. Situational tasks make it possible to objectively assess the level of student mastery of theoretical material during ongoing monitoring of progress and intermediate certification. The difficulty of the questions in the exam papers is evenly distributed.

There are no comments on the peer-reviewed assessment materials.

In general, assessment materials for the discipline of General Surgery contribute to a qualitative assessment of students' level of proficiency in universal/general professional/professional competencies.

Peer-reviewed assessment materials for the discipline of General Surgery can be recommended for use for ongoing monitoring of progress and intermediate certification at the Faculty of Medicine for 3rd year students.

Reviewer:

Chairman of TSUMK
in surgical disciplines

Ph.D. Kalitseva M.V.

Passport of assessment materials for the discipline
general surgery

No.	Name of the supervised section (topic) of the discipline/module	Code of the competence (stage) being formed	Name of assessment material
1	2	3	4
Type of control	Ongoing progress monitoring/interim assessment		
1.	Asepsis. Antiseptic.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	test control, questions for the module, questions for the exam, bank of situational problems, exam papers
2.	Bleeding and stopping bleeding. Blood transfusion. Donation.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	test control, questions for the module, questions for the exam, bank of situational problems, exam papers
3.	Wounds, wound treatment.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	test control, questions for the module, questions for the exam, bank of situational problems, exam papers
4.	Teaching about pain. Anesthesia. Inhalation anesthesia. Non-inhalational anesthesia.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	test control, questions for the module, questions for the exam, bank of situational problems, exam papers
5.	Desmurgy. Fractures, dislocations	PK-1, PK-2, OPK-4, OPK-5, OPK-6	test control, questions for the module, questions for the exam, bank of situational problems, exam papers
6.	Thermal damage. Burns and frostbite. Emergency conditions.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	test control, questions for the module, questions for the exam, bank of situational problems, exam papers
7.	Surgical infection. Sepsis.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	test control, questions for the module, questions for the exam, bank of situational problems, exam papers
8.	Surgery. Pre- and postoperative period.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	test control, questions for the module, questions for the exam, bank of situational problems, exam papers

Questions for the module

TOPIC: "ASEPSIS-ANTISEPTICS"

1. Name the ways of endogenous contamination of wounds.
2. Name the types of operating room cleaning
3. What antiseptics belong to the group of oxidizing agents.
4. What drugs increase nonspecific immunobiological protection
5. Which method refers to mechanical antiseptics?
6. What drugs increase nonspecific immunological protection:
7. What are the main methods of physical antiseptics.
8. What test indicators are used to determine the quality of an autoclave?
9. What are the main methods for sterilizing cutting instruments.
10. What are the methods for preventing the contact spread of microflora
11. Which antiseptics belong to the group of halogens and halogen-containing compounds
12. What are proteolytic enzymes?
13. What applies to methods of biological antiseptics
14. What means are classified as passive specific immunization.
15. Name the main methods of sterilizing gloves.
16. How much should sterilize surgical linen in an autoclave at a steam pressure of 2 atm.
17. What drugs can be used to produce an active immunization of the patient.
18. Which antiseptics belong to the group of halogens.
19. Name the methods indirect sterility control.
20. How to sterilize instruments that have been in contact with anaerobic infection.
21. What method is used to sterilize cystoscopes, laparoscopes, thoroscopes.
22. What is included in the organizational measures of asepsis.
23. What refers to proteolytic enzymes of animal origin.
24. Who coined the term "antiseptic".
25. What does pre-sterilization preparation of instruments include?
26. What regime is observed in dry-heat ovens.
27. What drugs can be used to actively immunize a patient.
28. Indicate the stages of primary surgical treatment of a wound.
29. What drugs are used to treat the surgeon's hands.
30. What is the source of contact infection.
31. What can become a source of endogenous infection.
32. Name the methods of biological antiseptics.
33. How long does it take to sterilize surgical instruments in an autoclave under a pressure of 2 atm.
34. Name the means of passive specific immunization.

TOPIC: "BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"

1. What circumstances can contribute to secondary early bleeding from a postoperative wound?
2. Name cases in which Possible air embolism:
3. Assess the severity of blood loss in a volume of 600 ml for an adult with body weight 70 kg.
4. What bleeding is considered internal?
5. When determining blood group using coliclones, there is no agglutination with both reagents (anti-A and anti-B). What type of blood is being tested?
6. When determining the blood group, the isohemagglutination reaction with standard sera of groups A(II) and B(III) turned out to be positive and negative with sera of groups O(I) and AB(IV). What does this result indicate?
7. What are the contraindications to reinfusion for hemoperitoneum.
8. What blood elements contain agglutinins?
9. What drugs are classified as blood substitutes for detoxification?
10. What applies to methods of temporarily stopping bleeding.
11. What reflects the amount of blood loss in the first hours during severe bleeding.
12. Who first proposed vessel ligation as a method of stopping bleeding?
13. How is the decrease in blood volume compensated for during acute blood loss?
14. How is a test for individual blood compatibility performed?
15. When human blood was mixed with standard isohemagglutinating sera of four blood groups, an agglutination reaction occurred with sera I and III. Determine your blood type.
16. In what blood elements are agglutinogens found?
17. Which of the listed drugs are classified as blood substitutes with hemodynamic action?

18. In which of the following cases is air embolism possible:
 19. Name the main phases of blood coagulation.
 20. How the individual compatibility test is carried out.
 21. Select the main general symptoms of profuse bleeding.
 22. How indications for blood transfusion are determined.
 23. What is the definition of exchange blood transfusion?
 24. What is with symptoms of deterioration of the patient's condition due to transfusion of poor-quality blood.
 25. What indicators are used to assess the degree and severity of blood loss?
 26. How is a test for individual blood compatibility performed?
 27. What is the total volume of transfusion with total parenteral nutrition?
 28. What location of the source of bleeding is Melena typical for?
 29. When is indicated adhesive bandage as a temporary stopping method bleeding.
 30. Name the clinical manifestations of blood transfusion shock.
 31. In what case is a biological test not carried out?
 32. What blood substitute is used for the purpose of dehydration?
 33. What applies to methods for definitively stopping bleeding.
 34. Name the chemicals used to stop bleeding:
 35. For which bleeding is vessel ligation most often used? for?
 36. What are biological methods to stop bleeding.
 37. What should be done on the first day after blood transfusion to a patient?
 38. What about optimal storage temperature for canned blood:
 39. Name the definition of agglutinins.
 40. Name the chemicals used to stop bleeding:
 41. What are the signs of excessive infusion.
 42. Specify drugs for correcting water-salt metabolism and acid-base status.
 43. Correct application of a hemostatic tourniquet to a limb:
 44. What are the clinical manifestations of blood transfusion shock.
 45. What are the main causes of death in case of massive bleeding in the first hours after its occurrence?
 46. What are the common clinical signs of bleeding?
 47. What methods of temporarily stopping bleeding can be used in case of damage to large arterial vessels?
 48. When do clinical manifestations of complications caused by transfusion of blood incompatible with the Rh factor appear?
 49. What should be taken into account when infusion correction of hypovolemia?
 50. What symptoms occur during the development of haemoperitoneum.
 51. Which of the following drugs are currently used for blood transfusion?
 52. Which of the following drugs is advisable to transfuse to a patient in a state of traumatic shock?
 53. Name the absolute indications for blood transfusion.
 54. Complications caused by incompatible transfusion Blood Rh factor can occur under the following conditions:
 55. What drugs are advisable to transfuse to a patient with a severe form of endogenous intoxication?
 57. What is the definition of pseudo agglutination?
 58. What is used as a blood stabilizer?

TOPIC "NARCOSISE"

1. What is the purpose of premedication?
2. Name the sign of the first stage and the onset of the second stage of ether anesthesia according to Guedel.
3. What are the possible complications after endotracheal anesthesia?
4. Name the signs of an overdose of ether anesthesia (the fourth level of the surgical stage).
5. What level of depth of general anesthesia (anesthesia stage) is required for abdominal surgical interventions.
6. What complications may occur when performing local anesthesia with novocaine.
7. What concentration of procaine is used when performing infiltration anesthesia?
8. Name the most rational types of pain relief for the reduction of hip and shoulder dislocations.
9. What drugs are considered components of ataralgesia?

10. Which anesthesia is the least toxic for a patient during a 2-3-hour operation on the abdominal organs.
11. How can a patient be transported after premedication?
12. What is meant by the term “anesthesiological corridor” of an anesthetic agent?
13. Which breathing circuit is safest for the patient?
14. What about ether anesthetics?
15. What drugs are used for spinal anesthesia?
16. What are the contraindications for intravenous anesthesia with ketamine?
17. What medications are used for traditional premedication.
18. What are the positive properties of nitrous oxide.
19. What are the advantages of endotracheal anesthesia?
20. Name the gaseous narcotic anesthetics.
21. What types of local anesthesia are related to conduction anesthesia?
22. When is a case blockade used?
23. What is the purpose of premedication?
24. What are the positive properties of halothane.
25. Name the main mechanism of disruption of neuromuscular transmission by “short-acting” muscle relaxants.
26. What is necessary for tracheal intubation.
27. What complications are possible with spinal anesthesia.
28. What is the correct body position when performing surgery under spinal anesthesia with Sovcaine solution?
29. What is the mechanism of action of local anesthetics?
30. What types conduction anesthesia exists.
31. What is the maximum amount of local anesthetic dry matter allowed when performing local anesthesia (procaine, lidocaine, trimecaine)?
32. What drugs are used for induction of anesthesia?
33. What are the advantages of performing anesthesia using a semi-closed circuit?
34. What are considered late complications of spinal anesthesia.
35. What types of anesthesia are preferable during surgery for panaritium?
36. Which intravenous anesthetic is preferable for induction of anesthesia in persons with blood loss of more than 1000 ml, hypovolemia, low blood pressure?

TOPIC “TRAUMAS. DAMAGE”

1. Common predisposing nonmicrobial factors for postoperative wound suppuration include
2. What is a necessary condition for primary wound healing?
3. Determine the sequence of examination of a patient with acute pathology of the abdominal organs:
4. Write the definition of bruise.
5. Name the types of displacement of fragments.
6. What dislocations are called recent?
7. What is the area of the patient's palm compared to the entire surface area of their body?
8. What does pre-hospital medical care for burn victims include?
9. Name the methods for stable fixation of fragments:
10. What are the characteristics of gunshot wounds?
11. What treatment methods are used in the inflammation phase of purulent wounds?
12. What are the types of injuries?
13. Specify first aid measures for long-term compartment syndrome.
14. Name the types of fractures by location.
15. The following signs of dislocations are distinguished:

16. The appearance of coagulative necrosis is caused by the following:
17. Burn disease develops when:
18. Is it possible to reuse dressing material?
19. Indicate the points for carrying out the wires during skeletal traction.
20. The following types of wound healing are distinguished:
21. When should primary treatment of a wound be performed on a patient admitted in a state of severe shock?
22. If perforation of a hollow organ is suspected, the main method of examination is.
23. Name the main symptom of hemarthrosis of the knee joint.
24. What layers does callus consist of?
25. Specify the indications for surgical treatment of dislocations.
26. What is the total area of the burn when one lower limb, both upper limbs, head and neck are affected?
27. What is characteristic of burn shock?
28. When dressing purulent wounds, must the dressing applied to the wound be sterile?
29. What to do if there is bleeding from a postoperative wound
30. What to do if there is bleeding from a postoperative wound.
31. What manipulations are performed during primary surgical treatment of a wound?
32. Specify the clinical signs of soft tissue contusion.
33. What phases are distinguished in the clinical course of traumatic shock?
34. In what order does the histological picture change during the formation and maturation of callus?
35. Name the characteristic complaints of a patient with a fracture.
36. What are the complications of burns?
37. What happens with deep burns?
38. Can one dressing nurse work in both "clean" and "purulent" dressing rooms?
39. What are the goals of transport immobilization?
40. What is characteristic of the inflammation phase of the wound process?
41. What means help remove purulent discharge from a wound?
42. How quickly does the clinical picture of traumatic toxicosis develop?
43. Name the basic principles of treatment of fractures.
44. When does secondary callus formation begin?
45. What are the basic principles of general treatment of burns?
46. What conditions are necessary for primary wound healing:
47. What methods can be used for local treatment of purulent wounds in the inflammatory phase?
48. Name the main pathogenetic factors in the development of traumatic toxicosis:
49. When surgical treatment of fractures is indicated in the following cases:
50. Name the absolute clinical signs of a fracture.
51. The patient has an open hip fracture and arterial bleeding. What is the sequence of indicated actions when providing first aid?
52. Should the dressing nurse wear sterile gloves?
53. Name the basic rules of transport immobilization.
54. Which wounds progress most favorably?
55. When should primary treatment of a wound be performed on a patient admitted in a state of severe shock?
56. Indicate the main periods of the clinical course of traumatic toxicosis.

57. What are the main measures for shock in the prehospital stage?
58. What are the main local symptoms that are important for diagnosing a fracture?
59. When is the first dressing performed after a planned operation?
60. What are the signs of the development of putrefactive infection in a wound?
61. Which method refers to the non-operative method of fixing bone fragments?
62. What are the phases of local clinical manifestations of radiation burns?
63. What is a wound called?
64. What is the volume of primary treatment of a wound at the bottom of which there is a large vascular bundle?
65. With closed lung injury, the following complications may occur:
66. Select the main clinical signs of wounds:
67. Rupture of a hollow organ with closed abdominal trauma is accompanied by:
68. Select the reasons for the development of traumatic shock.
69. Which of the following are considered complications of fractures?

TOPIC "INFECTION"

1. What types of surgical infections are distinguished according to the source of occurrence.
2. Basic treatment methods boil.
3. What is the direction of the incisions when opening a retromammary abscess?
4. Give the definition of an abscess.
5. What applies to non-clostridial anaerobic microflora.
6. Basic methods of treating anaerobic infection.
7. What is characteristic of a wound with an anaerobic infection?
8. What are the early symptoms of anaerobic infection.
9. Basic methods of treating carbuncle.
10. Name the basic principles of treatment of acute mastitis.
11. Methods of treating phlegmon-soft tissues in the softening stage.
12. What is the direction of the incisions when opening an intramammary abscess?
13. What does treatment for tetanus include?
14. What are the main signs of bacterial toxic shock:
15. What is characteristic of inflammatory changes in the composition of peripheral blood?
16. Name the clinical forms of erysipelas. Treatment is used for phlegmon of soft tissues in the stage of purulent melting?
17. What is gas gangrene. Basic methods of treating gas gangrene.
18. Name the forms of tuberculous lymphadenitis.
19. What structural elements are affected by a boil?
20. What is called an abscess. Basic principles of treatment.
21. What is hidradenitis. Treatment methods.
22. What are the ways of bacterial contamination of breast tissue?
23. Name the factors predisposing to the development of mastitis.

TOPIC: "LIMPHO-CIRCULATORY DISORDERS, ONCOLOGY"

1. What pathological processes are important in the development of trophic ulcers? A
2. What is characteristic of acute deep vein thrombosis.
3. What is characteristic of dry gangrene?
4. What disease is characterized by the symptom of intermittent claudication?
5. What is considered a necessary condition for the occurrence of implantation metastases?
6. What refers to the "small signs" syndrome.
7. Name palliative operations for malignant tumors:
8. What is called an artificial fistula.
9. Name the causes of acute venous insufficiency of the lower limb:
10. What is characteristic of obliterating endarteritis?
11. What does xSurgical treatment of diabetic foot syndrome include?

12. What is antituberculosis.
13. Where bedsores most often form.
14. What does it include? prophylaxis of deep vein thrombosis.
15. What is a trophic ulcer. Where is it most often formed?
16. When does postthrombotic disease develop:
17. Name the main symptoms of obliterating endarteritis.
18. Indicate the main methods of treating benign tumors.
19. What activities are included in antituberculosis.
20. Name the causes of gangrene:
21. List the methods for determining the functional ability of the venous valve apparatus:
22. Indicate the main methods of treating malignant tumors.
23. What is characterized by screaming gangrene. Basic methods of treatment.
24. Treatment methods for purulent thrombophlebitis:
25. What drugs are considered pathogenetically justified for the treatment of patients with obliterating endarteritis?
26. What is a tumor called?
27. What can be attributed to the clinical signs of wet gangrene of the limb:
28. What is characteristic for acute deep vein thrombosis.
29. Name the optimal measures for the treatment of patients with wet gangrene of the limb in the presence of severe intoxication and high body temperature:
30. List the causes of lymph circulation disorders:
31. What disease is characterized by swelling and cyanosis of the skin?
32. Name the stages of acute ischemia according to V.S. Savelyev.
33. What metastases are typical for intestinal tumors?
34. What is called atypia of tumor cells?
35. Name the causes of acute arterial circulatory disorders.
36. What is the principle of case?

TOPIC: "CLINICAL RESEARCH METHODS"

1. What is an ultrasound examination. For what diseases is ultrasound examination indicated?
2. What examination methods should be performed on the patient during a planned admission to the hospital.
3. Name the main stages of surgical treatment of patients.
4. Determine the sequence of examination of a patient with acute pathology of the abdominal organs
5. When should you shave your skin before elective surgery?
6. How often does the attending physician prepare observation diaries for patients who are in satisfactory condition?
7. Highlight the main factors that determine the duration of the preoperative period.
8. The complex of infusion preparation before surgery includes:
 6. What is shown with urinary retention in the postoperative period.
 8. What types of enemas are used immediately before surgery?
 9. What sections make up the subjective part of the medical history?
10. What operation is called radical?
 11. If perforation of a hollow organ is suspected, the main method of examination is:
 12. What is used to cleanse the intestines in preparation for planned surgery?
 13. In what case is it necessary to obtain the patient's consent for surgery?
14. What does the preliminary preparation of the surgical field for emergency surgery include?
 15. What diseases require emergency surgery?
 16. When do preoperative preparations for elective surgery begin?
 17. To detect metastatic spread of a tumor, the following is used:
18. What methods of preventing wound infection should be used before elective surgery?
 19. Which of the following provisions are reflected in the patient's life history (anamnesis vitae)?:
 22. Which of the listed operations should be planned first when drawing up the operating room schedule?
 23. Determine the sequence of examination of a patient with acute pathology of the abdominal organs.
 24. Name the main instrumental examination methods.
 25. What instrumental examination method is the main one when diagnosing gastric bleeding?
 26. When is fibrogastroscopy performed?
 27. What is diagnostic laparoscopy?

28. When is FGDS performed for gastric bleeding?
29. Which examination method is the leading one for intestinal perforation?
30. For venous diseases, what instrumental examination method should be performed?

QUESTIONS FOR THE EXAM

HISTORY OF SURGERY AND ORGANIZATION OF SURGICAL HELP.

1. The concept of surgery. Surgical diseases. Surgical patients.
2. Surgical deontology (due in the relationship between surgeons and surgical patients, between students and patients).
3. The purpose and tasks facing the surgeon when studying surgical patients. Compliance with deontological principles.
4. Features of the study of surgical patients and compliance with the principles of surgical deontology.
5. Basic methods for identifying the vitality of the homeostatic systems of the patient's body.
6. Priority of Russian and Soviet surgery. Organization of surgical care in the Russian Federation.
7. Leading representatives of Russian and Soviet surgery.
8. Priority directions of modern Soviet and world surgery.
9. What do you know about laser surgery?
10. Endoscopy for emergency surgical diseases of internal organs. Devices and techniques for performing fibro-esophago-gastro- and duodenoscopy, as well as bronchoscopy.
11. Methods of clinical endoscopy (devices, equipment).
12. Work of a surgeon in an outpatient clinic network. Clinical examination of surgical patients.
13. Surgical department of the hospital and surgical department of the clinic.

TRANSFUSION OF BLOOD AND BLOOD SUBSTITUTES.

14. The doctrine of blood groups.
15. Methodology for determining blood groups and their characteristics.
16. Donation table - blood group compatibility diagram.
17. Mechanism of action of transfused blood. Dangers of massive blood transfusion.
18. Reverse blood transfusion. Conditions. Technique.
19. Organization of blood service in the Russian Federation. Donation and other sources of blood.
20. Transfusion of individual blood components. Indications, technique.
21. Preparation, preservation and transfusion of red blood cells. Indications, technique.
22. Preservation of blood, its storage and determination of suitability.
23. Blood replacement fluids. Classification, characteristics and indications for their transfusion.
24. Indications and contraindications for blood transfusion.
25. Methods and technology of blood transfusion.
26. Rh factor. Characteristics and its clinical significance. Determination of the Rh factor.
27. Post-hemotransfusion reactions (pathogenesis, degree of reaction, prevention and treatment).
28. Complications during blood transfusion. Their warning.

ASEPTICA AND ANTISEPTICS.

29. Asepsis. Sterilization of dressing material.
30. Methods of preparing the surgeon's hands for surgery. Advantages and disadvantages. Operating with gloves.
31. Characteristics and use of antibiotics in purulent surgery.
32. Airborne infection and its prevention. Rules of conduct for medical staff and students in the operating room. Operating block. Design, equipment, contents.
33. Antibiotics. Indications for use, complications and methods for their prevention.
34. Mechanisms of action of various groups of antiseptics.
35. Basic requirements for antiseptics and their use (examples).
36. Modern methods of sterilization of surgeon's hands, dressings and instruments.
37. Asepsis. Definition. Types and methods.
38. Endogenous and exogenous sources of infection of surgical wounds.
39. Complications and their causes during treatment with antibiotics.

40. Implantation infection. Routes of entry. Sterilization of lye and catgut.
41. Cold sterilization (examples).
42. Name the methods of sterilization used in medicine.
43. What dosage forms of antiseptics do you know?
44. Name the physical methods of sterilization.
45. Methods of administering antiseptics.
46. Methods of administering antibiotics. Complications associated with antibiotic therapy, their prevention and treatment.
47. Name proteolytic enzymes, methods of use and their mechanism of action in the treatment of purulent wounds.
48. Gaseous sterilization used in surgical practice.
49. Sanitary and hygienic regime in the wards, operating room and dressing room for patients with gas gangrene.
50. Name the main forms of anaerobic infection in peacetime and the mortality rate associated with them.

ANESTHESIA

51. Methods, means and techniques for performing local anesthesia and their characteristics.
52. Clinical course of mask anesthesia: stages and levels, complications and their prevention.
53. Gas anesthesia, means, stages of progression, advantages of gas anesthesia over ether.
54. Intravenous anesthesia, narcotic drugs, clinic, dangers, complications.
55. The doctrine of pain.
56. Pharmacological means of general anesthesia (narcotic, analgesic, cholinergic drugs).
57. Inhalation anesthesia. Methods of performing mask anesthesia, disadvantages and complications.
58. Local infiltration anesthesia. Anesthetic agents. Technique. Stages of local infiltration anesthesia.
59. Intubation anesthesia. Indications and contraindications. Technique. Complications.
60. Combined pain relief. Potentiated anesthesia. Controlled hypotension. Artificial hypothermia and hibernation.
61. Complications during mask anesthesia and measures to combat them.
62. Non-inhalation anesthesia. Methods, local anesthesia. Ways.
63. The essence of local and general anesthesia.
64. Theories of ether anesthesia (old and modern).
65. Advantages and disadvantages of intravenous anesthesia. Dangers, complications and their prevention.
66. Muscle relaxants. The mechanism of action of depolarizing and non-depolarizing muscle relaxants.

BLEEDING

67. Bleeding. Classification. Methods to stop bleeding.
68. Disturbance of homeostasis during bleeding. Compensatory reactions of the body during oxygen starvation and acute malnutrition. Collapse. Pathogenesis, clinical picture, treatment.
69. Adaptation reactions in case of large and massive blood loss and oxygen starvation.
70. Methods of final bleeding control.
71. Types, dangers and outcomes of bleeding.
72. Temporary stop of bleeding. Hemostatic tourniquet (application technique, complications and their prevention).
73. Changes occurring in the internal environment of the body during large blood losses.
74. Causes of bleeding.

DAMAGE (INJURY)

75. Errors and dangers in the treatment of fractures of long bones.
76. Callus. The main sources of callus formation. Evolution of callus. Methods for stimulating callus formation.

77. Traumatic toxicosis (traumatic compression syndrome). Conditions for the occurrence of long-term compartment syndrome. Leading pathogenetic factors. First pre-medical and medical aid for long-term compartment syndrome.
78. Electrical injury. Causes, local and general manifestations. Warning, first aid.
79. Frostbite. Classification, clinic and surgical treatment.
80. Terminal states. Their characteristics, resuscitation. Criteria for biological death. Asphyxia. Causes. Methods of resuscitation and intensive care.
81. Treatment of frostbite in the pre-reactive and reactive periods.
82. Burn disease. Clinical characteristics of the phases of burn disease and treatment of patients by phase.
83. Certain types of postoperative wound complications. Causes, prevention and treatment.
84. Burns. Classification by reason and depth. Methods for determining the extent of a burn. First aid for burns with caustic alkalis and concentrated acids. Emergency care for burns. First medical aid for thermal injuries. Chemical and radiation burns. Thermal burns: factors, classification by depth of injury, determination of burn area.
85. First aid for open and closed bone fractures.
86. Closed soft tissue injuries.
87. Methods of treatment of purulent wounds.
88. Dislocations. Types and treatment. Classification, clinical picture and diagnosis. Basic methods of treatment of acquired and congenital dislocations.
89. Traumatic shock. Causes, clinical picture, prevention and treatment.
90. Closed injuries of the skull and brain. Types, clinical picture, diagnosis, treatment, complications and their prevention in concussion. Treatment of concussion and brain contusion. The mechanism of concussion and brain contusion.
91. Treatment of purulent wounds. Secondary surgical treatment of wounds and secondary suture.
92. Conditions conducive to the spread of necrosis.
93. Principles of treatment of fractures.
94. Radiation sickness. Features of the course and treatment of wounds in patients with radiation sickness.
95. Closed injuries to the chest and its organs. Types, clinical picture, diagnosis, dangers, complications and first medical aid for them. Treatment.
96. Displacement of fragments in fractures of tubular bones (reasons, types, prevention of secondary displacement).
97. Treatment of clean and purulent wounds. Physical methods of treatment in surgery (mechanotherapy, heat therapy, electrotherapy, ultrasound and laser beam treatment).
98. Closed injuries of abdominal organs. Clinic, diagnosis, treatment, dangers and complications
99. Dangers and complications of injuries. First aid (transport immobilization).
100. Traumatism. Concept. Types of injuries.
101. Basic methods of treating thermal and radiation burns.
102. Wounds. History of the development of the doctrine of wounds. Classification. Wound infection. Clinic. Dangers. Complications. First medical aid. Biology of the wound process. Characteristics of the phases of the wound process.
103. Open bone fractures. Definition, treatment. Complications.
104. Treatment of wounds during the incubation period of infection. Primary surgical treatment of wounds. Primary seam.
105. Radiation injuries. Radioactive mixes. First aid and treatment.
106. Freezing, conditions of occurrence, clinic, first aid and treatment.
107. Foreign bodies. Types, routes of penetration, diagnosis and treatment. Dangers and complications associated with them.
108. Damage to atmospheric electricity. Mechanism, clinic, prevention, first aid, treatment and prevention.
109. Name the conditions that contribute to the occurrence of frostbite and freezing.
110. Features of the study of patients with acute trauma.

DESMURGY.

- 111.Desmurgy. definition, characteristics of dressing material. Types of dressings, complications and their prevention.
- 112. Plaster. Properties. Technique for preparing plaster bandages. Application and removal of plaster casts. Complications and their management.

SURGICAL INFECTION.

- 113.Acute purulent infection. The body's reaction. Principles of treatment of purulent diseases. General issues of acute purulent surgical infection. Etiology, pathogenesis.
- 114. Certain types of purulent processes (furuncle, carbuncle, hidradenitis). Dangers and complications associated with them.
- 115.Sepsis. Classification. Pathogenesis. Clinic. Treatment. Prevention.
- 116. Lymphangitis. Lymphadenitis. Etiology, pathogenesis, treatment.
- 117. Purulent arthritis. Etiology, pathogenesis, clinical picture, treatment.
- 118.Inflammatory diseases of blood vessels. Thrombophlebitis.
- 119. Certain types of surgical tuberculosis. Osteoarticular tuberculosis. Phases of the evolution of osteoarticular tuberculosis according to Kornev.
- 120.Erysipelas. Etiology. Pathogenesis. Clinic. Treatment.
- 121.Osteomyelitis. Hematogenous osteomyelitis. Pathogenesis, clinical picture, treatment.
- 122.Anaerobic infection. Pathogens. Clinic, treatment, prevention. Clinic, prevention, treatment of gas gangrene.
- 123. Panaritium. Etiology, types, clinic and treatment.
- 124.Phlebitis. Phlebothrombosis. Thrombophlebitis.
- 125. Prevention of specific acute wound infections (tetanus, anthrax, rabies).
- 126.Phlegmon, abscess, lymphadenitis. Etiopathogenesis, clinical picture, treatment.
- 127. Gangrene. Kinds. General principles of treatment.
- 128. General purulent infection (pathogenesis, clinical picture, diagnosis, treatment).
- 129.Basic principles of treatment of acute purulent infection (conservative measures, surgical treatment).
- 130.Tetanus. Etiology, pathogenesis, clinical picture, prevention and treatment.
- 131.Peritonitis. Etiopathogenesis, classification, clinical picture, treatment and prevention. Purulent peritonitis. Sources of infection of the abdominal cavity. Clinic and treatment.
- 132.Mastitis. Etiopathogenesis, clinical picture, prevention, treatment.
- 133.Pathogenesis, clinical picture, prevention and treatment of candidomycosis.
- 134. Surgical parasitic diseases: actinomycosis, ascariasis, echinococcosis, opisthorchiasis.
- 135. The main four forms of anaerobic wound infection (gas gangrene) in peacetime (name the pathogens, forms of the disease and indicate the mortality rate for them).
- 136. Main types of specific surgical infections.
- 137. Abscesses of the lungs and liver.
- 138. Classification of purulent arthritis.
- 139. Classification of purulent pleurisy.

SURGERY.

- 140. Period of the operation. Concept. Classification. Its main stages. Control of body functions of the operated patient. Dangers and complications.
- 141. Preoperative period. Preparing the patient for surgery. Preoperative conclusion. Direct preparation of patients for surgery and pain relief.
- 142.Therapeutic exercise in the postoperative period.
- 143.Postoperative period. Phases of the postoperative period. Vascular and cardiac complications, prevention and treatment. Disturbance of homeostasis and its normalization.
- 144.Postoperative period. Prevention and treatment of respiratory complications.

BLOOD AND LYMPH CIRCULATION DISORDERS.

- 145. Thrombosis and embolism in surgery (thrombophlebitis, phlebothrombosis).

- 146. Circulatory disorders. Causes and consequences (necrosis, ulcers, fistulas).
- 147. Fistulas and ulcers. Causes, classification, treatment.
- 148. Obliterating endarteritis.

TUMORS.

- 149. Benign tumors of connective tissue origin.
- 150. Benign tumors of epithelial origin.
- 151. Malignant tumors of epithelial origin.
- 152. Modern methods of research and treatment of cancer patients.
- 153. Precancerous diseases of the abdominal organs.
- 154. Endogenous and exogenous carcinogenic factors. Cancer prevention.
- 155. Methods for diagnosing malignant and benign tumors.
- 156. Basic methods of treating malignant tumors. Principles of surgical treatment of malignant tumors.
- 157. Theories of malignant growth.
- 158. Concept of tumors. Classification, theories of the origin of malignant tumors. Organization of cancer care in the USSR.
- 159. Malignant tumors of connective tissue origin.
- 160. Precancerous conditions of various tissues and organs.
- 161. Modern methods of diagnosis and treatment of malignant tumors (give examples).

DEVELOPMENTAL ANOMALIES AND ASSOCIATED WITH THEM DISEASES.

- 162. Types of anomalies in the development of the digestive organs.
- 163. Types of developmental anomalies of the facial and oral cavity organs.
- 164. Endogenous and exogenous factors in the development of congenital surgical diseases of the abdominal organs.
- 165. Types of developmental anomalies of the musculoskeletal system.
- 166. Types of developmental anomalies of the skull and brain.
- 167. Types of developmental anomalies of the organs of the urinary excretory system.
- 168. Endogenous and exogenous factors of anomaly. Clinical significance of developmental defects.
- 169. Anomalies of head and neck development and their surgical treatment.
- 170. Developmental defects and their causes.
- 171. Hereditary and congenital surgical diseases. Malformations of the abdominal organs. Causes. Pathogenesis.

PLASTIC OR RECOVERY SURGERY.

- 172. Plastic surgery. The main problems of tissue incompatibility and ways to overcome them.
- 173. Legal and ethical basis for the removal of organs and tissues for transplantation.
- 174. Removal of organs and tissues from the dead, conditions of removal, storage and transplantation.
- 175. Artificial tissues and organs in plastic surgery.
- 176. Main and unsolved problems in transplantology.
- 177. Methods of tissue and organ preservation.
- 178. Methods of skin grafting (free and non-free).
- 179. Preservation and transplantation of bones, vessels and organs.
- 180. What do you know about heart transplantation?
- 181. Transplantation of organs and tissues (auto-, homo-, hetero-, and alloplasty). Preservation of tissues and organs.

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Departmentsurgical diseases No. 1
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Situational task No. 1

40 patients were routinely operated on within one month by the same surgeon. Of these, 5 had suppuration of the wounds, 2 had suture dehiscence.

What is the cause of complications and how to identify the cause?

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Situational task No. 2

The patient complains of severe pain in the rectal area, high body temperature, and general malaise. Objectively: there is swelling and hyperemia of the skin in the perineal area. On palpation, sharp pain is noted; the act of defecation also increases the pain.

Diagnosis? Treatment?

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Situational task No. 3

The patient suffered a soft tissue injury to his right hip while doing agricultural work in the field two days ago. Upon examination, a wound measuring 3x6 cm is detected on the anterior surface of the upper third of the thigh. The surrounding skin is hyperemic, swollen, and palpation is sharply painful. The inguinal lymph nodes are enlarged and painful. Body temperature increased to 38.0C.

Diagnosis? What are your events?

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Situational task No. 4

The patient complains of throbbing pain, severe swelling of the tissues of the 2nd finger of the left hand, purulent discharge from the wounds on the finger, and therefore was treated in the clinic for a long time, but the treatment did not give an effect. Sometimes sequestra fall out of fistulas.

What complication, what disease do you have in the patient and what should be done with it?

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Situational task No. 5

A man was driving a car at a speed of 120 km/h. As a result of the sudden stop of the car, he lost consciousness for 2 hours and lost his memory. Based on the mechanism of injury, indicate the type of injury and provide first aid.

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Situational task No. 6

A patient was admitted to the clinic with suspected intra-abdominal bleeding.

What laboratory and instrumental studies will you prescribe to clarify the diagnosis?

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Situational task No. 7

After the skull injury, the patient regained consciousness within a day. Having come to his senses, he began to complain of pain in the lower abdomen. It turned out that he had not urinated yet since the injury. We decided to drain the urine with a catheter, but, to our surprise, we only got about 25 ml. urine stained with blood.

What type of damage are we talking about and what needs to be done to clarify the diagnosis?

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Situational task No. 8

An unconscious patient with severe pallor of the skin was brought to the surgical clinic. Blood pressure is not determined, the pulse is thready. Blood loss according to Phillips – 2.5 liters. The surgeon on duty determined the patient's blood type, sent the blood to the laboratory to determine the Rh factor and began to wait for an answer. The patient died 20 minutes later.

Did the doctor do the right thing?
What would you do?

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Situational task No. 9

Apnea occurs: due to obstructed air flow into the lungs due to spasm of the vocal cords /laryngospasm/, blockage of the airways with vomit, kinking of the endotracheal tube, retraction of the tongue, etc.

What measures will you take and carry out in case of these complications?

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Situational task No. 10

The soldier was on the defensive for a long time (6 days) - in a damp trench, there were repeated snowstorms, there was no hot food or drink. During the command "Attack!" could not easily get out of the trench. When I tried to get up and run, I fell.

What happened and what should have been done to prevent it?

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Disciplinegeneral surgery

Situational task No. 11

During a car accident, the patient received an extensive laceration in the left buttock area. Delivered to the clinic 7 hours after the injury with signs of incipient inflammation.

What is your diagnosis, first aid and treatment?

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Situational task No. 12

A patient with a carbuncle in the area of the bridge of the nose became heavier after squeezing it out in the last 2-3 days. Headache, motor agitation, insomnia, temporary delirium, temperature 39-40°C, head tilted back, vision impaired.

What complication occurred? How to make a diagnosis and what to do?

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Situational task No. 13

The car hit a pedestrian while moving and drove away. The victim tried to get to his feet twice, but was unable to. Then he fell silent and continued to lie on the pavement, as if he had fallen asleep, but his eyes were open, he was breathing silently and quickly. The pulse is thread-like, small, frequent and soft. Visible parts of the body are covered with cold, sticky sweat.

What is this condition and what are your actions?

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Situational task No. 14

There is a patient with sepsis in the department. He received monomycin for 2 weeks, and then kanamycin for 10 days.

Is antibiotic therapy prescribed correctly? If not, why not? How should this therapy be administered?

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Situational task No. 15

The patient complains of pain in the right mammary gland, increased body temperature to 39-40°C, headaches, insomnia, chills, weakness, and is unable to feed the child with this breast. On examination, the right mammary gland is enlarged in volume, the skin over it is red. On palpation, a sharply painful infiltrate with a softening area in the center is determined.

What could happen to the patient and how to help her?

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Situational task No. 16

The condition of the patient with a wound to the left jugular vein suddenly deteriorated sharply: breathing became shallow and uneven, the pupils dilated, blood pressure dropped sharply, and facial muscle spasms appeared. Soon respiratory and cardiac arrest occurred.

What is the cause of death? What are the measures to prevent this condition in case of injuries to large veins of the neck?

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Situational task No. 17

The patient underwent surgery - amputation of the left lower limb at the mid-thigh level due to gas gangrene.

What activities should be carried out in the ward where the patient was lying and in the operating unit? What should be done with the instruments, dressings and surgical linen that were used during the amputation?

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Situational task No. 18

The patient had repeated recurrences of the stem form of lymphangitis of the right lower limb. In the last 2-3 years, the volume of this limb began to increase.

What happened? What to do about this complication?

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Situational task No. 19

The patient complains of pain and swelling in the parotid region on the left, an increase in body temperature to 39o. The pain makes it difficult to chew and swallow food. The skin over the swelling is thinned, red and there is an unclear fluctuation in the depths.

What is your diagnosis and treatment?

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Situational task No. 20

A 49-year-old patient, a cattleman by profession, was hit with a hoof on his right cheek while caring for animals, which resulted in a laceration.

What is the danger and how to prevent complications?

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Situational task No. 21

During the examination, the patient complains of pain in the left forearm. I got sick 2 days ago when, after doing physical work in the garden, slight redness and slight itching appeared on the lower third of the forearm. Subsequently, the itching went away, severe pain appeared and the patient consulted a doctor with the presence of an inflammatory infiltrate, which protrudes cone-shaped above the skin level and at its top there is a small accumulation of pus.

What is your diagnosis? Treatment?

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Situational task No. 22

The patient received antibiotics for a long time due to purulent peritonitis due to a perforated gastric ulcer. Lately he has been complaining of general weakness, malaise, chills in the evenings and at night, and poor appetite. Upon examination, there are white deposits in the form of islands on the mucous membrane of the oral cavity and tongue.

Complication? What is it connected with? How to treat this complication?

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Situational task No. 23

A sick machine operator at a collective farm where vegetables are grown, while spreading organic fertilizers delivered from a dairy farm, cut his hand. Within 24 hours, the hand became very swollen, bursting pain appeared, and the body temperature rose to 38.8o. The area of swelling and local temperature from the hand quickly spread to the lower third of the shoulder.

What is suspected? What to do? What is prevention?

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Situational task No. 24

A patient with post-injection anaerobic gangrene caused by *Cl.perfringens* was admitted to the clinic and underwent surgery.

What to do with bed and underwear, furniture in the ward, instruments, surgical linen and dressings used during the operation?

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Situational task No. 25

After applying a circular plaster cast for a fracture of the bones of the right leg, a patient developed pain and cyanosis of the toes, a crawling sensation in the limbs and chilliness. The quality of the plaster was not checked before application; it dries poorly and does not harden.

What's happened? What should I do?

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Departmentsurgical diseases No. 1
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Disciplinegeneral surgery

Situational task No. 26

The patient complains of pain along the veins of the left lower limb, redness, and an increase in body temperature to 37.5o. Objectively: the left lower limb is swollen, hyperemic and painful along the veins. They reveal painful lumps.

Diagnosis? Treatment?

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Discipline general surgery

Situational task No. 27

The patient had suffered frostbite of degree II-III in both feet in the past. In addition, he is a heavy smoker. Now he complains of rapid fatigue and chilliness of the legs even in the warm season, intermittent pain in the calf muscles.

Diagnosis? Treatment?

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Department surgical diseases No. 1
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Discipline general surgery

Situational task No. 28

The patient has abscess mastitis on the right with the presence of three cavities.

What general and local treatment should the patient undergo?

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Disciplinegeneral surgery

Situational task No. 29

The child was born with normal weight and physically developed. But the skin and sclera of the eyes are jaundiced.

What is the cause of jaundice?

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Situational task No. 30

Sudden onset, increasing and persistent abdominal pain is characteristic of...?

Are cramping pains with bloating, stool and gas retention typical...?

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Disciplinegeneral surgery

Situational task No. 31

As a result of a car accident, a 74-year-old patient developed confusion, lack of blood pressure, lack of pulse in the peripheral arteries (pulse is determined only in the carotid and femoral arteries or by heart contractions), shallow and rapid breathing.

What is the phase of terminal states? What to do with the patient?

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Disciplinegeneral surgery

Situational task No. 32

The patient complains of general weakness, nausea, dizziness. There was vomit the color of coffee grounds. Within 3 days he notes "tarry stools." Objectively: the skin and visible mucous membranes are pale, pulse is 100 beats per minute. weak filling and tension, blood pressure 100/50 mmHg. Nv – 42 units.

Diagnosis? What help is needed?

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Disciplinegeneral surgery

Situational task No. 33

The ambulance service delivered a 37-year-old patient in a pre-agonal state. According to those accompanying and loved ones, approximately 40-50 minutes ago, the patient suddenly began to experience profuse bloody vomiting, followed by involuntary urination and defecation.

What is the degree of blood loss? How to determine it and what to do with the patient?

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Disciplinegeneral surgery

Situational task No. 34

The hunter, on instructions from the hunting inspectorate, participated in the forced shooting of wolves, jackals and foxes. During a fight with a half-dead wolf, he received multiple bites on his arms and legs.

What can develop as a result of this, and what measures should be taken to prevent a formidable, fatal complication?

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Disciplinegeneral surgery

Situational task No. 35

In wounded R., 45 years old, gas gangrene was found to spread from the right shin to the middle third of the thigh.

What surgical intervention is indicated for the patient?

What specific treatment is needed?

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Departmentsurgical diseases No. 1

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Disciplinegeneral surgery

Situational task No. 36

To compensate for blood loss, the patient is transfused with single-group canned blood collected 7 days ago. During the transfusion, complaints of nausea, a feeling of heat, pain in the sternum and in the lumbar region appeared.

What is the reason? Your actions?

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Situational task No. 37

A 33-year-old patient is operated under mask fluorotane anesthesia. Suffering from chronic alcoholism. The second stage of anesthesia lasted longer. Due to the urgency of the disease (hemorrhagic pancreatic necrosis) and intervention, preparation of the gastrointestinal tract and examination of the oral cavity were not performed. At the moment of the excitement stage, breathing stopped.

What could have happened? What to do with anesthesia and the patient?

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Departmentsurgical diseases No. 1
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Disciplinegeneral surgery

Situational task No. 38

The patient complains of swelling and pain in the left lower limb, a feeling of heat, and chills in the evenings. On examination, the entire left lower limb is enlarged in volume, the skin over it is tense, shiny, and pale. The limb is somewhat colder than the healthy one. Body temperature reaches 40o.

What does the patient suffer from? What is first aid and treatment?

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Situational task No. 39

The patient complains of pain, redness of the skin, swelling of the outer surface of the middle third of the right shoulder. He considers himself sick for 2 weeks when a boil appeared on his right shoulder. He did not seek medical help. Then severe pain appeared at the site of the boil, the area of redness of the skin increased, and swelling appeared.

What could happen to the patient and how to help him?

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Situational task No. 40

When a jet transfusion of same-type and Rh-compatible blood into the ulnar vein occurred, first respiratory arrest occurred, and then cardiac arrest.

What could have happened?
How do you think about helping the victim?

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Situational task No. 41

A patient with massive intestinal bleeding was brought to the surgical clinic. The patient's blood pressure is 70/40 mmHg, pulse is 140 per minute. Blood loss 1.5 liters. Relatives found out that the patient suffers from hemophilia.

What hemostatic therapy will you prescribe to the patient (name the drugs)?

Are there indications for blood transfusion?

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Situational task No. 42

The patient had an oblique traumatic fracture of the middle third of the femur.

What method will you choose for treatment, given that there has been a displacement of the fragments along the length?

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Situational task No. 43

A patient with an extensive infarction of the anterior wall of the left ventricle underwent a heart transplant. A few days later, the patient's condition began to deteriorate, and signs of rejection of the transplanted heart appeared.

What is the reason? What mistakes were made? What to do

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Situational task No. 44

The patient, under general anesthesia with muscle relaxants and controlled breathing, underwent a lobectomy of the right lung for an abscess. After the end of the operation and restoration of spontaneous breathing, 3-4 hours later, first bronchospasm developed, then respiratory arrest.

What is the reason? How to restore breathing?

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Situational task No. 45

Sterile linen and dressings were received from the autoclave 7 days ago. Boxes did not open. Several planned operations are planned in a day.

What could have happened and what should be done with the specified sterilized dressing material?

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Disciplinegeneral surgery

Situational task No. 46

The patient complains of pain in the left armpit for 10 days. He has long suffered from excessive sweating, especially in the armpits. Objectively: a dense painful infiltrate is palpated in the left armpit, the skin over it is uneven and purplish-red in color. In the center of the infiltrate there is fluctuation.

Diagnosis? Treatment?

**Federal State Budgetary Educational Institution
higher education "North Ossetian State Medical Academy" of the Ministry of Health of
the Russian Federation**

Departmentsurgical diseases No. 1
FacultyMedicinal Well3
Disciplinegeneral surgery

Situational task No. 47

A large painful swelling formed at the site of a small soft tissue bruise. With careful examination, the site of the bruise is revealed in the center of the fluctuation. The patient notes that with any injury he experiences significant bruising, which takes a long time to go away. Two years ago I cut my finger and the bleeding from the wound did not stop for a long time.

What would this mean, and what assignments need to be made?

**Federal State Budgetary Educational Institution
higher education "North Ossetian State Medical Academy" of the Ministry of Health of
the Russian Federation**

Departmentsurgical diseases No. 1
FacultyMedicinal **Well**3
Disciplinegeneral surgery

Situational task No. 48

At a railway crossing, you accidentally witnessed the amputation of a man's left leg at the level of the middle third of the thigh by the wheels of a locomotive.

What should be done to stop the bleeding?
What to do next with the victim?

**Federal State Budgetary Educational Institution
higher education "North Ossetian State Medical Academy" of the Ministry of Health of
the Russian Federation**

Departmentsurgical diseases No. 1
FacultyMedicinal **Well**3
Disciplinegeneral surgery

Situational task No. 49

A patient with a thermal burn of his left arm, face and torso was admitted to the emergency room. The patient is sharply excited and does not make contact. The pulse is frequent, weak filling. On the burn surface there are areas of necrosis, as well as burst blisters with remnants of the epidermis.

What phase of burn disease?

What is the degree of burn? When can you start treating a burn surface?

**Federal State Budgetary Educational Institution
higher education "North Ossetian State Medical Academy" of the Ministry of Health of
the Russian Federation**

Departmentsurgical diseases No. 1

FacultyMedicinal

Well3

Disciplinegeneral surgery

Situational task No. 50

The patient has a lacerated and bruised wound in the parietal region with skin detachment. The wound bleeds moderately and hurts. When compiling a medical history, it is not possible to establish the circumstances of the injury due to poor memory.

What happened to the patient and how to help him?

No.LD-21

Federal State Budgetary Educational Institution
higher education "North Ossetian State Medical Academy" of the Ministry of Health of the
Russian Federation

Department of Surgical Diseases No. 1

Standards of test tasks

in the discipline General Surgery

main professional educational program of higher education - specialty program in specialty
05/31/01 General Medicine, approved 05/24/2023.

for students 3 courses

by specialty 05/31/01 General medicine

Vladikavkaz, 2023

"ASEPTICA-ANTISEPTICS" OPTION #1

1. Ways of endogenous contamination of wounds: a) through non-sterile surgical instruments; b) penetration directly from a hollow organ; c) through the hands of medical personnel; d) through bacterially contaminated abdominal exudate; e) with a flow of lymph or blood from a purulent-inflammatory focus. Choose the correct combination of answers:

- 1) a B C.
- 2) c, d, d.
- 3) a, d, d.
- 4) b, d, d.
- 5) everything is true.

2. There are the following types of operating room cleaning:

- A. before the start of the working day;
- B. after each operation;
- V. current;
- G. daily;
- D. general;

E. all of the above;

3. Sterilize in formaldehyde vapor:

- A) robes;
- B) cystoscopes;
- B) latex gloves;
- G) syringes;
- D) surgeon's hands.

Choose the correct answer.

4. Treatment of the surgeon's hands with chlorhexidine lasts:

- A) 1 min;
- B) 3 min;
- IN) 5 minutes;
- G) 10 min.

Choose the correct answer.

5. To treat the surgical field, use all of the following, except:

- A. organic iodine-containing substances;
- B. 0.5% alcohol solution of chlorhexidine;
- V. pervomura;
- G. gluing sterile films;
- D. alcohol tincture of iodine;

6. Antiseptics of the oxidizing group are: a) chlorhexidine bigluconate; b) potassium permanganate; c) hydrogen peroxide; d) dioxidine; e) iodopyrone. Choose the correct combination of answers:

- 1) a, b.
- 2) b, c.
- 3) in, g.
- 4) g, d.
- 5) everything is true.

7. What drugs belong to the group of activating nonspecific immunobiological reactivity?

- 1) Antigangrenous serum.
- 2) Staphylococcal toxoid.
- 3) Prodigiozan.
- 4) Levamisole.
- 5) Antitetanus serum.
- 6) Thymus extract.

Choose the correct combination of answers: A - 1, 3, 4; B - 2, 4, 6; B - 3, 4, 6; G - 3, 4, 5; D - 4, 5, 6.

8. Which method refers to mechanical antiseptics?

- A) Flow-through wound drainage.
- B) Vacuum drainage of the wound.
- IN) Primary surgical treatment of the wound.
- G) Ultrasonic wound cavitation.
- D) Flow enzymatic dialysis.

Choose the correct answer.

9. What drugs increase nonspecific immunological protection:

- 1) prodigiosan;
- 2) staphylococcal toxoid;
- 3) lysozyme;
- 4) bacteriophage;
- 5) levamisole

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 3, 4; G - 1, 3, 5; D - 1, 4, 5.

10. Select the basic methods of physical antiseptis.

Select all correct answers

- A. Application of hygroscopic material;
- B. Application of drainages;
- B. Use of hypertonic solution;
- G. Sorbents;

- D. Proteolytic enzymes;
- E. Toilet wound;

SITUATIONAL TASK

After completing the operations, the nurse began to process the instruments used during the purulent operation under running water, and the used surgical material (wipes, balls, tampons, etc.) was placed in a bag and thrown into the trash.

What mistakes did she make, and what dangerous consequences could they lead to?

"ASEPTICA-ANTISEPTICS" OPTION #2

1. Cold sterilization means include:

- 1. ultra-violet rays;
- 2. ionizing radiation;
- 3. ultrasonic waves;
- 4. formaldehyde fumes;
- 5. autoclaving.

Choose the correct combination of answers: A - 1, 2, 4, 5; B -2, 5; B - 1, 3, 4, 5; G - 1, 2, 3, 4; D - 1, 2, 3, 5.

2. What test indicators are used to determine the quality of an autoclave?

Select all correct answers

- A. Thermal indicator;
- B. Sulfur;
- B. Benzoic acid;
- G. Urea;
- D. Antipyrine;

3. Select the main methods for sterilizing cutting instruments.

Select all correct answers

- A. Autoclaving;
- B. Processing in a dry-heat oven;
- B. Beam method;
- G. Chemical method;

4. Ways of endogenous contamination of wounds:a) through non-sterile surgical instruments; b) penetration directly from a hollow organ; c) through the hands of medical personnel;d) through bacterially contaminated abdominal exudate; e) with a flow of lymph or blood from a purulent-inflammatory focus. Choose the correct combination of answers:

- 1) a B C.
- 2) c, d, d.
- 3) a, d, d.
- 4) b, d, d.
- 5) everything is true.

5. Which of the following refers to methods for preventing the contact spread of microflora?a) sterilization of linen; b) sterilization of instruments; c) sterilization of suture material; d) treatment of the surgeon's hands; e) treatment of the surgical field. Choose the correct combination of answers:

- 1) a B C D.
- 2) a, c, d, e.
- 3) a, b, c, d.
- 4) b, c, d, d.
- 5) a, b, d, d.

6. Antiseptics belonging to the group of halogens and halogen-containing compounds are: a) potassium permanganate; b) sodium hypochlorite; c) dioxidine; d) povidoniod; d) iodonate. Choose the correct combination of answers:

- 1) a, c.
- 2) b, d.
- 3) c, d, d.
- 4) b, d, d.
- 5) everything is true.

7. Proteolytic enzymes of animal origin are:

- 1) papain;
- 2) trypsin;
- 3) chymotrypsin;
- 4) streptokinase;
- 5) Terrilitin.

Choose the correct combination of answers: A - 1, 2, 3; B - 3,5; B - 2, 3; G - 2, 3, 4; D - 1, 4.

8. Biological antiseptic methods include:

- 1) use of vaccines and serums;
- 2) use of sulfonamides;
- 3) use of nitrofurans;
- 4) use of antibiotics;
- 5) use of proteolytic enzymes.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 4, 5; G - 1, 2, 5; D - 1, 3, 5.

9. Select means of passive specific immunization.

Select all correct answers

- A. Serum;
- B. Antitoxins;
- B. Hyperimmune plasma;
- G. Tetanus toxoid;

10. When are antibiotics administered to prevent postoperative complications?

Select all correct answers

- A. In the morning on the day of surgery;
- B. 30 minutes after surgery;
- B. During surgery;
- D. Within 1–2 days after surgery;

SITUATIONAL TASK

The patient was brought to the emergency room in a state of moderate severity, with severe abdominal pain, with a picture of peritonitis. How much sanitization does he have to do?

"ASEPTICA-ANTISEPTICS"

OPTION #3

1. Select the main ways of spreading exogenous infection.

Select all correct answers

- A. Airborne;
- B. Household;
- V. Contact;
- G. Whey;
- D. Implantation;

2. Ways of endogenous contamination of wounds:a) through non-sterile surgical instruments; b) penetration directly from a hollow organ; c) through the hands of medical personnel;d) through bacterially contaminated abdominal exudate; e) with a flow of lymph or blood from a purulent-inflammatory focus. Choose the correct combination of answers:

- 1) a B C.
- 2) c, d, d.
- 3) a, d, d.
- 4) b, d, d.
- 5) everything is true.

3. The time for sterilizing surgical instruments in an autoclave under a pressure of 2 atm is:

- A) 2 hours;
- B) 45 min;
- B) 1 hour;
- G) 20 minutes;
- D) 1.5 hours

Choose the correct answer.

4. Select the main methods for sterilizing gloves.

Select all correct answers

- A. Autoclaving;
- B. Drying oven;
- B. Boiling;
- G. Boiling in sublimate;

D. Luchevoy;

5. Sterilize surgical linen in an autoclave at a steam pressure of 2 atm. follows:

- A) 2h;
- B) 1 h;
- IN) 45 min;
- G) 30 min;
- D) 20 minutes.

Choose the correct answer.

6. What methods are considered physical antiseptics? a) ultrasonic wound cavitation; b) antibiotic-novocaine blockade of a purulent-inflammatory focus; c) vacuum aspiration; d) treating wounds with an effective antiseptic solution; e) use of laser radiation. Choose the correct combination of answers:

- 1) a, d, d.
- 2) a, 6, c.
- 3) c, d, d.
- 4) a, c, d.
- 5) a, c, d.

7. Active immunization of the patient can be done using the following drugs:

- 1) staphylococcal toxoid;
- 2) antistaphylococcal γ -globulin;
- 3) bacteriophage;
- 4) levamisole
- 5) tetanus toxoid.

Choose the correct combination of answers: A - 1, 3, 4; B - 1, 2, 4; B - 1,2, 3; G - 2, 3; D - 1, 4, 5.

8. An antiseptic belonging to the group of halogens is:

- A) potassium permanganate;
- B) hydroxymethylquinoxaline dioxide;
- B) phenol;
- G) iodine;
- D) silver nitrate.

Choose the correct answer.

9. How long does a gauze swab remain hygroscopic?

- A. 2 hours;
- B. 4 hours;
- V. 8 hours;
- G. 24 hours;
- D. 2-3 days;

10. Antiseptics is a set of measures aimed at:

- A. preventing infection from entering the wound;
- B. destruction of infection on the patient's skin and mucous membranes;
- B. destruction of infection in the wound, pathological focus and the patient's body;
- D. combating infectious diseases;

SITUATIONAL TASK

A patient was admitted to the clinic with post-injection anaerobic gangrene caused by *Cl. perfringens*, operated. What to do with bed and underwear, furniture in the ward, instruments, surgical linen and dressings used during the operation?

"ASEPTICA-ANTISEPTICS"

OPTION #4

1. Which of the following refers to methods for preventing the contact spread of microflora? a) sterilization of linen; b) sterilization of instruments; c) sterilization of suture material; d) treatment of the surgeon's hands; e) treatment of the surgical field. Choose the correct combination of answers:

- 1) a B C D.
- 2) a, c, d, e.
- 3) a, b, c, d.
- 4) b, c, d, d.
- 5) a, b, d.

2. Ways of endogenous contamination of wounds: a) through non-sterile surgical instruments; b) penetration directly from a hollow organ; c) through the hands of medical personnel; d) through bacterially contaminated abdominal exudate; e) with a flow of lymph or blood from a purulent-inflammatory focus. Choose the correct combination of answers:

- 1) a B C.
- 2) c, d, d.
- 3) a, d, d.
- 4) b, d, d.
- 5) everything is true.

3. What are the possible modes for sterilizing dressings in an autoclave?

Select all correct answers

- A. 1.5 atm. - 30 min;
- B. 1.5 atm. — 45 min;
- V. 1.5 atm. - 1 hour;
- G. 2 atm. - 30 min;
- D. 2 atm. — 45 min;
- E. 2 atm. - 1 hour;

4. Which of the indirect methods of sterility control is the most reliable?

- A) Pressure gauge readings.
- B) Thermometry.
- IN) Melting of antipyrine.
- G) Melting benzoic acid.
- D) Bacteriological control.

Choose the correct answer.

5. Cold sterilization means include:

- 1. ultra-violet rays;
- 2. ionizing radiation;
- 3. ultrasonic waves;
- 4. formaldehyde fumes;
- 5. autoclaving.

Choose the correct combination of answers: A - 1, 2, 4, 5; B -2, 5; B - 1, 3, 4, 5; G - 1, 2, 3, 4; D - 1, 2, 3, 5.

6. The action of proteolytic enzymes during purulent processesah consists in: a) lysis of necrotic tissues;b) increasing blood clotting; c) fibrinolysis; d) potentiation of the action of antibiotics; e) antibacterial effect; e) anti-inflammatory effect. Choose the correct combination of answers:

- 1) a B C.
- 2) a, c, d.
- 3) b, d, f.
- 4) b, d, f.
- 5) everything is true.

7. What drugs increase nonspecific immunological protection:

- 1. prodigiosan;
- 2. staphylococcal toxoid;
- 3. lysozyme;
- 4. bacteriophage;
- 5. levamisole

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 3, 4; G - 1, 3, 5; D - 1, 4, 5.

8. An antiseptic related to oxidizing agents is:

- 1) hydrogen peroxide;
- 2) potassium permanganate;
- 3) phenol;
- 4) chloramine;
- 5) silver nitrate.

Choose the correct combination of answers: A - 2, 3; B - 2, 3, 4; B - 3, 4, 5; G - 1, 2; D - 1, 3, 4.

9. Which of the following can be classified as complications of antibiotic therapy?

Select all correct answers

- A. Allergic reactions;
- B. Dysbacteriosis;
- B. Toxic effect on internal organs;
- G. Bleeding;
- D. Formation of resistant strains of microorganisms;

10. Sutures placed after what time after surgery are called primary delayed?

- A. 12 hours;
- B. 24 hours;
- V. 72 hours;
- G. 1–5 days;
- D. 7 days;

SITUATIONAL TASK

After performing a purulent operation, the operating nurse thoroughly washed the scalpel and scissors in an

alkaline solution, treated it with sublimate for 25 minutes and boiled it in a soda solution for 45 minutes. What gross mistakes did your sister make? Which sterilization method would you choose?

"ASEPTICA-ANTISEPTICS"

OPTION #5

1. Sterilization of instruments that have been in contact with anaerobic infection is carried out:

- A) burning;
- B) autoclaving for 1 hour;
- B) boiling in a solution of sodium bicarbonate for 30 minutes;
- G) fractional sterilization;
- D) formalin vapor.

Choose the correct answer.

2. All of the following are currently used to treat surgeon's hands, except:

- A. ammonia;
- B. povidone;
- B. chlorhexidine;
- G. AHD;

3. Which of the following methods is used to sterilize cystoscopes, laparoscopes, and thoroscopes?

- 1) Burning.
- 2) Boil for 30 minutes in 2% sodium bicarbonate solution.
- 3) Autoclaving.
- 4) Gas sterilization.
- 5) Sterilization in an alcohol solution of chlorhexidine.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3; B - 2, 4; G - 2, 5; D - 4, 5.

4. Organizational measures of asepsis include: a) use of disposable underwear, suture material, and instruments; b) disinfection of the hands of personnel before and after each contact with the patient; c) identification and sanitation of bacteria carriers in the hospital; d) primary surgical treatment of wounds; d) use of antibiotics. Select rightcorrect combination of answers:

- 1) in, g.
- 2) a B C.
- 3) b, c, d.
- 4) c, d, d.
- 5) a, d.

5. TOxogenous sources of contamination of surgical wounds include: a) bacterially contaminated abdominal exudate; b) bacterial carriage among medical personnel; c) unsanitized foci of chronic infection in the patient; d) microbial contamination of surgeons' hands and instruments; e) microbial air pollution in operating rooms, wards and dressing rooms. Select rightcorrect combination of answers:

- 1) a, c, d.
- 2) g, d.
- 3) b, c.
- 4) b, d, d.
- 5) a, c.

6. Indications for prophylactic use of antibioticskov in surgery are: a) operations on patients with primary immunodeficiencies; b) operations related to the implantation of foreign material (vascular grafts, heart valves, etc.); c) operations for widespread peritonitis; d) operations related to the removal of varicose veins of the lower extremities; e) planned hernia repair. Choose the correct combination of answers:

- 1) a B C.
- 2) b, c, d.
- 3) a, c, d.
- 4) c, d, d.
- 5) a, b, d.

7. What drugs are classified as chemical antiseptics:

- 1) penicillins;
- 2) formalin;
- 3) nystatin;
- 4) nitrofurazone;
- 5) Hydroxymethylquinoxaline dioxide.

Choose the correct combination of answers; A - 1, 3, 4; B - 2, 4, 5; B - 2, 3, 4; G - 3, 4, 5; D - 2, 3, 5.

8. Proteolytic enzymes of animal origin are:

- 1) papain;
- 2) trypsin;
- 3) chymotrypsin;
- 4) streptokinase;
- 5) Terrilitin.

Choose the correct combination of answers: A - 1, 2, 3; B - 3, 5; B - 2, 3; G - 2, 3, 4; D - 1, 4.

9. Which of the following are classified as chemical antiseptics of the halogen group?

Select all correct answers

- A. Nitrofurazone;
- B. Iodine;
- B. Iodinol;
- G. Iodonate;
- D. Lugol's solution;
- E. Lysol;
- J. Chlorhexidine;

10. Who coined the term "antiseptic"?

- A. J. Lister;
- B. N. I. Pirogov;
- W. J. Pringle;
- G. I. Semmelweis;

SITUATIONAL TASK

40 patients were routinely operated on within one month by the same surgeon. Of these, 5 had suppuration of the wounds, and 2 had suture dehiscence.

What is the cause of complications and how to identify the cause?

"ASEPTICA-ANTISEPTICS"

OPTION #6

1. Pre-sterilization preparation of instruments should include all of the following, except:

- A. disinfection;
- B. soaking in a cleaning solution;
- B. washing under running water;
- G. short-term boiling;
- D. drying;

2. The following sterilization regime is observed in dry-heat ovens:

- A) 0.5 h at 200 °C;
- B) 1 hour at 180 °C;
- B) 1 hour at 220 °C;
- G) 2 hours at 180 °C;
- D) 2 hours at 220 °C.

Choose the correct answer.

3. What are the possible modes for sterilizing dressings in an autoclave?

Select all correct answers

- A. 1.5 atm. - 30 min;
- B. 1.5 atm. — 45 min;
- V. 1.5 atm. - 1 hour;
- G. 2 atm. - 30 min;
- D. 2 atm. — 45 min;
- E. 2 atm. - 1 hour;

4. Which of the following applies to methods of preventing contact infection?

- 1) sterilization of linen.
- 2) sterilization of instruments.
- 3) sterilization of suture material.
- 4) treatment of surgeon's hands.
- 5) processing of the surgical field.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 1, 5; B - 1, 2, 3, 5; G - 2, 3, 4, 5; D - 1, 2, 4, 5.

5. As one of the measures to prevent airborne infection when examining medical staff, the following is carried out:

- A. blood sampling for Australian antigen and RW;
- B. bacterial culture for the dysentery group;
- B. bacterial culture for enterobiasis;

- G. bacterial culture from the nasopharynx;
- D. study of washings from the hands of personnel;

6. Which method refers to mechanical antiseptics?

- A) Flow-through wound drainage.
- B) Vacuum drainage of the wound.
- B) Primary surgical treatment of the wound.
- G) Ultrasonic wound cavitation.
- D) Flow enzymatic dialysis.

Choose the correct answer.

7. High energy laser beams have the following effects:

- 1) change chemical reactions in tissues;
- 2) increase tissue temperature;
- 3) destroy microorganisms;
- 4) sharply increase intracellular and interstitial pressure;
- 5) enhance the reproduction of young cells.

Choose the correct combination of answers: A - 1, 3; B - 1.5; B - 2, 4, 5; G - 3, 4, 5; D - 2, 3.

8. The mechanism of action of proteolytic enzymes during purulent processes is:

- 1) lysis of necrotic tissue;
- 2) increased blood clotting;
- 3) fibrinolysis;
- 4) potentiation of the action of antibiotics;
- 5) anti-edema effect.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 1, 3, 4, 5; B - 1, 2, 4, 5; G - 1, 2, 3, 5; D - 2, 3, 4, 5.

9. Specify drugs that stimulate nonspecific immunity.

Select all correct answers

- A. Vitamins;
- B. Lysozyme;
- B. Interferons;
- G. Interleukins;
- D. Bacteriophages;

10. Active immunization of the patient can be done using the following blowing drugs:

- 1. staphylococcal toxoid;
- 2. antistaphylococcal γ -globulin;
- 3. bacteriophage;
- 4. levamisole.
- 5. tetanus toxoid.

Choose the correct combination of answers: A - 1, 3, 4; B - 1, 2, 4; B - 1, 2, 3; G - 2, 3; D - 1, 4, 5.

SITUATIONAL TASK

During examination in the emergency room, the patient was diagnosed with pediculosis. How much sanitization will you do? The further fate of the patient?

**"ASEPTICA-ANTISEPTICS"
OPTION #7**

1. Which of the following can become a source of endogenous infection?

Select all correct answers

- A. Implants;
- B. Inflammatory skin diseases;
- B. Postoperative scars;
- D. Chronic inflammatory diseases of internal organs;

2. Which of the following refers to methods of preventing contact infection?

- 1) sterilization of linen.
- 2) sterilization of instruments.
- 3) sterilization of suture material.
- 4) treatment of surgeon's hands.
- 5) processing of the surgical field.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 1.5; B - 1, 2, 3, 5; G - 2, 3, 4, 5; D - 1, 2, 4, 5.

3. First hand treatment provides:

- 1. washing hands with brushes;
- 2. washing hands with running water and soap;
- 3. hand washing first for 1 minute;
- 4. hand washing first for 3 minutes;
- 5. lubricating the nail phalanges with iodine solution.

Choose the correct combination of answers: A - 1, 4, 5; B - 2, 3; B - 2, 4; G - 1, 3, 5; D - 2, 3, 5.

4. To treat the surgical field, use all of the following, except:

- A. organic iodine-containing substances;
- B. 0.5% alcohol solution of chlorhexidine;
- V. pervomura;
- G. gluing sterile films;
- D. alcohol tincture of iodine;

5. Sterilize in formaldehyde vapor:

- A) robes;
- B) cystoscopes;
- B) latex gloves;
- G) syringes;
- D) surgeon's hands.

Choose the correct answer.

6. Methods of physical antiseptics include:

- 1) wound drainage;
- 2) washing the wound with chlorhexidine solution;
- 3) necrectomy;
- 4) ultrasonic cavitation;
- 5) immunotherapy.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 1, 4; G - 2, 4; D - 3, 5.

7. Who coined the term "antiseptic"?

- A. J. Lister;
- B.N.I. Pirogov;
- W. J. Pringle;
- G. I. Semmelweis;

8. Of the listed antibiotics, ototoxic and nephrotoxic effects are exerted by:

- A) penicillins;
- B) aminoglycosides;
- B) tetracyclines;
- G) cephalosporins;
- D) macrolides.

Choose the correct answer.

9. Select the stages of primary surgical treatment of the wound.

Select all correct answers

- A. Dissection;
- B. Excision of the edges, walls, bottom of the wound, removal of hematomas and foreign bodies;
- B. Mandatory suturing of the wound;
- D. Wound drainage;
- D. Opening of leaks and pockets;

10. The mechanism of action of proteolytic enzymes during purulent processes is:

- 1. lysis of necrotic tissue;
- 2. increased blood clotting;
- 3. fibrinolysis;
- 4. potentiation of the action of antibiotics;
- 5. anti-edema effect.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 1, 3, 4, 5; B - 1, 2, 4, 5; G - 1, 2, 3, 5; D - 2, 3, 4, 5.

SITUATIONAL TASK

During examination in the emergency room, the patient was diagnosed with pediculosis. How much sanitization will you do? The further fate of the patient?

"ASEPTICA-ANTISEPTICS"

OPTION #8

1. Select the main methods for sterilizing cutting instruments.

Select all correct answers

- A. Autoclaving;
- B. Processing in a dry-heat oven;
- B. Beam method;
- G. Chemical method;

2. Which of the following substances are used to treat surgeon's hands?

- 1. Pervomur.

2. Novosept.
3. Donor.
4. Ethanol.
5. Chloramine.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 1, 2, 3, 5; B - 2, 3, 4, 5; G - 1, 3, 5; D - 1, 2, 4, 5.

3. Pre-sterilization preparation of instruments should include all of the following, except:

- A. disinfection;
- B. soaking in a cleaning solution;
- B. washing under running water;
- G. short-term boiling;
- D. drying;

4. All of the following are considered sources of contact infection, except:

- A. the patient's skin;
- B. surgeon's hands;
- B. catheters, drainages;
- G. surgical linen;
- D. dressing material;
- E. surgical instruments;

5. Which of the following can become a source of endogenous infection?

Select all correct answers

- A. Implants;
- B. Inflammatory skin diseases;
- B. Postoperative scars;
- D. Chronic inflammatory diseases of internal organs;

6. Biological antiseptic methods include:

1. use of vaccines and serums;
2. use of sulfonamides;
3. use of nitrofurans;
4. use of antibiotics;
5. use of proteolytic enzymes.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 4, 5; G - 1, 2, 5; D - 1, 3, 5.

7. Select the stages of primary surgical treatment of the wound.

Select all correct answers

- A. Dissection;
- B. Excision of the edges, walls, bottom of the wound, removal of hematomas and foreign bodies;
- B. Mandatory suturing of the wound;
- D. Wound drainage;
- D. Opening of leaks and pockets;

8. Indications for prophylactic use of antibiotics in surgery are: a) operations on patients with primary immunodeficiencies; b) operations related to the implantation of foreign material (vascular grafts, heart valves, etc.); c) operations for widespread peritonitis; d) operations related to the removal of varicose veins of the lower extremities; e) planned hernia repair. Choose the correct combination of answers:

1. a B C.
2. b, c, d.
3. a, c, d.
4. c, d, d.
5. a, b, d.

9. What drugs are classified as chemical antiseptics:

1. penicillins;
2. formalin;
3. nystatin;
4. nitrofurazone;
5. Hydroxymethylquinoxaline dioxide.

Choose the correct combination of answers; A - 1, 3, 4; B - 2, 4, 5; B - 2, 3, 4; G - 3, 4, 5; D - 2, 3, 5.

10. An antiseptic belonging to the group of halogens is:

- A) potassium permanganate;
- B) hydroxymethylquinoxaline dioxide;
- B) phenol;
- G) iodine;
- D) silver nitrate.

Choose the correct answer.

A patient with purulent arthritis was given an intramuscular antibiotic (lincomycin) for the first time in his life. After 20-30 minutes, the patient's body became covered with red spots, itching of the skin appeared, as well as swelling of the lips. What complication did the patient experience? What tactical mistake was made? How to stop this complication?

"ASEPTICA-ANTISEPTICS"

OPTION #9

1. All of the following are considered sources of contact infection, except:

- A. the patient's skin;
- B. surgeon's hands;
- B. catheters, drainages;
- G. surgical linen;
- D. dressing material;
- E. surgical instruments;

2. Which of the following can become a source of endogenous infection?

Select all correct answers

- A. Implants;
- B. Inflammatory skin diseases;
- B. Postoperative scars;
- D. Chronic inflammatory diseases of internal organs;

3. Sterilize surgical linen in an autoclave at steam pressure 2atm. follows:

- A) 2h;
- B) 1 h;
- IN) 45 min;
- G) 30 min;
- D) 20 minutes.

Choose the correct answer.

4. Treatment of the surgeon's hands with chlorhexidine lasts:

- A) 1 min;
- B) 3 min;
- IN) 5 minutes;
- G) 10 min.

Choose the correct answer.

5. First treatment of hands includes:

- 1. washing hands with brushes;
- 2. washing hands with running water and soap;
- 3. hand washing first for 1 minute;
- 4. hand washing first for 3 minutes;
- 5. lubricating the nail phalanges with iodine solution.

Choose the correct combination of answers: A - 1, 4, 5; B - 2, 3; B - 2, 4; G - 1, 3, 5; D - 2, 3, 5.

6. What methods are considered physical antiseptics?

- 1) Ultrasonic wound cavitation.
- 2) Antibiotic-procaine blockade of a purulent-inflammatory focus.
- 3) Flow dialysis.
- 4) Cauterization of superficial wounds with a solution of silver nitrate.
- 5) Vacuum drainage of the wound.

Choose the correct combination of answers: A - 1, 4, 5; B - 1, 2, 3; B - 3, 4, 5; G - 1, 3, 4; D - 1, 3, 5.

7. Sutures placed after what time after surgery are called primary delayed?

- A. 12 hours;
- B. 24 hours;
- V. 72 hours;
- G. 1-5 days;
- D. 7 days;

8. Antiseptics belonging to the group of halogens and halogen-containing compounds are: a) potassium permanganate; b) sodium hypochlorite; c) dioxidine; d) povidoniod; d) iodonate. Choose the correct combination of answers:

- 1. a, c.
- 2. b, d.
- 3. c, d, d.
- 4. b, d, d.
- 5. everything is true.

9. What drugs belong to the group of activating nonspecific immunobiological reactivity?

- 1. Antigangrenous serum.

2. Staphylococcal toxoid.
3. Prodigiozan.
4. Levamisole.
5. Antitetanus serum.
6. Thymus extract.

Choose the correct combination of answers: A - 1, 3, 4; B - 2, 4, 6; B - 3, 4, 6; G - 3, 4, 5; D - 4, 5, 6.

10. Proteolytic enzymes of animal origin are:

1. Papain;
2. trypsin;
3. chymotrypsin;
4. streptokinase;
5. terrilitin.

Choose the correct combination of answers: A - 1, 2, 3; B - 3,5; B - 2, 3; G - 2, 3, 4; D - 1, 4.

SITUATIONAL TASK

The operating nurse placed the dressing material in the box in the following order: large napkins on the bottom; the next layer is medium-sized gauze napkins and the last layer is containers with gauze balls. After which the box was loaded into the autoclave along with the others. What mistakes were made by the operating nurse?

"ASEPTICA-ANTISEPTICS"

OPTION No. 10

1. Organizational measures of asepsis include: a) use of disposable underwear, suture material, and instruments; b) disinfection of the hands of personnel before and after each contact with the patient; c) identification and sanitation of bacteria carriers in the hospital; d) primary surgical treatment of wounds; d) use of antibiotics.

Select rightcorrect combination of answers:

1. in, g.
2. a B C.
3. b, c, d.
4. c, d, d.
5. a, d.

2. Which of the following refers to methods of preventing contact infection?

1. sterilization of linen.
2. sterilization of instruments.
3. sterilization of suture material.
4. treatment of surgeon's hands.
5. processing of the surgical field.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 1,5; B - 1, 2, 3, 5; G - 2, 3, 4, 5; D - 1, 2, 4, 5.

3. Cold sterilization means include:

1. ultra-violet rays;
2. ionizing radiation;
3. ultrasonic waves;
4. formaldehyde fumes;
5. autoclaving.

Choose the correct combination of answers: A - 1, 2, 4, 5; B -2, 5; B - 1, 3, 4, 5; G - 1, 2, 3, 4; D - 1, 2, 3, 5.

4. What test indicators are used to determine the quality of an autoclave?

Select all correct answers

- A. Thermal indicator;
- B. Sulfur;
- B. Benzoic acid;
- G. Urea;
- D. Antipyrine;

5. What are the main components of the drug C-4?

- A) Hydrogen peroxide + ethanol.
- B) Hydrogen peroxide + formic acid.
- B) Hydrogen peroxide + ammonia solution.
- G) Hydrogen peroxide + methyl alcohol.
- D) Hydrogen peroxide + mercury dichloride.

Choose the correct answer.

6. An antiseptic related to oxidizing agents is:

1. hydrogen peroxide;
2. potassium permanganate;
3. phenol;
4. chloramine;
5. silver nitrate.

Choose the correct combination of answers: A - 2, 3; B - 2, 3, 4; B - 3, 4, 5; G - 1, 2; D - 1, 3, 4.

7. Select the main methods of physical antiseptics.

Select all correct answers

- A. Application of hygroscopic material;
- B. Application of drainages;
- B. Use of hypertonic solution;
- G. Sorbents;
- D. Proteolytic enzymes;
- E. Toilet wound;

8. The action of proteolytic enzymes during purulent processesah consists in: a) lysis of necrotic tissues;b) increasing blood clotting; c) fibrinolysis; d) potentiation of the action of antibiotics; e) antibacterial effect; e) anti-inflammatory effect. Choose the correct combination of answers:

- 1) a B C.
- 2) a, c, d.
- 3) b, d, f.
- 4) b, d, f.
- 5) everything is true.

9. Of the listed antibiotics, ototoxic and nephrotoxic effects are exerted by:

- A) penicillins;
- B) aminoglycosides;
- B) tetracyclines;
- G) cephalosporins;
- D) macrolides.

Choose the correct answer.

10. Indications for prophylactic use of antibioticskov in surgery are: a) operations on patients with primary immunodeficiencies; b) operations related to the implantation of foreign material (vascular grafts, heart valves, etc.); c) operations for widespread peritonitis; d) operations related to the removal of varicose veins of the lower extremities; e) planned hernia repair. Choose the correct combination of answers:

- 1. a, b, c.
- 2. b, c, d.
- 3. a, c, d.
- 4. c, d, d.
- 5. a, b, d.

SITUATIONAL TASK

What sanitary standards are provided for the surgical ward (area, wall height, temperature and humidity)?

"ASEPTICA-ANTISEPTICS"

OPTION No. 11

1. Select the main ways of spreading exogenous infection.

Select all correct answers

- A. Airborne;
- B. Household;
- V. Contact;
- G. Whey;
- D. Implantation;

2. As one of the measures to prevent airborne infection when examining medical staff, the following is carried out:

- A. blood sampling for Australian antigen and RW;
- B. bacterial culture for the dysentery group;
- B. bacterial culture for enterobiasis;
- G. bacterial culture from the nasopharynx;
- D. study of washings from the hands of personnel;

3. Which of the following methods is used to sterilize cystoscopes, laparoscopes, and

thorascopes?

1. Burning.
2. Boil for 30 minutes in 2% sodium bicarbonate solution.
3. Autoclaving.
4. Gas sterilization.
5. Sterilization in an alcohol solution of chlorhexidine.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3; B - 2, 4; G - 2.5; D - 4, 5.

4. The time for sterilizing surgical instruments in an autoclave under a pressure of 2 atm is:

- A) 2 hours;
- B) 45 min;
- B) 1 hour;
- G) 20 minutes;
- D) 1.5 hours

Choose the correct answer.

5. Select the main methods for sterilizing gloves.

Select all correct answers

- A. Autoclaving;
- B. Drying oven;
- B. Boiling;
- G. Boiling in sublimate;
- D. Luchevoiy;

6. An antiseptic belonging to the group of halogens is:

- A) potassium permanganate;
- B) hydroxymethylquinoxaline dioxide;
- B) phenol;
- G) iodine;
- D) silver nitrate.

Choose the correct answer.

7. Biological antiseptic methods include:

1. use of vaccines and serums;
2. use of sulfonamides;
3. use of nitrofurans;
4. use of antibiotics;
5. use of proteolytic enzymes.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 4, 5; G - 1, 2, 5; D - 1, 3, 5.

8. What methods relate to physical antiseptics? a) ultrasonic wound cavitation; b) antibiotic-novocaine blockade of a purulent-inflammatory focus; c) vacuum aspiration; d) treating wounds with an effective antiseptic solution; e) use of laser radiation. Choose the correct combination of answers:

1. a, d, d.
2. a, 6, c.
3. c, d, d.
4. a, c, d.
5. a, c, d.

9. Select the stages of primary surgical treatment of the wound.

Select all correct answers

- A. Dissection;
- B. Excision of the edges, walls, bottom of the wound, removal of hematomas and foreign bodies;
- B. Mandatory suturing of the wound;
- D. Wound drainage;
- D. Opening of leaks and pockets;

10. Sutures placed after what time after surgery are called primary delayed?

- A. 12 hours;
- B. 24 hours;
- V. 72 hours;
- G. 1–5 days;
- D. 7 days;

SITUATIONAL TASK

A 55-year-old patient was taken to the hospital from the scene of a car accident. Upon examination, there is a deep crushed wound in the area of the left thigh with scraps of clothing in it. During the inspection of the wound, foreign bodies were removed, and the wound was thoroughly washed with antiseptic solutions. Since there was no bleeding, it was decided to suture the wound layer by layer, carefully matching the edges. Which is what was done.

What mistakes were made? What are the further management tactics?

"ASEPTICA-ANTISEPTICS"

OPTION No. 12

1. All of the following are considered sources of contact infection, except:

- A. the patient's skin;
- B. surgeon's hands;
- B. catheters, drainages;
- G. surgical linen;
- D. dressing material;
- E. surgical instruments;

2. Which of the following can become a source of endogenous infection?

Select all correct answers

- A. Implants;
- B. Inflammatory skin diseases;
- B. Postoperative scars;
- D. Chronic inflammatory diseases of internal organs;

3. The following sterilization regime is observed in dry-heat ovens:

- A) 0.5 h at 200 °C;
- B) 1 hour at 180 °C;
- IN) 1 hour at 220 °C;
- G) 2 hours at 180 °C;
- D) 2 hours at 220 °C.

Choose the correct answer.

4. Which of the indirect methods of sterility control is the most reliable??

- A) Pressure gauge readings.
- B) Thermometry.
- IN) Melting of antipyrine.
- G) Melting benzoic acid.
- D) Bacteriological control.

Choose the correct answer.

5. Cold sterilization means include:

- 1. ultra-violet rays;
- 2. ionizing radiation;
- 3. ultrasonic waves;
- 4. formaldehyde fumes;
- 5. autoclaving.

Choose the correct combination of answers: A - 1, 2, 4, 5; B -2, 5; B - 1, 3, 4, 5; G - 1, 2, 3, 4; D - 1, 2, 3, 5.

6. Of the listed antibiotics, ototoxic and nephrotoxic effects are exerted by:

- A) penicillins;
- B) aminoglycosides;
- B) tetracyclines;
- G) cephalosporins;
- D) macrolides.

Choose the correct answer.

7. Select means of passive specific immunization.

Select all correct answers

- A. Serum;
- B. Antitoxins;
- B. Hyperimmune plasma;
- G. Tetanus toxoid;

8. Antiseptics of the oxidizing group are: a) chlorhexidine bigluconate; b) potassium permanganate; c) hydrogen peroxide; d) dioxidine; e) iodopyrone. Choose the correct combination of answers:

- 1. a, b.
- 2. b, c.
- 3. c, d.
- 4. g, d.
- 5. Everything is correct.

9. Which of the following are classified as chemical antiseptics of the halogen group?

Select all correct answers

- A. Nitrofurazone;
- B. Iodine;

- B. Iodinol;
- G. Iodonate;
- D. Lugol's solution;
- E. Lysol;
- J. Chlorhexidine;

10. When are antibiotics administered to prevent postoperative complications?

Select all correct answers

- A. In the morning on the day of surgery;
- B. 30 minutes after surgery;
- B. During surgery;
- D. Within 1–2 days after surgery;

SITUATIONAL TASK

A 55-year-old patient was taken to the hospital from the scene of a car accident. Upon examination, there is a deep crushed wound in the area of the left thigh with scraps of clothing in it. During the inspection of the wound, foreign bodies were removed, and the wound was thoroughly washed with antiseptic solutions. Since there was no bleeding, it was decided to suture the wound layer by layer, carefully matching the edges. Which is what was done.

What mistakes were made? What are the further management tactics?

"ASEPTICA-ANTISEPTICS"

OPTION No. 13

1. All of the following are considered sources of contact infection, except:

- A. the patient's skin;
- B. surgeon's hands;
- B. catheters, drainages;
- G. surgical linen;
- D. dressing material;
- E. surgical instruments;

2. Select the main ways of spreading exogenous infection.

Select all correct answers

- A. Airborne;
- B. Household;
- V. Contact;
- G. Whey;
- D. Implantation;

3. Sterilize in formaldehyde vapor:

- A) robes;
- B) cystoscopes;
- B) latex gloves;
- G) syringes;
- D) surgeon's hands.

Choose the correct answer.

4. Sterilization of instruments that have been in contact with anaerobic infection is carried out:

- A) burning;
- B) autoclaving for 1 hour;
- B) boiling in a solution of sodium bicarbonate for 30 minutes;
- G) fractional sterilization;
- D) formalin vapor.

Choose the correct answer.

5. The time for sterilizing surgical instruments in an autoclave under a pressure of 2 atm is:

- A) 2 hours;
- B) 45 min;
- B) 1 hour;
- G) 20 minutes;
- D) 1.5 hours

Choose the correct answer.

6. What drugs are classified as chemical antiseptics:

- 1) penicillins;
- 2) formalin;
- 3) nystatin;
- 4) nitrofurals;

5) Hydroxymethylquinoxaline dioxide.

Choose the correct combination of answers; A - 1, 3, 4; B - 2, 4, 5; B - 2, 3, 4; G - 3, 4, 5; D - 2, 3, 5.

7. When are antibiotics administered to prevent postoperative complications?

Select all correct answers

A. In the morning on the day of surgery;

B. 30 minutes after surgery;

B. During surgery;

D. Within 1–2 days after surgery;

8. Antiseptics - a set of measures aimed at:

A. preventing infection from entering the wound;

B. destruction of infection on the patient's skin and mucous membranes;

B. destruction of infection in the wound, pathological focus and the patient's body;

D. combating infectious diseases;

9. How long does a gauze swab remain hygroscopic?

A. 2 hours;

B. 4 hours;

V. 8 hours;

G. 24 hours;

D. 2–3 days;

10. What drugs increase nonspecific immunological protection:

1. prodigiosan;

2. staphylococcal toxoid;

3. lysozyme;

4. bacteriophage;

5. levamisole.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 3, 4; G - 1, 3, 5; D - 1, 4, 5.

SITUATIONAL TASK

After suffering a severe stroke, a patient developed bedsores in the sacrococcygeal region with areas of necrosis tightly fused to the underlying tissues. Due to the severity of the condition, the attending physician refrained from necrectomy under anesthesia. Ointment dressings and treatment of the surrounding skin with KMnO₄ solution are performed to prevent wound infection.

What antiseptic method would be useful in this case?

"ASEPTICA-ANTISEPTICS"

OPTION No. 14

1. There are the following types of operating room cleaning:

- A. before the start of the working day;
- B. after each operation;
- V. current;
- G. daily;
- D. general;
- E. all of the above;

2. Select the main ways of spreading exogenous infection.

Select all correct answers

- A. Airborne;
- B. Household;
- V. Contact;
- G. Whey;
- D. Implantation;

3. Pre-sterilization preparation of instruments should include all of the following, except:

- A. disinfection;
- B. soaking in a cleaning solution;
- B. washing under running water;
- G. short-term boiling;
- D. drying;

4. The following sterilization regime is observed in dry-heat ovens:

- A) 0.5 h at 200 °C;
- B) 1 hour at 180 °C;
- IN) 1 hour at 220 °C;
- G) 2 hours at 180 °C;
- D) 2 hours at 220 °C.

Choose the correct answer.

5. Select the main methods for sterilizing cutting instruments.

Select all correct answers

- A. Autoclaving;
- B. Processing in a dry-heat oven;
- B. Beam method;
- G. Chemical method;

6. The mechanism of action of proteolytic enzymes during purulent processes is:

- 1. lysis of necrotic tissue;
- 2. increased blood clotting;
- 3. fibrinolysis;
- 4. potentiation of the action of antibiotics;
- 5. anti-edema effect.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 1, 3,4, 5; B - 1, 2, 4, 5; G - 1, 2, 3, 5; D - 2, 3, 4, 5.

7. Specify drugs that stimulate nonspecific immunity.

Select all correct answers

- A. Vitamins;
- B. Lysozyme;
- B. Interferons;
- G. Interleukins;
- D. Bacteriophages;

8. Which of the following can be classified as complications of antibiotic therapy?

Select all correct answers

- A. Allergic reactions;
- B. Dysbacteriosis;
- B. Toxic effect on internal organs;
- G. Bleeding;
- D. Formation of resistant strains of microorganisms;

9. Select the main methods of physical antiseptis.

Select all correct answers

- A. Application of hygroscopic material;
- B. Application of drainages;
- B. Use of hypertonic solution;
- G. Sorbents;
- D. Proteolytic enzymes;
- E. Toilet wound;

10. What drugs are classified as chemical antiseptics:

- 1) penicillins;
- 2) formalin;
- 3) nystatin;
- 4) nitrofurazone;
- 5) Hydroxymethylquinoxaline dioxide.

Choose the correct combination of answers; A - 1, 3, 4; B - 2, 4, 5; C - 2, 3, 4; D - 2, 3, 5.

SITUATIONAL TASK

The patient was brought to the emergency room in a state of moderate severity, with severe abdominal pain, with a picture of peritonitis. How much sanitization does he have to do?

ANSWERS TO THE “ASEPTICS-ANTISEPTICS” TESTS

OPTION 1

- 14
- 2 - E
- 3 - B
- 4 - B
- 5 - B
- 6 - 2
- 7 - B
- 8 - B
- 9 - G
- 10 - ABCG

OPTION 2

- 1 - G
- 2 - ABC
- 3 - AB
- 4 - 4
- 5 - 5
- 6 - 4
- 7 - B
- 8 - B
- 9 - AB
- 10 - ABC

OPTION 3

- 1 - AED
- 2 - 4
- 3 - G
- 4 - blood pressure
- 5 - D
- 6 - 5
- 7 - D
- 8 - G
- 9 - B
- 10 - V

OPTION 4

- 15
- 2 - 4
- 3 - BG
- 4 - B
- 5 - G
- 6 - 2
- 7 - G
- 8 - G
- 9 - ABCD

OPTION 8

- 1 - AB
- 2 - A
- 3 - G
- 4 - A
- 5 - BG
- 6 - B
- 7 - ABGD
- 8 - 1
- 9 - B
- 10 - G

OPTION 9

- 1 - B
- 2 - BG
- 3 - D
- 4 - B
- 5 - B
- 6 - D
- 7 - G
- 8 - 4
- 9 - B
- 10 - V

OPTION 10

- 12
- 2 - D
- 3 - G
- 4 - ABC
- 5 - B
- 6 - G
- 7 - ABCG
- 8 - 2
- 9 - G
- 10 - 1

OPTION 11

- 1 - AED
- 2 - G
- 3 - D
- 4 - G
- 5 - blood pressure
- 6 - G
- 7 - B
- 8 - 5
- 9 - ABGD

10 - G

OPTION 5

1 - G
2 - A
3 - D
4 - 2
5 - 4
6 - 1
7 - B
8 - B
9 - BVGD
10 - A

OPTION 6

1 - G
2 - B
3 - BG
4 - D
5 - G
6 - B
7 - G
8 - B
9 - ABCG
10 - D

OPTION 7

1 - BG
2 - D
3 - B
4 - B
5 - B
6 - B
7 - A
8 - G
9 - ABGD
10 - B

10 - G

OPTION 12

1 - B
2 - BG
3 - B
4 - B
5 - G
6 - B
7 - AB
8 - 2
9 - BVGD
10 - AG

OPTION 13

1 - B
2 - AED
3 - B
4 - G
5 - G
6 - B
7 - ABC
8 - B
9 - B
10 - G

OPTION 14

1 - E
2 - AED
3 - G
4 - B
5 - AB
6 - B
7 - ABCG
8 - ABCD
9 - ABCG
10 - B

**"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"
OPTION #1**

1. What circumstances can contribute to secondary early bleeding from a postoperative wound? a) slipping of the ligature from the vessel; b) bleeding from small unligated vessels; c) local application of cold to reduce pain; d) hyperbilirubinemia; e) a sharp increase in blood pressure; f) vascular erosion due to wound suppuration; g) transfusion of preserved blood. Choose the correct combination of answers:

- 1) a, b, c, e.
- 2) c, d, f, g.

- 3) g, d, f, g.
- 4) a, b, d, d.
- 5) a, c, f, g.

2. Indicate in which of the following cases an air embolism is possible:

- A) in case of injury to the veins of the lower extremities;
- B) when the subclavian vein is injured;
- B) with a penetrating knife wound of the knee joint and hemarthrosis;
- G) when the spleen is injured;
- D) when a large arterial trunk is injured in the thigh.

Choose the correct answer.

3. Assess the severity of blood loss in a volume of 600 ml for an adult with body weight 70 kg.

- A. Mild degree;
- B. Moderate;
- B. Severe degree;
- G. Massive blood loss;

4. In relation to the external environment, the following types of bleeding are distinguished:

Select all correct answers

- A. hidden;
- B. external;
- B. secondary;
- G. obvious;
- D. internal;

5. Which of the listed types of bleeding are classified as internal?

Select all correct answers

- A. Bleeding from ulcers of the gastrointestinal tract;
- B. Bleeding into the abdominal cavity due to rupture of the spleen;
- B. Kidney bleeding;
- G. Soft tissue hematomas;
- D. Hemarthrosis;
- E. Uterine bleeding;

6. When determining blood group using coliclones, there is no agglutination with both reagents (anti-A and anti-B). What type of blood is being tested?

- 1) 0 (I).
- 2) A (P).
- 3) H (W).
- 4) AB(IV).
- 5) no conclusion can be drawn.

7. When determining the blood group, the isohemagglutination reaction with standard sera A(II) and B(III) was positive. groups and negative - with sera of 0(I) and AB(IV) groups. What does this result indicate?

- A) about group 0(I) the blood being tested.
- B) about group A(II).
- IN) about group B(III).
- G) about the group AB(IV).
- D) about the unsuitability of standard serums.

Choose the correct answer.

8. Select contraindications for reinfusion in hemoperitoneum.

- A. The patient has an infectious disease;
- B. Aggravated allergic history;
- B. Combination with rupture of hollow organs;
- D. Disorders of the blood coagulation system;
- D. Unstable hemodynamics;

9. What blood elements contain agglutinins?

- A) blood serum.
- B) leukocytes.
- B) red blood cells.
- G) platelets.
- D) monocytes.

Choose the correct answer.

10. Which of the listed drugs are classified as blood substitutes for detoxification?

Select all correct answers

- A. Polidez;

- B. Dextran [cf. molecular weight 50,000-70,000];
- B. Plasmosteril;
- G. Neocompensan;
- D. Hemodez;

TASK

A 20-year-old patient underwent primary surgical treatment of a thigh wound. 1.5 hours after the operation, the bandage was soaked with blood, which seeped between the stitches.
Indicate the cause of bleeding and the actions necessary to stop the bleeding.

BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE" OPTION #2

1. Methods for temporarily stopping bleeding include: a) applying a pressure bandage; b) application of a hemostatic tourniquet; c) introduction of a hemostatic sponge into the wound; d) electrocoagulation of a bleeding vessel; e) ligation of the vessel; f) applying a hemostatic clamp; g) suturing the vessel. Choose the correct combination of answers:

- 1) a, b, f.
- 2) a, c, d, g.
- 3) b, d, f.
- 4) c, d, d.
- 5) everything is true.

2. In the first hours of severe bleeding, the amount of blood loss is most accurately reflected by:

- A) relative blood density;
- B) hemoglobin content;
- B) hematocrit;
- G) red blood cell content;
- D) change in BCC indicators.

Choose the correct answer.

3. Who first proposed using vessel ligation as a method of stopping bleeding?

- A.N.I. Pirogov;
- B. K. Galen;
- V. Hippocrates;
- G. Avicenna;
- D. K. Celsus;

4. The cause(s) of early secondary bleeding may be:

- Select all correct answers**
- A. damage to the vessel wall;
 - B. slipping of the ligature;
 - B. increased blood pressure;
 - G. pushing out a blood clot;
 - D. suppuration of the wound;

5. How does compensation occur for the decrease in blood volume during acute blood loss?

Select all correct answers

- A. Vasodilation;
- B. Arteriolo-spasm;
- B. Oliguria;
- G. Venospasm;
- D. Autohemodilution;
- E. Tachycardia;

6. When determining blood group using tsoliklones, agglutination is observed with anti-B tsoliclones. What type of blood is being tested?

- 1) 0 (I).
- 2) A (P).
- 3) B (III).
- 4) AB(IV).
- 5) no conclusion can be drawn.

7. A test for individual blood compatibility is carried out between:

- A) plasma or serum of the patient's blood and donor blood;
- B) donor plasma and patient blood;
- IN) formed elements of the patient's blood and donor blood;
- G) formed elements of the donor's blood and the patient's blood;
- D) whole blood from the donor and whole blood from the patient.

Choose the correct answer.

8. When human blood was mixed with standard isohemagglutinating sera of four blood groups, an agglutination reaction occurred with sera I and III. Determine your blood type.

- A. Group I;
- B. II group;
- B. III group;
- G. IV group;
- D. More research should be done;

9. What elements of the blood contain agglutinogens?

- A) in blood plasma.
- B) in blood serum.
- B) Vleukocytes.
- G) in erythrocytes.
- D) in platelets.

Choose the correct answer.

10. Which of the listed drugs are classified as blood substitutes with hemodynamic action?

Select all correct answers

- A. Dextran [cf. molecular weight 50,000-70,000];
- B. Hemodez;
- B. Dextran [mol. weight 30,000-40,000];
- G. Gelatin;

TASK

The patient has a closed chest injury. The condition is severe: tachycardia, tachypnea, breathing on the left is not carried out, percussion sound is shortened.

Indicate the presumptive diagnosis and examination plan for the patient.

BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE" OPTION #3

1. In which of the following cases is an air embolism possible?

- 1) in case of injury to the veins of the lower extremities;
- 2) when the subclavian vein is injured;
- 3) with a penetrating knife wound of the knee joint and hemarthrosis;
- 4) when the spleen is injured;
- 5) when a large arterial trunk is injured in the thigh.

2. The cause of late secondary bleeding is:

- 1. increased blood pressure;
- 2. purulent melting of a blood clot;
- 3. elimination of vascular spasm;
- 4. erosion of the vessel wall;
- 5. vessel injury, ligature slippage.

Choose the correct combination of answers: A - 1, 2; B - 2, 3, 4; B - 2, 3, 5; G - 2, 4; D - 1, 2, 4.

3. Select the main phases of blood coagulation.

Select all correct answers

- A. Formation of thromboplastin;
- B. Transition of prothrombin to thrombin;
- B. Transition of proconvertin into convertin;
- G. Fibrin formation;
- D. Clot retraction;

4. Assess the severity of blood loss in a volume of 600 ml for an adult with body weight 70 kg.

- A. Mild degree;
- B. Moderate;
- B. Severe degree;
- G. Massive blood loss;

5. Select the main general symptoms of profuse bleeding.

Select all correct answers

- A. Decrease in blood pressure;

- B. Bradycardia;
- B. Arrhythmia;
- G. Paleness of the skin;
- D. Tachycardia;
- E. Skin moisture;

6. When determining blood group in the ABO system using standard isohemagglutinating sera, a positive agglutination reaction with standard serum was revealed in 0 (I) and A (P) groups and negative with B (W). Which group does the blood being tested belong to?

- 1) 0 (I).
- 2) A (II).
- 3) H (W).
- 4) AB(IV).
- 5) no conclusion can be drawn.

7. Indications for blood transfusion are determined by:

- 1) allergic condition of the patient;
- 2) state of shock;
- 3) the presence of hepatic renal failure;
- 4) the need to replenish blood loss;
- 5) the presence of vitamin deficiency in the patient.

Choose the correct combination of answers: A - 1, 2; B - 1, 3; C - 2, 3; D - 2, 4; E - 4, 5.

8. Select the definition of exchange transfusion.

A. Transfusion into the patient's vascular bed of blood that he lost as a result of surgery, injury or pathological process;

B. Transfusion of donor blood simultaneously with the exfusion of the patient's own blood;

B. Blood transfusion directly from the donor to the recipient;

9. Symptoms of deterioration of the patient's condition due to transfusion of poor-quality blood are:

- 1) increase in hematocrit;
- 2) chills;
- 3) hyperthermia;
- 4) pain in the lumbar region;
- 5) tachycardia.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4; C - 1, 3, 4, 5; D - 2, 4, 5; E - 2, 3, 4, 5.

10. The main properties of detoxification blood substitutes are:

- 1) blood dilution;
- 2) changes in the physical and chemical properties of blood;
- 3) high absorption properties;
- 4) increased renal filtration;
- 5) strengthening the detoxification function of the liver.

Choose the correct combination of answers: A - 1, 3, 4; B - 2, 3, 4; C - 3, 4; D - 3, 4, 5; E - 3, 5.

TASK

Immediately after the cessation of the mortar shelling, the company medical instructor was called to see a serviceman with a mine explosion wound to the right lower limb and a traumatic amputation of the right leg at the level of the middle third. During the initial examination by a medical instructor, the victim was excited and euphoric, pale skin, a rapid thread-like pulse (130 per minute, arterial hypotension 80/40 mm Hg), and the release of scarlet blood in a pulsating stream from the stump of the right leg.

1. What is your presumptive diagnosis? Indicate the main pathogenetic aspects of this suffering.
2. Indicate the main actions of a company medical instructor.

Indicate the main medical measures during the evacuation of the victim and upon delivery to the hospital.

"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"

OPTION #4

1. Which of the listed types of bleeding are internal? a) bleeding from gastroduodenal ulcers; b) bleeding into the abdominal and pleural cavities due to penetrating wounds; c) renal bleeding; d) soft tissue hematomas; e) hemarthrosis; f) intestinal bleeding; g) uterine bleeding. Choose the correct combination of answers:

- 1) a, b, d.
- 2) b, c, d.
- 3) a, d, f.
- 4) a, c, g.

5) b, d, d.

2. What causes early secondary bleeding:

1. suppuration of the wound;
2. vessel injury;
3. pushing out a blood clot;
4. slipping of the ligature;
5. increased blood pressure.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 5; B - 3, 4, 5; G - 2, 4, 5; D - 4, 5.

3. Select the main phases of blood coagulation.

Select all correct answers

- A. Formation of thromboplastin;
- B. Transition of prothrombin to thrombin;
- B. Transition of proconvertin into convertin;
- G. Fibrin formation;
- D. Clot retraction;

4. What indicators are used to assess the degree and severity of blood loss?

Select all correct answers

- A. Number of red blood cells;
- B. Hemoglobin content;
- B. Hematocrit;
- G. Specific gravity of blood;
- D. Specific gravity of urine;
- E. Daily diuresis;

5. List the symptoms of blood loss due to excessive vomiting of "coffee grounds."

Select all correct answers

- A. Loss of consciousness due to displacement of the midline structures of the brain by an intracranial hematoma;
- B. Fall in blood pressure;
- B. Tachycardia;
- D. Sharp depression of cardiac activity during tamponade of the cardiac sac;
- D. Decrease in hematocrit;
- E. Decrease in hemoglobin content in peripheral blood;
- G. Peritoneal symptoms with hemoperitoneum;
- H. Paleness of the skin;

6. A test for individual blood compatibility is carried out between:

- 1) plasma or serum of the patient's blood and donor blood;
- 2) donor plasma and patient blood;
- 3) formed elements of the patient's blood and donor blood;
- 4) formed elements of the donor's blood and the patient's blood;
- 5) whole blood from the donor and whole blood from the patient.

7. When determining blood group using tsoliklones, agglutination is absent with anti-A and anti-B tsoliclones. What type of blood is being tested?

- A) 0(I).
- B) A(II).
- IN) IN(III).
- G) AB(IV).

Choose the correct answer.

8. Symptoms of deterioration of the patient's condition due to transfusion of poor-quality blood are:

- 1) increase in hematocrit;
- 2) chills;
- 3) hyperthermia;
- 4) pain in the lumbar region;
- 5) tachycardia.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4; B - 1, 3, 4, 5; G - 2, 4, 5; D - 2, 3, 4, 5.

9. A test for individual blood compatibility is carried out between:

- A) plasma or serum of the patient's blood and donor blood;
- B) donor plasma and patient blood;
- IN) formed elements of the patient's blood and donor blood;
- G) formed elements of the donor's blood and the patient's blood;

D) whole blood from the donor and whole blood from the patient.

Choose the correct answer.

10. With total parenteral nutrition, the total volume of transfusion is:

A) 500-1000 ml;

B) 1500-2000 ml;

C) 2500-3000 ml;

D) 3500 ml;

E) more than 3500 ml.

Choose the correct answer.

TASK

During emergency laparotomy for a stab and penetrating wound of the anterior abdominal wall, a wound was found on the right liver lobes measuring 10x5 cm with abundant flow of dark blood from it.

1. Using the features of the blood known to you from the anatomy courses supply to the liver, indicate a method for temporarily stopping the blood currents in this case.
2. Indicate possible methods of final hemostasis in this situation.

"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"

OPTION #5

1. The causes of secondary late bleeding are: a) increased blood pressure; b) purulent thrombus removal; c) elimination of vascular spasm; d) erosion of the vessel wall; e) injury to a vessel; f) slipping of the ligature. Choose the correct combination of answers:

- 1) a, b.
- 2) c, d, f.
- 3) b, c, d.
- 4) b, d.
- 5) a, d, e.

2. What location of the source of bleeding is Melena typical for?

- A) llight.
- B) upper gastrointestinal tract.
- C) Prectum.
- D) bud.
- E) spleen.

Choose the correct answer.

3. What indicators are used to assess the degree and severity of blood loss?

Select all correct answers

- A. Number of red blood cells;
- B. Hemoglobin content;
- C. Hematocrit;
- D. Specific gravity of blood;
- E. Specific gravity of urine;
- F. Daily diuresis;

4. Pressure bandage is indicated as a temporary stopping method bleeding with:

- 1) bleeding from the veins of the forearm;
- 2) damage to the carotid artery;
- 3) bleeding from the soft tissues of the head;
- 4) injury to the popliteal fossa area;
- 5) bleeding from the soft tissues of the chest wall.

Choose the correct combination of answers: A - 2, 3, 5; B - 1, 3, 4; C - all answers are correct; D - 1, 3, 5.

5. Due to what, during acute blood loss, there is a natural compensation for the decrease in blood volume and the viability of the body is maintained?

- 1) vasoconstriction.
- 2) increase in central venous pressure.
- 3) autohemodilution.
- 4) vasodilation.
- 5) centralization of blood flow.

Choose the correct combination of answers: A - 1, 4, 5; B - 1, 3, 5; C - 1, 2, 4; D - 2, 4, 5; E - 2, 3, 4.

6. Clinical manifestations of blood transfusion shock: a) pain in a stomach; b) tachycardia; c) bradycardia; d) drop in blood pressure; e) lower back pain. Choose the correct combination of answers:

- 1) a B C.
- 2) b, d.
- 3) c, d, d.
- 4) b, d, d.
- 5) a, c, d, e.

7. Agglutination is observed with anti-B zolicles. What type of blood is being tested?

- A) 0(I).
- B) A(II).
- IN) IN(III).
- G) AB(IV).

Choose the correct answer.

8. Indications for blood transfusion are:

- 1) acute blood loss;
- 2) purulent intoxication;
- 3) acute thrombophlebitis;
- 4) acute tuberculosis;
- 5) shock.

Choose the correct combination of answers: A - 1, 2, 5; B - 2, 3, 5; B - 3, 4, 5; G - 2, 4, 5; D - 1, 3, 5.

9. In what case is a biological test not carried out?

Select all correct answers

- A. Blood transfusion with ongoing bleeding;
- B. Blood transfusion during surgery under anesthesia;
- B. Blood transfusion of a relative;
- G. Transfusion of autologous blood;

10. What blood substitute is used for dehydration?

- A) soybean oil + triglycerides.
- B) 4% sodium bicarbonate solution.
- IN) dextran [cf. they say weight 50,000-70,000].
- G) mannitol
- D) protein solution.

Choose the correct answer.

TASK

A man injured in an accident was brought to the emergency department A 40-year-old man driving a car with unfastened seat belts. According to the patient, when the car collided with an obstacle, he received a strong blow to the stomach with the steering wheel. At the time of examination, the patient complained of some weakness, "spots before the eyes," and minor pain in the lower abdomen. When examining the patient by the surgeon on duty, no damage to the musculoskeletal system was detected, moderate pallor of the skin was noted, pulse rate was 105 per minute, blood pressure was 110/70 mm Hg, the abdomen was not distended, was involved in breathing, slightly tense in the meso- and hypogastrum, moderately painful there. In the mesogastrium there is a hematoma measuring 10x4 cm. The patient, citing urgent matters and satisfactory health, intends to leave the hospital.

1. What is your presumptive diagnosis? Indicate the main pathogenetic aspects of this suffering.
2. What additional diagnostic measures are appropriate in relation to this sick?
3. Indicate the main directions of treatment measuresty in relation to this patient.

"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"

OPTION #6

1. Methods for definitively stopping bleeding include: a) introducing a hemostatic sponge into the wound; b) applying a pressure bandage; c) electrocoagulation of a bleeding vessel; d) application of a hemostatic tourniquet; e) tamponade of the wound with a gauze swab; f) wound tamponade with muscle tissue; g) ligation of the vessel; h) application of a hemostatic clamp; i) suturing the vessel. Choose the correct combination of answers:

- 1) a, c, e, g, i.
- 2) b, d, d, h, i.
- 3) a, c, d, f, h.
- 4) a, d, f, g.
- 5) everything is true.

2. Name the chemicals used to stop bleeding:

- 1) aminocaproic acid;
- 2) vitamin B;
- 3) dextran [cf. they say weight 30000-40000];
- 4) calcium chloride;
- 5) heparin sodium.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 1.5; G - 1, 4; D 2,

3. List the symptoms of blood loss due to excessive vomiting of "coffee grounds."

Select all correct answers

- A. Loss of consciousness due to displacement of the midline structures of the brain by an intracranial hematoma;
- B. Fall in blood pressure;
- B. Tachycardia;
- D. Sharp depression of cardiac activity during tamponade of the cardiac sac;
- D. Decrease in hematocrit;
- E. Decrease in hemoglobin content in peripheral blood;
- G. Peritoneal symptoms with hemoperitoneum;
- H. Paleness of the skin;

4. For which bleeding is vessel ligation most often used?for?

- A) gastric.
- B) rectal.
- B) Vtoric early.
- G) secondary later.
- D) primary.

Choose the correct answer.

5. Biological ways to stop bleeding are:

- 1) wound tamponade with omentum;
- 2) muscle wound tamponade;
- 3) administration of epinephrine;
- 4) intravenous administration of aminocaproic acid;
- 5) intramuscular injection of menadione sodium bisulfite.

Choose the correct combination of answers: A - 1, 2; B - 2, 4, 5; B - 1, 2, 3, 4; G - 3, 4, 5; D - 1, 2, 3.

6. What should be done on the first day after blood transfusion to a patient? a) observation by the doctor on duty; b) three times Measurement of body temperature after 1 hour; c) general urine analysis; d) clinical blood test; d) save part of the transfused blood. Choose the correct combination of answers:

- 1) c, d, d.
- 2) a B C D.
- 3) a, c, d, e.
- 4) a, c, d.
- 5) That's all true.

7. When human blood was mixed with standard isohemagglutinating sera of four blood groups, an agglutination reaction occurred with sera of groups I, II and III. Determine your blood type.

- A. Group I;
- B. II group;
- B. III group;
- G. IV group;
- D. More research should be done;

8. Optimal storage temperature for canned blood:

- A) from 0 to 2 °C;
- B) from 4 to 6 °C;
- IN) from 8 to 10 °C;
- G) -1 °C;
- D) -2 °C.

Choose the correct answer.

9. Select the definition of agglutinins.

- A. Antigens found in blood serum;
- B. Antigens found in red blood cells;
- B. Antibodies found in blood serum;
- D. Antibodies found in red blood cells;

10. The main requirement for antishock blood substitutes is:

- 1) rapid removal of fluid from the bloodstream;
- 2) rapid metabolism;
- 3) prolonged retention of fluid in the bloodstream;
- 4) rapid increase in BCC;
- 5) changes in the chemical composition of the blood.

Choose the correct combination of answers: A - 1, 2, 4; B - 3, 4; B - 3, 4, 5; G - 1, 2; D - 1, 3, 4,5.

TASK

The ambulance team was called by police officers who found an unconscious young woman in the apartment with transverse incised wounds on the anterior surfaces of both forearms. On examination: no consciousness, severe pallor of the skin, pulse rate 130 per minute, pulse is determined only at aa. caroticae, blood pressure 60/20 mm Hg, scanty flow of dark blood from the wounds. There is a large accumulation of dark blood on the floor next to the victim.

1. What is your diagnosis? Indicate the main pathogenetic aspects of this condition.
2. Basic therapeutic measures in prehospital and hospital stages.

"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"

OPTION #7

1. List the general symptoms of bleeding: a) drop in blood pressure; b) tachycardia; c) pallor of the skin; d) increase in hematocrit; e) decrease in hemoglobin in peripheral blood; f) loss of consciousness due to displacement of the midline structures of the brain by intracranial hematoma; g) peritoneal symptoms with hemoperitoneum; h) profuse vomiting the color of "coffee grounds" during bleeding from gastroduodenal ulcers; i) severe weakness. Choose the correct combination of answers:

- 1) a, d, e, f, g.
- 2) b, c, d, h, i.
- 3) c, d, e, h, i.
- 4) a, b, c, d, i.
- 5) d, f, g, h.

2. For which bleeding is vessel ligation most often used?

- A) gastric.
- B) rectal.
- B) Vtoric early.
- G) secondary later.
- D) primary.

Choose the correct answer.

3. What characteristic signs of bleeding include melena?

Select all correct answers

- A. Pulmonary;
- B. Gastric;
- V. Intestinal (upper sections);
- G. Renal;
- D. Intestinal (lower sections);

4. What location of the source of bleeding is Melena typical for?

- A) light.
- B) upper gastrointestinal tract.
- B) Prectum.
- G) bud.
- D) spleen.

Choose the correct answer.

5. Name the chemicals used to stop bleeding:

1. aminocaproic acid;
2. vitamin B;
3. dextran [cf. they say weight 30000-40000];
4. calcium chloride;
5. sodium heparin.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 1.5; G - 1, 4; D - 2, 5.

6. A biological test for blood transfusion involves frequency and method of administration of 10-15 ml of blood followed by clamping of the system: a) once; b) twice; c) three times; d) four times; d) jet. Choose the correct combination of answers:

- 1) a, b.
- 2) c, d.
- 3) g, d.
- 4) d.
- 5) a, c.

7. Which system is characterized by the presence of innate antibodies?

Select all correct answers

- A. Group system AB0;
- B. Rh system;
- B. Some minor group systems;

8. Which of the following pathological conditions allows one to obtain blood suitable for reinfusion?

- 1) Ectopic pregnancy.
- 2) Intestinal rupture.
- 3) Splenic rupture.
- 4) Ruptured aortic aneurysm.
- 5) Rupture of the gallbladder.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 5; B - 3, 4, 5; D - 1, 3, 4; D-1, 5.

9. When determining blood group in the ABO system using standard isohemagglutinating sera, a positive agglutination reaction with standard serum was revealed in 0 (I) and A (P) groups and negative with B (W). Which group does the blood being tested belong to?

- 1) 0 (I).
- 2) A (II).
- 3) H (W).
- 4) AB(IV).
- 5) no conclusion can be drawn.

10. Signs of excessive infusion are: a) tachypnea; b) tachycardia; c) swelling of the neck veins; d) moist rales in the lungs; e) increase in central venous pressure. Choose the correct combination of answers:

- 1) a, c.
- 2) c, d, d.
- 3) a B C.
- 4) b, d, d.
- 5) g, d.

TASK

8 hours after the gastric resection operation, which ended with drainage of the abdominal cavity, the resuscitator on duty noted on the monitor a sudden increase in heart rate to 120 per minute with a drop in blood pressure to 80/40 mm Hg. Art. When examining the patient, attention was paid to lethargy, adynamia, and pallor of the skin. The drainage from the abdominal cavity released up to 800 ml of scarlet blood within 10 minutes.

1. What is your presumptive diagnosis, taking into account the classification known to you? Indicate the main pathogenetic aspects of this suffering.
2. Indicate the sequence of main treatment measures for this patient.

"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"

OPTION #8

1. List the local symptoms of bleeding: a) loss of consciousness due to displacement of the midline structures of the brain by an intracranial hematoma; b) progressive fall in blood pressure; c) tachycardia; d) sharp depression of cardiac activity during hemotamponade of the cardiac sac; e) decrease in hematocrit; f) decrease in hemoglobin in peripheral blood; g) peritoneal symptoms with hemoperitoneum; h) pallor of the skin; i) profuse vomiting the color of "coffee grounds" during bleeding from gastroduodenal ulcers. Choose the correct combination of answers:

- 1) a B C D.
- 2) a, g, i.
- 3) b, d, h, i.
- 4) c, d, f, h.
- 5) b, f, h, i.

2. Biological ways to stop bleeding are:

1. tamponade of the wound with an omentum;
2. muscle tamponade of the wound;
3. administration of epinephrine;
4. intravenous administration of aminocaproic acid;
5. intramuscular injection of menadione sodium bisulfite.

Choose the correct combination of answers: A - 1, 2; B - 2, 4, 5; B - 1, 2, 3, 4; G - 3, 4, 5; D - 1, 2, 3.

3. What is the severity of acute blood loss in a volume of 2500 ml for an adult with body weight 70 kg?

- A. Light;
- B. Average;
- B. Heavy;

4. The cause of late secondary bleeding is:

- 1) increased blood pressure;
- 2) purulent melting of a blood clot;
- 3) elimination of vascular spasm;
- 4) arrosion of the vessel wall;
- 5) vessel injury, ligature slippage.

Choose the correct combination of answers: A - 1, 2; B - 2, 3, 4; B - 2, 3, 5; G - 2, 4; D - 1, 2, 4.

5. What causes early secondary bleeding:

1. suppuration of the wound;
2. vessel injury;
3. pushing out a blood clot;
4. slipping of the ligature;
5. increased blood pressure.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 5; B - 3, 4, 5; G - 2, 4, 5; D - 4, 5.

6. Blood reinfusion can be performed: a) in case of rupture countersinks; b) with rupture of the spleen and small intestine; c) with rupture of the colon; d) in case of rupture of the vessels of the mesentery of the intestine; e) with rupture of the small intestine. Choose the correct combination of answers:

- 1) V.
- 2) g, d.
- 3) a, g.
- 4) b, d.
- 5) everything is true.

7. Which of the following is necessary when conducting a biological test?

- A. Quick injection of 25 ml of blood with a syringe while monitoring the patient's condition;
- B. Jet injection of 25 ml of blood while monitoring the patient's condition;
- B. Slow drip administration of the first portion of blood while monitoring the patient's condition;
- D. Three-time jet injection of 15 ml of blood with monitoring of the patient's condition;
- D. Monitoring the patient's condition 10–15 minutes after the start of the transfusion;

8. Monitoring the reaction when determining blood group using cyclones is carried out during:

- A) 3-5 s;
- B) 20-30 s;
- IN) 1 min;
- G) 2 minutes;
- D) 2.5 min.

Choose the correct answer.

9. When determining blood group using tsoliklones, agglutination is observed with anti-B tsoliclones. What type of blood is being tested?

- 1) 0 (I).
- 2) A (P).
- 3) B (III).
- 4) AB(IV).
- 5) no conclusion can be drawn.

10. Select drugs to correct water-salt metabolism and acid-base status? a) sodium bicarbonate solution; b) trisol; c) trisamine; d) acesol; e) Ringer-Locke solution. Choose the correct combination of answers:

- 1) a B C D E.
- 2) a B C.
- 3) g, d.
- 4) a, b, d.
- 5) a, c, d.

TASK

A patient was admitted to the surgical department with complaints of general weakness, frequent loose black stools, and an episode of loss of consciousness. Upon examination, attention is drawn to the pallor of the skin and tachycardia up to 110 beats per minute. The doctor diagnosed gastrointestinal bleeding. In order to compensate for blood loss, emergency blood transfusion is indicated.

What is the required minimum of laboratory tests (samples) that should be performed, without which blood transfusion is unacceptable?

"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"

OPTION #9

1. When a hemostatic tourniquet is correctly applied to a limb: a) venous bleeding continues for some time; b) the limb becomes pale; c) the limb becomes cyanotic; d) the pulse distal to the tourniquet is not detected; e) arterial bleeding stops. Choose the correct combination of answers:

- 1) a, c.
- 2) G.
- 3) a, b, d, d.
- 4) a, c, d.
- 5) c, d, d.

2. Pressure bandage is indicated as a temporary stopping method bleeding with:

1. bleeding from the veins of the forearm;
2. damage to the carotid artery;
3. bleeding from the soft tissues of the head;
4. injury to the popliteal fossa area;
5. bleeding from the soft tissues of the chest wall.

Choose the correct combination of answers: A - 2, 3, 5; B - 1, 3, 4; B - all answers are correct; G - 1, 3, 5.

3. What is the severity of acute blood loss in a volume of 1200 ml for an adult with body weight 70 kg?

- A. Light;
- B. Average;
- B. Heavy;
- G. Massive blood loss;

4. Indicate in which of the following cases an air embolism is possible:

- A) in case of injury to the veins of the lower extremities;
- B) when the subclavian vein is injured;
- B) with a penetrating knife wound of the knee joint and hemarthrosis;
- G) when the spleen is injured;
- D) when a large arterial trunk is injured in the thigh.

Choose the correct answer.

5. In the first hours of severe bleeding, the amount of blood loss is most accurately reflected by:

- A) relative blood density;
- B) hemoglobin content;
- B) hematocrit;
- D) erythrocyte content;
- D) change in BCC indicators.

Choose the correct answer.

6. Sources of blood and its components for transfusion can be: a) donor blood; b) reserved autologous blood; c) animal blood plasma; d) autologous blood spilled into the pleural cavity; e) autologous blood spilled into the abdominal cavity when the spleen is damaged. Choose the correct combination of answers:

- 1) a B C.
- 2) b, d, d.
- 3) a, b, c, d.
- 4) a, b, d, d.
- 5) everything is true.

7. Which of the following should be reflected in the patient's medical history after a blood transfusion?

Select all correct answers

- A. Pulse, pressure and body temperature for 3 hours;
- B. Body temperature in the morning and evening;

- B. Condition of organs and systems 2 times a day;
- D. Observation diaries every 3 hours on the first day after transfusion;
- D. Color of the first portion of urine;

8. Clinical manifestations of transfusion shock are as follows:

- 1) stomach ache;
- 2) tachycardia;
- 3) bradycardia;
- 4) drop in blood pressure;
- 5) lower back pain.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 4; B - 3, 4, 5; G - 2, 4, 5; D - 1, 3, 4, 5.

9. When determining blood group using coliclones, there is no agglutination with both reagents (anti-A and anti-B). What type of blood is being tested?

- 1) 0 (I).
- 2) A (P).
- 3) H (W).
- 4) AB(IV).
- 5) no conclusion can be drawn.

10. The main requirement for anti-shock blood substitutes is: a) rapid removal of fluid and toxins from the bloodstream; b) rapid metabolism; c) prolonged retention of fluid in the bloodstream; d) rapid increase in BCC; e) attraction of fluid from the interstitial space into the vascular bed. Choose the right onenew combination of answers:

- 1) a, b, d.
- 2) c, d, d.
- 3) in, g.
- 4) a, c, d.
- 5) b, d.

TASK

The patient was admitted to the clinic for rectal cancer. Sickexamined, abdominal-perineal extirpation of the rectum is planned. The upcoming major operation is associated with significant blood loss.

What method of blood transfusion can you suggest for subsequent transfusion to this patient?

"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"

OPTION No. 10

1. What are the main causes of death with massive bleeding inthe first hours after its occurrence?

- 1) decrease in hemoglobin level.
- 2) liver ischemia.
- 3) acute hemodynamic disturbance.
- 4) breathing disorder.
- 5) renal failure.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 3; D - 1, 2, 3, 4; D - 4, 5.

2. In relation to the external environment, the following types of bleeding are distinguished:

Select all correct answers

- A. hidden;
- B. external;
- B. secondary;
- G. obvious;
- D. internal;

3. Select the manifestations of gastric bleeding.

Select all correct answers

- A. Melena;
- B. Vomiting like "coffee grounds";
- B. Hemoptysis;
- D. Discharge of foaming blood from the mouth;
- D. Disappearance of hepatic dullness;

4. What are the common clinical signs of bleeding?

- 1) weakness.
- 2) thirst.
- 3) dizziness.
- 4) heartache.
- 5) cyanosis.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 3, 4; D - 1, 4, 5; D - 1, 2, 4.

5. What methods of temporarily stopping bleeding can be used in case of damage to large arterial vessels?

- 1) elevated position of the limb.
- 2) application of a tourniquet.
- 3) applying a hemostatic clamp to the wound.
- 4) finger pressure of the artery.
- 5) temporary bypass of the vessel.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 2, 3, 4; B - 2, 3, 4, 5; G - 2, 3, 4; D - 2, 4, 5.

6. Before blood transfusion, it is necessary: a) to test the compatibility of the donor's serum and the recipient's blood; b) conduct tests to determine the compatibility of the recipient's serum and the donor's blood; c) conduct a three-fold biological test; d) determine the recipient's blood type; e) determine the donor's blood type. Choose the correct combination of answers:

- 1) a, c, d, e.
- 2) a, c.
- 3) a, d, d.
- 4) b, c, d, d.
- 5) b, d, d.

7. When do clinical manifestations of complications caused by transfusion of blood incompatible with the Rh factor appear?

Select all correct answers

- A. After transfusion of 100 ml of blood;
- B. During a biological test;
- B. 1–2 hours after blood transfusion;
- D. 1 day after blood transfusion;
- D. Up to 12 hours after blood transfusion;

8. Sources of blood and its components for transfusion are

- 1) donor blood;
- 2) autologous blood;
- 3) animal blood;
- 4) cadaveric blood;
- 5) placental blood.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 4, 5; B - 2, 3, 5; G - 1, 2, 4, 5; D - all answers are correct.

9. When determining blood group, the isohemagglutination reaction was positive with standard sera 0(I) and B(III) groups and negative - with A(P). What is the blood type being tested?

- A) 0(I).
- B) A(II).
- IN) IN(III).
- G) AB(IV).

Choose the correct answer.

10. Which of the following pathological conditions should be taken into account during infusion correction of hypovolemia? a) polyuria; b) tachypnea; c) hyperthermia; d) vomiting; e) diarrhea. You choose the correct combination of answers:

- 1) a B C D E.
- 2) b, c, d, d.
- 3) a, b, c, d.
- 4) a, c.
- 5) a B C D.

TASK

Patient K., 27 years old, was admitted with blunt abdominal trauma 2 hours after the injury. The condition is extremely serious. Pulse is thready 120 per minute. Blood pressure 80/40 mm Hg. An emergency laparotomy was performed. Liquid blood with a volume of approximately 2 l. The blood is collected in a sterile container, filtered through 8 layers of gauze and sodium heparin is added for stabilization. The source of the bleeding was determined to be a splenic rupture. A splenectomy was performed. After final hemostasis and revision of the abdominal cavity, no damage to the hollow organs was detected.

Which method of blood transfusion is most optimal for this patient and why? Name the

contraindications to this method of blood transfusion

**"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"
OPTION No. 11**

1. Specify ways to physically stop bleeding:

- 1) application of cold;
- 2) packing the wound;
- 3) hemostatic sponge;
- 4) electrocoagulation;
- 5) vascular suture.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 3, 4, 5; G - 1, 4; D - 3, 4.

2. Due to what, during acute blood loss, there is a natural compensation for the decrease in blood volume and the viability of the body is maintained?

1. vasoconstriction.
2. increase in central venous pressure.
3. autohemodilution.
4. vasodilation.
5. centralization of blood flow.

Choose the correct combination of answers: A - 1, 4, 5; B - 1, 3, 5; B - 1, 2, 4; G - 2, 4, 5; D - 2, 3, 4.

3. With the development of haemoperitoneum, the following symptoms occur:

Select all correct answers

- A. Kloiber cups on a radiograph;
- B. peritoneal irritation;
- B. dullness in sloping places;
- G. increased peristalsis;

4. What drugs are used to stop bleeding locally?

1. hemostatic sponge.
2. gelatin sponge.
3. thrombin.
4. fibrin film.
5. cryoprecipitate.

Choose the correct combination of answers: A - 1, 3; B - 2, 3, 4; B - 2, 3, 4, 5; G - 1, 4, 5; D - 1, 2, 3, 4.

5. What are the main causes of death with massive bleeding in the first hours after its occurrence?

1. decrease in hemoglobin level.
2. liver ischemia.
3. acute hemodynamic disturbance.
4. breathing disorder.
5. kidney failure.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 3; D - 1, 2, 3, 4; D - 4, 5.

6. What blood elements contain agglutinins?

- A) blood serum.
- B) leukocytes.
- B) red blood cells.
- D) platelets.
- D) monocytes.

Choose the correct answer.

7. What is necessary to prevent citrate intoxication (shock)?

Select all correct answers

- A. For massive blood transfusions, use other stabilizers;
- B. For every 500 ml of blood, inject 10 ml of 10% calcium chloride;
- B. Do not transfuse blood that is too old;
- G. Slow drip injection of blood;

8. Indications for intra-arterial blood transfusion are:

- 1) severe shock;
- 2) preagonal state as a result of acute blood loss;

- 3) clinical death;
- 4) preoperative preparation;
- 5) surgery.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 1, 3, 4; B - 1, 2, 4; G - 1, 2, 3; D - all answers are correct.

9. When determining blood group, the isohemagglutination reaction was positive with standard sera 0(I) and A(II) groups. Indicate which group the blood being tested belongs to:

- A) 0(I);
- B) A(II);
- IN) IN(III);
- G) AB(IV).

Choose the correct answer.

10. Select drugs for parenteral nutrition: a) polyamine; b) polydesis; c) gelatinol; d) intralipid; e) 10% glucose solution. Choose the correct combination of answers:

- 1) a B C.
- 2) a, d, d.
- 3) d.
- 4) a,c,d.
- 5) b, d.

TASK

A patient with a clinical picture of hemorrhagic shock was admitted to the intensive care unit. Upon examination, it was discovered that the source of the bleeding was a stomach ulcer. The bleeding was stopped endoscopically. Volume of blood loss 35% bcc. In a short period of time, the patient received about 1 l red blood cell mass compatible by group and Rh factor and after biological tests. After this, the patient developed tremors, convulsions, increased heart rate, arrhythmia, and decreased blood pressure.

What complication did the patient experience? What needs to be done to prevent this?

"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"

OPTION No. 12

1. What are the common clinical signs of bleeding?

1. weakness.
2. thirst.
3. dizziness.
4. pain in the heart.
5. cyanosis.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 3, 4; D - 1, 4, 5; D - 1, 2, 4.

2. Which of the listed types of bleeding are classified as internal?

Select all correct answers

- A. Bleeding from ulcers of the gastrointestinal tract;
- B. Bleeding into the abdominal cavity due to rupture of the spleen;
- B. Kidney bleeding;
- G. Soft tissue hematomas;
- D. Hemarthrosis;
- E. Uterine bleeding;

3. Select possible reasons for the development of late secondary bleeding.

- A. Slipping of the ligature;
- B. Washing out the blood clot;
- B. Early activation of the patient;
- D. Development of infection in the wound;

4. Who first proposed using vessel ligation as a method of stopping bleeding?

- A.N.I. Pirogov;
- B. K. Galen;
- V. Hippocrates;
- G. Avicenna;
- D. K. Celsus;

5. Select the main general symptoms of profuse bleeding.

Select all correct answers

- A. Decrease in blood pressure;
- B. Bradycardia;
- B. Arrhythmia;

- G. Paleness of the skin;
- D. Tachycardia;
- E. Skin moisture;

6. What elements of the blood contain agglutinogens?

- A) in blood plasma.
- B) in blood serum.
- B) Vleukocytes.
- G) in erythrocytes.
- D) in platelets.

Choose the correct answer.

7. Which of the following drugs are currently used for blood transfusion?

Select all correct answers

- A. Donor blood;
- B. Corpse blood;
- B. Placental blood;
- G. Blood of the patient;
- D. Waste blood;

8. Contraindications for blood reinfusion are:

- 1) hemothorax with damage to large bronchi;
- 2) hemoperitoneum with damage to the stomach and intestines;
- 3) hemoperitoneum in malignant neoplasms;
- 4) blood that has been in the abdominal cavity for more than 24 hours;
- 5) disrupted ectopic pregnancy.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4, 5; B - 2, 4, 5; G - 1, 2, 5; D - 1, 2, 4, 5.

9. When determining the blood group, the isohemagglutination reaction with standard sera A(II) and B(III) was positive. groups and negative - with sera of 0(I) and AB(IV) groups. What does this result indicate?

- A) about group 0(I) the blood being tested.
- B) about group A(II).
- IN) about group B(III).
- G) about the group AB(IV).
- D) about the unsuitability of standard serums.

Choose the correct answer.

10. Which of the following drugs is advisable to transfuse to a patient in a state of traumatic shock? a) gelatinol; b) rheopolyglucin; c) polyglucin; d) disol; d) wolves. Choose the correct combination of answers:

- 1) a, b, d, d.
- 2) a, b, c, d.
- 3) in, g.
- 4) d.

5) a, b, d.

TASK

Before carrying out the blood transfusion, the doctor determined the blood group of the recipient and the donor, group and Rh compatibility of the blood, however, during the transfusion, the patient developed chest pain, chills, pain in the lumbar region, shortness of breath, difficulty breathing, decreased blood pressure, and facial flushing.

What's wrong with the patient? Your actions? How is a biological test performed?

"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"

OPTION No. 13

1. What methods of temporarily stopping bleeding can be used in case of damage to large arterial vessels?

1. elevated position of the limb.
2. application of a tourniquet.
3. applying a hemostatic clamp in the wound.
4. finger pressure of the artery.
5. temporary bypass of the vessel.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 2, 3, 4; B - 2, 3, 4, 5; G - 2, 3, 4; D - 2, 4, 5.

2. The cause(s) of early secondary bleeding may be:

Select all correct answers

- A. damage to the vessel wall;

- B. slipping of the ligature;
- B. increased blood pressure;
- G. pushing out a blood clot;
- D. suppuration of the wound;

3. Which of the following is classified as local biological methods of stopping bleeding?

Select all correct answers

- A. Hemostatic sponge;
- B. Thrombin;
- B. Cryoprecipitate;
- D. Tamponade with a strand of omentum;

4. Specify ways to physically stop bleeding:

1. application of cold;
2. packing the wound;
3. hemostatic sponge;
4. electrocoagulation;
5. vascular suture.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 3, 4, 5; G - 1, 4; D - 3, 4.

5. Select the manifestations of gastric bleeding.

Select all correct answers

- A. Melena;
- B. Vomiting like "coffee grounds";
- B. Hemoptysis;
- D. Discharge of foaming blood from the mouth;
- D. Disappearance of hepatic dullness;

6. When determining blood group, the isohemagglutination reaction was positive with standard sera 0(I) and B(III) groups and negative - with A(P). What is the blood type being tested?

- A) 0(I).
- B) A(II).
- IN) IN(III).
- G) AB(IV).

Choose the correct answer.

7. Select absolute indications for blood transfusion.

Select all correct answers

- A. Shock of any origin;
- B. Traumatic shock;
- B. Blood transfusion shock;
- G. Intoxication;
- D. Acute anemia;
- E. Large-scale surgery with massive blood loss;

8. Complications caused by incompatible transfusion Blood Rh factor can occur under the following conditions:

- 1) upon repeated administration to Rh-negative recipients of Rh-positive blood;
- 2) during pregnancy of a Rh-negative woman with a Rh-positive fetus;
- 3) during repeated transfusion of Rh-negative blood into Rh-positive recipients;
- 4) during pregnancy of a Rh-positive woman with a Rh-negative fetus;
- 5) when transfusing blood plasma from Rh-positive donors into Rh-negative recipients.

Choose the correct combination of answers: A - 1, 3, 4, 5; B - 1, 2; B - 2, 3, 5; G - 2, 4, 5; D - 2, 3, 4, 5.

9. Contraindications for blood reinfusion are:

- 1) hemothorax with damage to large bronchi;
- 2) hemoperitoneum with damage to the stomach and intestines;
- 3) hemoperitoneum in malignant neoplasms;
- 4) blood that has been in the abdominal cavity for more than 24 hours;
- 5) disrupted ectopic pregnancy.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4, 5; B - 2, 4, 5; G - 1, 2, 5; D - 1, 2, 4, 5.

10. What drugs are appropriate to transfuse to a patient with severe form of endogenous intoxication? a) polyglucin; b) polydesis; c) volecs; d) acesol; d) hemodesis. Choose the correct combination of answers:

- 1) in, city
- 2) a, b.
- 3) d.
- 4) a, d.
- 5) b, d.

TASK

Patient L., 30 years old, was admitted with a stab wound to the abdominal cavity. The patient's condition is very serious. The skin is pale, cold, covered with cold, sticky sweat. Pulse is weak, 130 beats per minute. Blood pressure 80/40 mm Hg. Art. The patient

was diagnosed with “penetrating injury to the abdominal cavity, intra-abdominal bleeding.” An emergency laparotomy was performed. In the abdominal cavity about 2 liters blood. The blood is collected in a sterile container, filtered through 8 layers of gauze and heparin is added for stabilization. The source of the bleeding was determined to be a liver injury. During an inspection of the abdominal organs, a wound to the wall of the duodenum was discovered.

Is blood reinfusion possible? Explain the answer.

**"BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"
OPTION No. 14**

1. What drugs are used to stop bleeding locally?

1. hemostatic sponge.
2. gelatin sponge.
3. thrombin.
4. fibrin film.
5. cryoprecipitate.

Choose the correct combination of answers: A - 1, 3; B - 2, 3, 4; B - 2, 3, 4, 5; G - 1, 4, 5; D - 1, 2, 3, 4.

2. How does compensation occur for the decrease in blood volume during acute blood loss?

Select all correct answers

- A. Vasodilation;
- B. Arteriolo-spasm;
- B. Oliguria;
- G. Venospasm;
- D. Autohemodilution;
- E. Tachycardia;

3. Which of the following should be considered the method of choice when stopping bleeding from a varicose vein on the leg?

- A. Application of an arterial tourniquet;
- B. Application of a venous tourniquet;
- B. Finger pressure;
- D. Elevated position of the limb and a pressure bandage;
- D. Wound tamponade;
- E. Applying a clamp;
- G. Temporary bypass;

4. With the development of haemoperitoneum, the following symptoms occur:

Select all correct answers

- A. Klobier cups on a radiograph;
- B. peritoneal irritation;
- B. dullness in sloping places;
- G. increased peristalsis;

5. When a hemostatic tourniquet is correctly applied to a limb: a) venous bleeding continues for some time; b) the limb becomes pale; c) the limb becomes cyanotic; d) the pulse distal to the tourniquet is not detected; d) arterial bleeding stops. Choose the correct combination of answers:

1. a, c.
2. g.
3. a, b, d, d.
4. a, c, d.
5. c, d, d.

6. When determining blood group, the isohemagglutination reaction was positive with standard sera 0(I) and A(II) groups. Indicate which group the blood being tested belongs to:

- A) 0(I);
- B) A(II);
- IN) IN(III);
- G) AB(IV).

Choose the correct answer.

7. Select the definition of pseudoagglutination.

- A. Gluing of red blood cells in the form of coin columns;
- B. Agglutination reaction with sera of all groups, occurring at room temperature;
- B. Agglutination reaction with sera of all groups, occurring at low temperature;

8. Which of the following is used as a blood stabilizer?

Select all correct answers

- A. Sodium citrate;

B. Heparin sodium;

B. Degmicide;

9. Clinical manifestations of transfusion shock are as follows:

1. abdominal pain;
2. tachycardia;
3. bradycardia;
4. drop in blood pressure;
5. lower back pain.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 4; B - 3, 4, 5; G - 2, 4, 5; D - 1, 3, 4, 5.

10. The main properties of detoxification blood substitutes are:

1. blood dilution;
2. changes in the physical and chemical properties of blood;
3. high absorption properties;
4. increased renal filtration;
5. strengthening the detoxification function of the liver.

Choose the correct combination of answers: A - 1, 3, 4; B - 2, 3, 4; B - 3, 4; G - 3, 4, 5; D - 3, 5.

TASK

Patient N., 28 years old, was admitted to the surgical department with acute appendicitis. An appendectomy was performed: the gangrenous appendix was removed. The operation was carried out with technical difficulties due to the retrocecal location of the process and the presence of moderate infiltration, therefore a drainage tube was inserted into the right lateral canal to the operation site. She was observed in the intensive care unit. An hour later, the surgeon on duty noticed pale skin and tachycardia (pulse rate 110 per minute, blood pressure 110/60 mm Hg). Up to 300.0 ml of blood, which came through the drainage, was found in the container. The patient was started on drip infusion of epsilon-aminocaproic acid, dicinone and vikasol were administered. After 20 minutes, the patient's condition did not improve; tachycardia reached 120 beats per minute.

What complication developed in the patient in the early postoperative period? What are your tactics?

ANSWERS "BLEEDING. BLOOD TRANSFUSION, BLOOD SUBSTITUTE"

OPTION 1 14 2 - B 3 - A 4 - ABGD 5 - BGD 6 - 1 7 - D 8 - B 9 - A 10 - blood pressure	OPTION 8 12 2 - A 3 - B 4 - G 5 - B 6 - 3 7 - G 8 - D 9 - 3 10 - 1
OPTION 2 eleven 2 - D 3 - D 4 - BG 5 - BVGDE 6 - 3 7 - A 8 - B 9 - G 10 - ABC	OPTION 9 13 2 - G 3 - B 4 - B 5 - D 6 - 4 7 - blood pressure 8 - G 9 - 1 10 - 2
OPTION 3 12 2 - G 3 - ABG 4 - A 5 - AGDE 6 - 3 7 - G	OPTION 10 1 - B 2 - ABGD 3 - AB 4 - A 5 - B 6 - 4

8 - B
9 - D
10 - A

OPTION 4

15
2 - B
3 - ABG
4 - ABCG
5 - BVDEZ
6 - 1
7 - A
8 - D
9 - A
10 - V

OPTION 5

14
2 - B
3 - ABCG
4 - G
5 B
6 - 4
7 - B
8 - A
9 - BG
10 - G

OPTION 6

eleven
2 - G
3 - BVDEZ
4 - G
5 - A
6 - 5
7 - G
8 - B
9 - B
10 - B

OPTION 7

14
2 - G
3 - BV
4 - B
5 - G
6 - 2
7 - AB
8 - G
9 - 3
10 - 2

7 - DB
8 - G
9 - B
10 - 1

OPTION 11

1 - G
2 - B
3 - BV
4 - D
5 - B
6 - A
7 - AB
8 - G
9 - B
10 - 2

OPTION 12

1 - A
2 - BGD
3 - G
4 - D
5 - AGDE
6 - G
7 - AB
8 - A
9 - D
10 - 2

OPTION 13

1 - B
2 - BG
3 - ABG
4 - G
5 - AB
6 - B
7 - BDE
8 - B
9 - A
10 - 5

OPTION 14

1 - D
2 - BVGDE
3 - G
4 - BV
5 - 3
6 - B
7 - A
8 - A
9 - G
10 - A

OPTION #1

1. The purpose of premedication is: a) prevention of the vagal effect; b) increased tone of the sympathetic nervous system; c) muscle relaxation; d) suppression of salivation; e) relieving emotional stress. Choose the correct combination of answers:

1. a, d.
2. g, d.
3. c, d.
4. a, b, d, d.
5. b, c, d, e.

2. Select the sign of the end of the first stage and the onset of the second stage of ether anesthesia according to Guedel.

Select all correct answers

- A. Loss of all types of sensitivity.;
- B. Lack of pupil reaction to light;
- B. Absence of corneal and corneal reflexes.;
- D. Moderate decrease in muscle tone.;
- D. Loss of consciousness.;
- E. Speech and motor stimulation.;

3. What are the possible complications after endotracheal anesthesia:

1. recurarization;
2. vomiting;
3. swelling of the vocal cords and subglottic space;
4. mechanical asphyxia (tongue retraction);
5. chills.

Choose the correct combination of answers: A - 1, 2; B - 3, 4; B - 2, 3, 4; G - 1, 2, 3; D - all answers are correct.

4. Select the signs of an overdose of ether anesthesia (the fourth level of the surgical stage).

Select all correct answers

- A. Pupil dilation;
- B. Thread-like pulse;
- B. Decrease in blood pressure;
- G. Clonic convulsions.;
- D. Absence of any reflexes.;

5. What level of depth of general anesthesia (anesthesia stage) is required for abdominal surgical interventions?

- A. I–II.;
- B. III(2)–III(3).;
- B. II–III(1).;
- G. III(1)–III(2).;
- D. III(2)–IV.;
- E. II–IV.;

6. What complications may occur during localanesthesia with novocaine? a) allergic reaction; b)acute liver failure; c) accidental intravasal administration of the drug; d) collapse; e) cessation of breathing. Choose the correct combination of answers:

1. a, b, c.
2. d.
3. a, d, d.
4. c, d, d.
5. Everything is correct.

7. What concentration of procaine is used when performing infiltration anesthesia?

- A. 0.25–0.5%.;
- B. 0.5–1.0%.;
- B. 1.0–2.0%.;
- G. 2.0–5.0%.;
- D. 10%;

8. The purpose of premedication is:

1. prevention of vagal effect;
2. increased tone of the sympathetic nervous system;
3. suppression of salivation;
4. relieving emotional stress;
5. prevention of vomiting and regurgitation.

Choose the correct combination of answers: A - 1, 5; B - 1, 4, 5; B - 3, 4; G - 1, 2, 3, 4; D - 1, 2, 3, 4, 5.

9. Indicate the most rational types of pain relief for the reduction of hip and shoulder dislocations:

1. endotracheal anesthesia with halothane;
2. mask anesthesia with a halothane-oxygen mixture;

3. NLA;
4. intravenous anesthesia with barbiturates;
5. epidural anesthesia.

Choose the correct combination of answers: A - 1, 2, 4, 5; B - 1, 2; V - 3; D - 2, 4; D - 3, 5.

10. What drugs are considered components of ataralgia?

- A. Diazepam and ketamine;
- B. Fentanyl and droperidol;
- B. Diazepam and fentanyl;
- G. Thiopental sodium and fentanyl;
- D. Trimeperidine and sodium oxybate.;
- E. Sodium oxybate and sodium thiopental.

TASK

A 50-year-old patient is undergoing surgery for a hernia of the linea alba. Mask anesthesia with halothane-oxygen mixture. Blood pressure - 130/60 mm Hg, heart rate - 78 per minute, respiratory rate - 18 per minute. Pupils - up to 2 mm, the reaction to light is sluggish, the corneal reflex is reduced. Determine the stage of anesthesia.

- A) I.
- B) II.
- B) III1-2.
- D) III3.

Choose the correct answer.

"NARCOSIZE"

OPTION #2

1. Which anesthesia is the least toxic for a patient during a 2-3-hour operation on the abdominal organs?

- A) An ether-oxygen mixture (mask).
 - B) Halothane-oxygen mixture (mask).
 - B) Endotracheal anesthesia with a halothane-oxygen mixture.
 - G) NLA.
 - D) Fractional intravenous anesthesia with ketamine.
- Choose the correct answer.

2. How can a patient be transported after premedication?

Select all correct answers

- A. On a gurney.;
- B. On foot, accompanied by medical personnel.;
- B. On foot when feeling normal.;
- G. In a chair.;
- D. After 2–12 hours;

3. Indicate the most rational types of pain relief for the reduction of hip and shoulder dislocations:

1. endotracheal anesthesia with halothane;
2. mask anesthesia with a halothane-oxygen mixture;
3. NLA;
4. intravenous anesthesia with barbiturates;
5. epidural anesthesia.

Choose the correct combination of answers: A - 1, 2, 4, 5; B - 1, 2; V - 3; D - 2, 4; D - 3, 5.

4. What is meant by the term "anesthesiological corridor" of an anesthetic agent?

- A. Dose of anesthetic to ensure achievement of the surgical stage of anesthesia;
- B. The range of anesthetic concentrations from the dose required to achieve minimal analgesia to the dose that causes the surgical stage.;
- B. The range of anesthetic concentrations, starting from the dose required to achieve stage III(1)–III(2) of anesthesia, and ending with the toxic dose.;
- D. The range of anesthetic concentrations, ranging from a dose leading to loss of consciousness to a dose causing disturbances in central hemodynamics.;

5. Which breathing circuit is the safest for the patient?

- A. Semi-open.;
- B. Semi-closed.;
- V. Open.;
- G. Closed.;

6. Essential anesthetics include: a) lidocaine; b) dicaine; c) cocaine; d) trimecaine; d) novocaine.

Choose the right onecombination of answers:

1. a, d.
2. a, b, d.

3. g, d.
4. c, d, d.
5. b, c, d.

7. What drugs are used for spinal anesthesia?

Select all correct answers

- A. Procaine;
- B. Lidocaine;
- B. Bupivacaine;
- G. Trimekain.;

8. What types of anesthesia are preferable during surgery for pain?nation?

1. intravenous anesthesia (barbiturates).
2. conduction anesthesia (according to Lukashevich-Oberst).
3. anesthesia with trichlorethylene.
4. infiltration anesthesia.
5. plexus anesthesia.

Choose the correct combination of answers: A - 1, 2; B - 3, 4; V - 3, 5; D - 3, 4; D - 1, 2, 3, 4, 5.

9. What concentration of procaine is used when performing infiltration anesthesia?

- A. 0.25–0.5%.;
- B. 0.5–1.0%.;
- B. 1.0–2.0%.;
- G. 2.0–5.0%.;
- D. 10%;

10. Intravenous anesthesia with ketamine is contraindicated for:

1. primary surgical treatment of wounds;
2. hepatic-renal failure;
3. epilepsy;
4. arterial hypotension, large blood loss;
5. arterial hypertension.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 3, 5; G - 2.5; D - all answers are correct.

TASK

In a weakened 70-year-old patient, after cholecystectomy performed under endotracheal anesthesia using non-depolarizing relaxants, hypoventilation of the lungs, cyanosis, and muscle relaxation are noted.

What causes this condition, what should the doctor do? Which of the following drugs eliminate these phenomena: strophanthin, diazepam, trimeperidine, neostigmine methyl sulfate, fentanyl?

"NARCOSIZE"

OPTION #3

1. For what purpose does an anesthesiologist use muscle relaxants?

1. to enhance (potentiate) the effect of narcotic drugs.
2. to immobilize the patient.
3. to block autonomic reactions.
4. to stabilize hemodynamics.
5. for tracheal intubation.

Choose the correct combination of answers: A - all answers are correct; B - 1, 3, 4; B - 2, 4, 5; G - 1, 2, 3; D - 2, 5.

2. What is included in premedication before emergency surgery?

- A. Sedatives and hypnotics along with narcotic analgesics 1.5–2 hours before surgery;
- B. Narcotic analgesics and antispasmodics 30–40 minutes before surgery;
- B. Narcotic analgesics and atropine 30–40 minutes before surgery;
- D. Narcotic analgesics and atropine 1.5–2 hours before surgery;
- D. All of the above are incorrect.;

3. What prevention of tongue retraction (mechanical asphyxia) is necessary for a patient in the early post-anesthesia period?

1. at the end of the operation, administer neostigmine methyl sulfate (a muscle relaxant antagonist) intravenously.
2. install an air duct.
3. ensure constant monitoring of medical personnel and monitoring for 2 hours after anesthesia.
4. administer respiratory analeptics to the patient.
5. insert the tube into the stomach.

Choose the correct combination of answers: A - 1, 2; B - 2, 4; B - 1, 3, 4; G - 4, 5; D - 2, 3.

4. Select the sign of the end of the first stage and the onset of the second stage of ether anesthesia according to Guedel.

Select all correct answers

- A. Loss of all types of sensitivity.;
- B. Lack of pupil reaction to light;
- B. Absence of corneal and corneal reflexes.;
- D. Moderate decrease in muscle tone.;
- D. Loss of consciousness.;
- E. Speech and motor stimulation.;

5. What are the advantages of performing anesthesia using a semi-open circuit?

Select all correct answers

- A. Economical;
- B. Possibility of more accurate dosing of the anesthetic mixture.;
- B. Significant reduction in air pollution in the operating room;
- D. Greater safety for the patient.;

6. Amide anesthetics are characterized by: a) rapid hydrolytic destruction in tissues; b) duration of effective regional anesthesia with a single injection into tissue; c) the admissibility of repeated administration of significant doses of the drug to prolong anesthesia; d) practically do not cause allergic reactions in the maximum permissible doses; e) are excreted from the body unchanged or undergo partial destruction in the liver. Choose the correct combination of answers:

- 1. a, c, d.
- 2. a, d, d.
- 3. a, b, c.
- 4. b, d, d.
- 5. c, d, d.

7. What concentration of procaine is used during conduction anesthesia?

- A. 0.25–0.5%.;
- B. 0.5–1.0%.;
- B. 1.0–2.0%.;
- G. 2.0–5.0%.;
- D. 10%.;

8. What is the mechanism of action of local anesthetics?

- A. The synthesis of the neurotransmitter is disrupted, as a result of which the transmission of impulses along the nerve fiber is blocked.;
- B. The neurotransmitter is inactivated, as a result of which the transmission of impulses along the nerve fiber is blocked.;
- B. Sodium channels are blocked and depolarization processes are disrupted.;
- D. Anesthetic molecules increase transmembrane potential;

9. Select indications for perinephric block.

Select all correct answers

- A. Renal colic.;
- B. Intestinal paresis.;
- B. Acute pancreatitis.;
- G. Acute myocardial infarction.;
- D. Acute cholecystitis.;
- E. Pelvic fracture.;

10. What complications are possible with spinal anesthesia? a) respiratory arrest; b) the occurrence of headaches, paresis, paralysis; c) meningitis; d) drop in blood pressure; e) spinal cord damage. Choose the correct combination of answers:

- 1. b, c, d, e.
- 2. a, c.
- 3. a, c, d.
- 4. a, b, c, d.
- 5. Everything is correct.

TASK

Patient D., 50 years old, was diagnosed with cardiac arrest.

What actions, in your opinion, should resuscitation measures begin with and what is the sequence of actions of the doctor: a) giving the patient a Trendelenburg position; b) performing closed cardiac massage; c) breathing “mouth to mouth”; d) mechanical defibrillation; e) ensuring airway patency; f) the ratio of the number of breaths and chest compression.

"NARCOSIZE"

OPTION #4

1. A 50-year-old patient is undergoing surgery for a hernia of the linea alba. Mask anesthesia with halothane-oxygen mixture. Blood pressure - 130/60 mm Hg, heart rate - 78 per minute, respiratory rate - 18 per minute. Pupils - up to 2 mm, the reaction to light is sluggish, the corneal reflex is reduced. Determine the stage of anesthesia.

- A) I.
- B) II.
- B) III1-2.
- D) III3.

Choose the correct answer.

2. Select the signs of an overdose of ether anesthesia (the fourth level of the surgical stage).

Select all correct answers

- A. Pupil dilation;
- B. Thread-like pulse;
- B. Decrease in blood pressure;
- G. Clonic convulsions.;
- D. Absence of any reflexes.;

3. Select the main mechanism of disruption of neuromuscular transmission by "short-acting" muscle relaxants.

- A. Depolarization of the postsynaptic membrane and slowdown of repolarization.;
- B. Blocking of cholinergic receptors without depolarization of the postsynaptic membrane.;
- B. Impaired release of acetylcholine;
- D. Inhibition of acetylcholinesterase.;

4. What are the advantages of performing anesthesia using a semi-closed circuit?

Select all correct answers

- A. Economical;
- B. Possibility of more accurate dosing of the anesthetic mixture.;
- B. Significant reduction in air pollution in the operating room;
- D. Greater safety for the patient.;

5. Select gaseous narcotic anesthetics.

Select all correct answers

- A. Diethyl ether.;
- B. Methoxyflurane;
- B. Nitrous oxide.;
- G. Enflurane;
- D. Cyclopropane;

6. What drugs are used for induction of anesthesia?

Select all correct answers

- A. Fentanyl.;
- B. Sodium thiopental;
- B. Droperidol;
- G. Deprivan.;
- D. Suxamethonium iodide;
- E. Diazepam;

7. What concentration of procaine is used when carrying out novocaine blockades?

- A. 0.25–0.5%.;
- B. 0.5–1.0%.;
- B. 1.0–2.0%.;
- G. 2.0–5.0%.;
- D. 10%.;

8. Essential anesthetics include: a) lidocaine; b) dicaine; c) cocaine; d) trimecaine; d) novocaine.

Choose the right onecombination of answers:

- 1. a, d.
- 2. a, b, d.
- 3. g, d.
- 4. c, d, d.

5. b, c, d.

9. What drugs are used for spinal anesthesia?

Select all correct answers

- A. Procaine;
- B. Lidocaine;
- B. Bupivacaine;
- G. Trimekain.;

10. Which of the following types of local anesthesia relate to conduction anesthesia? a) case anesthesia; b) anesthesia according to Oberst-Lukashevich; c) perirenal block; d) blockade of nerve plexuses and trunks; e) epidural anesthesia. Choose the correct combination of answers:

- 1. b, d, d.
- 2. a, b, c.
- 3. b, d.
- 4. c, d, d.
- 5 B.

TASK

A patient suffering from bronchial asthma for 10 years is scheduled to undergo gastric resection. Which of the following drugs should be included in the preoperative preparation plan: antihistamines, fentanyl, glucocorticoids, proserin, aminophylline?

"NARCOSIZE"

OPTION #5

1. What are the possible complications after endotracheal anesthesia:

- 1. recurarization;
- 2. vomiting;
- 3. swelling of the vocal cords and subglottic space;
- 4. mechanical asphyxia (tongue retraction);
- 5. chills.

Choose the correct combination of answers: A - 1, 2; B - 3, 4; B - 2, 3, 4; G - 1, 2, 3; D - all answers are correct.

2. What level of depth of general anesthesia (anesthesia stage) is required for abdominal surgical interventions?

- A. I-II.;
- B. III(2)-III(3).;
- B. II-III(1).;
- G. III(1)-III(2).;
- D. III(2)-IV.;
- E. II-IV.;

3. Select the main mechanism of disruption of neuromuscular transmission by "long-acting" muscle relaxants.

- A. Depolarization of the postsynaptic membrane and slowdown of repolarization.;
- B. Blocking of cholinergic receptors without depolarization of the postsynaptic membrane.;
- B. Impaired release of acetylcholine;
- D. Inhibition of acetylcholinesterase.;

4. Select vapor-forming liquid anesthetics.

Select all correct answers

- A. Nitrous oxide.;
- B. Diethyl ether.;
- B. Methoxyflurane;
- G. Trichlorethylene;

5. What are the beneficial properties of nitrous oxide?

Select all correct answers

- A. Bronchodilator effect.;
- B. Rapid onset of general anesthesia and rapid restoration of consciousness;
- B. No toxic effect on parenchymal organs.;
- D. Pronounced analgesic effect.;
- D. Lack of irritation of mucous membranes and hypersecretion.;

6. What drugs are considered components of neuroleptanalgesia?

- A. Diazepam and ketamine;

- B. Fentanyl and droperidol;
- B. Diazepam and fentanyl;
- G. Thiopental sodium and fentanyl.;
- D. Trimeperidine and sodium oxybate.;
- E. Sodium oxybate and sodium thiopental;

7. What is the maximum amount of local anesthetic dry matter allowed when performing local anesthesia (procaine, lidocaine, trimecaine)?

- A. 200–400 mg;
- B. 500 mg.;
- B. 600–800 mg;
- G. 1.0 g.;
- D. 2.0 g.;

8. Amide anesthetics are characterized by: a) rapid hydrolytic destruction in tissues; b) duration of effective regional anesthesia with a single injection into tissue; c) the admissibility of repeated administration of significant doses of the drug to prolong anesthesia; d) practically do not cause allergic reactions in the maximum permissible doses; e) are excreted from the body unchanged or undergo partial destruction in the liver. Choose the correct combination of answers:

- 1. a, c, d.
- 2. a, d, d.
- 3. a, b, c.
- 4. b, d, d.
- 5. c, d, d.

9. Name rational types of anesthesia during surgery for mastitis:

- 1. local infiltration anesthesia;
- 2. endotracheal anesthesia;
- 3. mask anesthesia (halothane);
- 4. intravenous anesthesia;
- 5. conduction anesthesia (retromammary blockade).

Choose the correct combination of answers: A - 1, 4; B - 4, 5; B - 2, 3; G - 3, 4; D - 3, 4, 5.

10. What are the negative effects of ketamine?

Select all correct answers

- A. Hallucinogenicity.;
- B. Possible development of psychotic reactions in the long-term postoperative period.;
- B. Increase in heart rate;
- D. Increased cardiac output.;
- D. Prolonged awakening with the possible development of motor and speech excitation;

TASK

One of the types of combined anesthesia is neuroleptanalgesia - NLA. Select the correct combination of drugs for NLA: a) seduxen + fentanyl; b) fentanyl + droperidol; c) droperidol + ketamine; 4) fentanyl + nitrous oxide; 5) seduxen + hexenal.

"NARCOSIZE"

OPTION #6

1. Intravenous anesthesia with ketamine is contraindicated for:

- 1. primary surgical treatment of wounds;
- 2. hepatic-renal failure;
- 3. epilepsy;
- 4. arterial hypotension, large blood loss;
- 5. arterial hypertension.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 3, 5; G - 2,5; D - all answers are correct.

2. What is meant by the term "anesthesiological corridor" of an anesthetic agent?

- A. Dose of anesthetic to ensure achievement of the surgical stage of anesthesia;
- B. The range of anesthetic concentrations from the dose required to achieve minimal analgesia to the dose that causes the surgical stage.;
- B. The range of anesthetic concentrations, starting from the dose required to achieve stage III(1)–III(2) of anesthesia, and ending with the toxic dose.;
- D. The range of anesthetic concentrations, ranging from a dose leading to loss of consciousness to a dose causing disturbances in central hemodynamics.;

3. What is necessary for tracheal intubation?

Select all correct answers

- A. Sterile wipes;
- B. Endotracheal tubes.;
- B. Gastric tube;
- G. Laryngoscope.;
- D. Bronchoscope;

4. What drugs are used for induction of anesthesia?

Select all correct answers

- A. Fentanyl.;
- B. Sodium thiopental;
- B. Droperidol;
- G. Deprivan.;
- D. Suxamethonium iodide;
- E. Diazepam;

5. Select the main mechanism of disruption of neuromuscular transmission by “short-acting” muscle relaxants.

- A. Depolarization of the postsynaptic membrane and slowdown of repolarization.;
- B. Blocking of cholinergic receptors without depolarization of the postsynaptic membrane.;
- B. Impaired release of acetylcholine;
- D. Inhibition of acetylcholinesterase.;

6. What drugs are considered components of ataralgia?

- A. Diazepam and ketamine;
- B. Fentanyl and droperidol;
- B. Diazepam and fentanyl;
- G. Thiopental sodium and fentanyl.;
- D. Trimeperidine and sodium oxybate.;
- E. Sodium oxybate and sodium thiopental;

7. Select indications for perinephric block.

Select all correct answers

- A. Renal colic.;
- B. Intestinal paresis.;
- B. Acute pancreatitis.;
- G. Acute myocardial infarction.;
- D. Acute cholecystitis.;
- E. Pelvic fracture.;

8. What complications may occur during local anesthesia with novocaine? a) allergic reaction; b) acute liver failure; c) accidental intravascular administration of the drug; d) collapse; e) cessation of breathing.

Choose the correct combination of answers:

- 1. a, b, c.
- 2. d.
- 3. a, d, d.
- 4. c, d, d.
- 5. Everything is correct.

9. Case blockade is used for:

- 1. injuries to the limbs;
- 2. inflammatory diseases of the extremities;
- 3. rib fractures;
- 4. snake bites;
- 5. carrying out infiltration anesthesia as a basis.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4, 5; B - 1, 3, 4, 5; G - 1, 2, 4, 5; D - all answers are correct.

10. Essential anesthetics are characterized by: a) rapid hydrolytic destruction in tissues; b) duration of effective regional anesthesia with a single injection into tissue; c) the admissibility of repeated administration of significant doses of the drug to prolong anesthesia; d) practically do not cause allergic reactions in the maximum permissible doses; e) are excreted from the body unchanged or undergo partial destruction in the liver. Choose the correct combination of answers:

- 1. a, c.
- 2. b, d.
- 3. a, b.
- 4. in, g.
- 5. g, d.

TASK

At what level of surgical anesthesia are optimal conditions created for performing operations on the abdominal organs? Choose the correct answer:

A – I (2); B – Sh (3); H – W (1 – 2) ?

"NARCOSIZE"

OPTION #7

1. Which intravenous anesthetic is preferable for induction of anesthesia in persons with blood loss of more than 1000 ml, hypovolemia, low blood pressure?

- A) Gexobarbital.
- B) sodium thiopental.
- B) Toetamine
- G) fentanyl + droperidol.

Choose the correct answer.

2. Which breathing circuit is the safest for the patient?

- A. Semi-open.;
- B. Semi-closed.;
- V. Open.;
- G. Closed.;

3. The purpose of premedication is: a) prevention of the vagal effect; b) increased tone of the sympathetic nervous system; c) muscle relaxation; d) suppression of salivation; e) relieving emotional stress. Choose the correct combination of answers:

- 1. a, d.
- 2. g, d.
- 3. c, d.
- 4. a, b, d, d.
- 5. b, c, d, e.

4. Select the main mechanism of disruption of neuromuscular transmission by "long-acting" muscle relaxants.

- A. Depolarization of the postsynaptic membrane and slowdown of repolarization.;
- B. Blocking of cholinergic receptors without depolarization of the postsynaptic membrane.;
- B. Impaired release of acetylcholine;
- D. Inhibition of acetylcholinesterase.;

5. What is necessary for tracheal intubation?

Select all correct answers

- A. Sterile wipes;
- B. Endotracheal tubes.;
- B. Gastric tube;
- G. Laryngoscope.;
- D. Bronchoscope;

6. What are the negative effects of ketamine?

Select all correct answers

- A. Hallucinogenicity.;
- B. Possible development of psychotic reactions in the long-term postoperative period.;
- B. Increase in heart rate;
- D. Increased cardiac output.;
- D. Prolonged awakening with the possible development of motor and speech excitation;

7. What concentration of procaine solution is used for intraoperative anesthesia according to

A.V. Vishnevsky:

- A) 1%;
- B) 0.5%;
- IN) 0.25%;
- G) 5%

Choose the correct answer.

8. What drugs are considered components of neuroleptanalgesia?

- A. Diazepam and ketamine;
- B. Fentanyl and droperidol;
- B. Diazepam and fentanyl;
- G. Thiopental sodium and fentanyl.;

D. Trimeperidine and sodium oxybate.;

E. Sodium oxybate and sodium thiopental;

9. What concentration of procaine is used during conduction anesthesia?

A. 0.25–0.5%.;

B. 0.5–1.0%.;

B. 1.0–2.0%.;

G. 2.0–5.0%.;

D. 10%.;

10. What complications may occur during local anesthesia with novocaine? a) allergic reaction; b) acute liver failure; c) accidental intravascular administration of the drug; d) collapse; e) cessation of breathing. Choose the correct combination of answers:

1. a, b, c.

2. d.

3. a, d, d.

4. c, d, d.

5. Everything is correct.

TASK

In a weakened 70-year-old patient, after surgery - cholecystectomy, hypoventilation of the lungs, cyanosis, and muscle relaxation are noted after the use of non-depolarizing relaxants during anesthesia (residual curarization phenomena). Which of the following drugs eliminates these phenomena: strophanthin, sedcusen, promedol, prozerin, fentanyl?

"NARCOSIZE"

OPTION #8

1. Indicate the most rational types of pain relief for the reduction of hip and shoulder dislocations:

1. endotracheal anesthesia with halothane;

2. mask anesthesia with a halothane-oxygen mixture;

3. NLA;

4. intravenous anesthesia with barbiturates;

5. epidural anesthesia.

Choose the correct combination of answers: A - 1, 2, 4, 5; B - 1, 2; V - 3; D - 2, 4; D - 3, 5.

2. What are the advantages of performing anesthesia using a semi-open circuit?

Select all correct answers

A. Economical;

B. Possibility of more accurate dosing of the anesthetic mixture.;

B. Significant reduction in air pollution in the operating room;

D. Greater safety for the patient.;

3. What prevention of tongue retraction (mechanical asphyxia) is necessary for a patient in the early post-anesthesia period?

1. at the end of the operation, administer neostigmine methyl sulfate (a muscle relaxant antagonist) intravenously.

2. install an air duct.

3. ensure constant monitoring of medical personnel and monitoring for 2 hours after anesthesia.

4. administer respiratory analeptics to the patient.

5. insert the tube into the stomach.

Choose the correct combination of answers: A - 1, 2; B - 2, 4; B - 1, 3, 4; G - 4, 5; D - 2, 3.

4. How can a patient be transported after premedication?

Select all correct answers

A. On a gurney.;

B. On foot, accompanied by medical personnel.;

B. On foot when feeling normal.;

G. In a chair.;

D. After 2–12 hours;

5. What are the possible complications after endotracheal anesthesia:

1. recurarization;

2. vomiting;

3. swelling of the vocal cords and subglottic space;
4. mechanical asphyxia (tongue retraction);
5. chills.

Choose the correct combination of answers: A - 1, 2; B - 3, 4; B – 2, 3, 4; G - 1, 2, 3; D - all answers are correct.

6. Intravenous anesthesia with ketamine is contraindicated for:

1. primary surgical treatment of wounds;
2. hepatic-renal failure;
3. epilepsy;
4. arterial hypotension, large blood loss;
5. arterial hypertension.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B – 3, 5; G - 2,5; D - all answers are correct.

7. What types of anesthesia are considered conductive:

1. according to Lukashevich-Oberst;
2. paravertebral;
3. epidural;
4. spinal;
5. intercostal.

Choose the correct combination of answers: A - 1, 2, 3, 4, 5; B – 2,5; B - 1, 2, 4; G - 1, 2, 5; D - 1, 2, 3, 5.

8. What drugs are used for induction of anesthesia?

Select all correct answers

- A. Fentanyl.;
- B. Sodium thiopental;
- B. Droperidol;
- G. Deprivan.;
- D. Suxamethonium iodide;
- E. Diazepam;

9. What concentration of procaine is used when carrying out novocaine blockades?

- A. 0.25–0.5% .;
- B. 0.5–1.0% .;
- B. 1.0–2.0% .;
- G. 2.0–5.0% .;
- D. 10% .;

10. Select indications for perinephric block.

Select all correct answers

- A. Renal colic.;
- B. Intestinal paresis.;
- B. Acute pancreatitis.;
- G. Acute myocardial infarction.;
- D. Acute cholecystitis.;
- E. Pelvic fracture.;

TASK

Patient D., 50 years old, was diagnosed with cardiac arrest. What actions, in your opinion, should resuscitation measures begin with: a) placing the patient in a Trendelenburg position; b) performing closed cardiac massage; c) carrying out mouth-to-mouth breathing, d) mechanical defibrillation; e) ensuring airway patency.

"NARCOSIZE"

OPTION #9

1. What prevention of tongue retraction (mechanical asphyxia) is necessary for a patient in the early post-anesthesia period?

1. at the end of the operation, administer neostigmine methyl sulfate (a muscle relaxant antagonist) intravenously.
2. install an air duct.
3. ensure constant monitoring of medical personnel and monitoring for 2 hours after anesthesia.
4. administer respiratory analeptics to the patient.
5. insert the tube into the stomach.

Choose the correct combination of answers: A - 1, 2; B - 2, 4; B - 1, 3, 4; G - 4, 5; D - 2, 3.

2. What are the advantages of performing anesthesia using a semi-closed circuit?

Select all correct answers

- A. Economical;

- B. Possibility of more accurate dosing of the anesthetic mixture.;
- B. Significant reduction in air pollution in the operating room;
- D. Greater safety for the patient.;

3. For what purpose does the anesthesiologist use muscle relaxants?

1. to enhance (potentiate) the effect of narcotic drugs.
2. to immobilize the patient.
3. to block autonomic reactions.
4. to stabilize hemodynamics.
5. for tracheal intubation.

Choose the correct combination of answers: A - all answers are correct; B - 1, 3, 4; B - 2, 4, 5; G - 1, 2, 3; D - 2, 5.

4. What is included in premedication before emergency surgery?

- A. Sedatives and hypnotics along with narcotic analgesics 1.5–2 hours before surgery;
- B. Narcotic analgesics and antispasmodics 30–40 minutes before surgery;
- B. Narcotic analgesics and atropine 30–40 minutes before surgery;
- D. Narcotic analgesics and atropine 1.5–2 hours before surgery;
- D. All of the above are incorrect.;

5. The disadvantages of mask anesthesia are:

1. danger of tongue retraction (mechanical asphyxia);
2. increase in anatomical “dead” space;
3. reduction of anatomical “dead” space;
4. danger of regurgitation and aspiration of gastric contents;
5. danger of overdose of inhalational anesthetic.

Choose the correct combination of answers: A - all answers are correct; B - 1, 4, 5; B - 1, 2, 4; G - 1.5; D - 3, 4.

6. Which intravenous anesthetic is preferable for induction of anesthesia in persons with blood loss of more than 1000 ml, hypovolemia, low blood pressure?

- A) Gexobarbital.
- B) sodium thiopental.
- B) Toetamine
- G) fentanyl + droperidol.

Choose the correct answer.

7. Contraindications to local anesthesia are:

1. pronounced inflammatory and scarring changes in tissues;
2. ongoing massive internal bleeding;
3. intolerance to anesthetics;
4. sharp nervous excitement of the patient;
5. the patient’s age is less than 10 years.

Choose the correct combination of answers: A - 2, 4, 5; B - 1, 3, 5; B - 1, 2, 3, 4, 5; G - 3, 4, 5; D - 1, 3, 4, 5.

8. What types of anesthesia are considered conductive:

1. according to Lukashevich-Oberst;
2. paravertebral;
3. epidural;
4. spinal;
5. intercostal.

Choose the correct combination of answers: A - 1, 2, 3, 4, 5; B – 2.5; B - 1, 2, 4; G - 1, 2, 5; D - 1, 2, 3, 5.

9. What is the maximum amount of dry matter of a local anesthetic when performing local anesthesia (procaine, lidocaine, trimecaine)?

- A. 200–400 mg;
- B. 500 mg.;
- B. 600–800 mg;
- G.1.0 g.;
- D.2.0 g.;

10. What concentration of procaine is used when carrying out novocaine blockades?

- A. 0.25–0.5%.;
- B. 0.5–1.0%.;
- B. 1.0–2.0%.;
- G. 2.0–5.0%.;
- D. 10%.;

TASK

When performing cardiopulmonary resuscitation by one resuscitator, the following ratio of the frequency of artificial pulmonary ventilation (ALV) and chest compressions (CHC) is recommended:

I V L K G K

1	:	5
2	:	15
3	:	15
2	:	5
1	:	10

"NARCOSIZE" OPTION No. 10

1. The disadvantages of mask anesthesia are:

1. danger of tongue retraction (mechanical asphyxia);
2. increase in anatomical "dead" space;
3. reduction of anatomical "dead" space;
4. danger of regurgitation and aspiration of gastric contents;
5. danger of overdose of inhalational anesthetic.

Choose the correct combination of answers: A - all answers are correct; B - 1, 4, 5; B - 1, 2, 4; G - 1.5; D - 3, 4.

2. Select gaseous narcotic anesthetics.

Select all correct answers

- A. Diethyl ether.;
- B. Methoxyflurane;
- B. Nitrous oxide.;
- G. Enflurane;
- D. Cyclopropane;

3. A 50-year-old patient is undergoing surgery for a hernia of the linea alba. Mask anesthesia with halothane-oxygen mixture. Blood pressure - 130/60 mm Hg, heart rate - 78 per minute, respiratory rate - 18 per minute. Pupils - up to 2 mm, the reaction to light is sluggish, the corneal reflex is reduced. Determine the stage of anesthesia.

- A) I.
- B) II.
- B) III1-2.
- D) III3.

Choose the correct answer.

4. What prevention of tongue retraction (mechanical asphyxia) is necessary for a patient in the early post-anesthesia period?

1. at the end of the operation, administer neostigmine methyl sulfate (a muscle relaxant antagonist) intravenously.
2. install an air duct.
3. ensure constant monitoring of medical personnel and monitoring for 2 hours after anesthesia.
4. administer respiratory analeptics to the patient.
5. insert the tube into the stomach.

Choose the correct combination of answers: A - 1, 2; B - 2, 4; B - 1, 3, 4; G - 4, 5; D - 2, 3.

5. What medications are used for traditional premedication?

1. hexobarbital, sodium thiopental.
2. atropine, methocynium iodide.
3. trimeperedine, morphine, fentanyl.
4. strophanthin-K, lily of the valley glycoside.
5. calcium gluconate, calcium chloride.

Choose the correct combination of answers: A - 1, 2, 4; B - 3, 4, 5; B - 2, 3; G - 4, 5; D - 1, 3, 4, 5.

6. Indicate the most rational types of pain relief for the reduction of hip and shoulder dislocations:

1. endotracheal anesthesia with halothane;

2. mask anesthesia with a halothane-oxygen mixture;
3. NLA;
4. intravenous anesthesia with barbiturates;
5. epidural anesthesia.

Choose the correct combination of answers: A - 1, 2, 4, 5; B - 1, 2; V - 3; D - 2, 4; D - 3, 5.

7. For spinal anesthesia the following is used:

1. 5% procaine solution;
2. 1-2% lidocaine solution;
3. 0.5-2% trimecaine solution;
4. 10% procaine solution;
5. 1% sovcaïne solution.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 1, 4; G - 1.5; D - 4, 5.

8. What is the correct body position when performing surgery under spinal anesthesia with Sovcaïne solution?

- A) Withlowered upper body (Trendelenburg position).
- B) with the upper half of the body raised.
- B) Ghorizontal.
- G) horizontal on the side.
- D) in a sitting position, bending forward.

Choose the correct answer.

9. What concentration of procaine solution is used for intraoperative anesthesia according to A.V. Vishnevsky:

- A) 1%;
- B) 0.5%;
- IN) 0.25%;
- G) 5%

Choose the correct answer.

10. What complications are possible with spinal anesthesia? a) respiratory arrest; b) the occurrence of headaches, paresis, paralysis; c) meningitis; d) drop in blood pressure; e) spinal cord damage. Choose the correct combination of answers:

1. b, c, d, e.
2. a, c.
3. a, c, d.
4. a, b, c, d.
5. Everything is correct.

TASK

Name the routes of drug administration during resuscitation: subcutaneous, intramuscular, intravenous, into the heart muscle, into the heart cavity, intratracheal

**"NARCOSIZE"
OPTION No. 11**

1. The advantages of endotracheal anesthesia are:

1. reliable prevention of aspiration of gastric contents;
2. reduction of anatomical "dead" space;
3. increase in anatomical "dead" space;
4. ensuring complete muscle relaxation;
5. providing the opportunity to operate on the face, neck, head.

Choose the correct combination of answers: A - 1, 2, 5; B - 3, 4, 5; B - 1, 2, 4, 5; G - 1.5; D - all answers are correct.

2. Select vapor-forming liquid anesthetics.

Select all correct answers

- A. Nitrous oxide.;
- B. Diethyl ether.;
- B. Methoxyflurane;

G. Trichlorethylene;

3. The disadvantages of mask anesthesia are:

1. danger of tongue retraction (mechanical asphyxia);
2. increase in anatomical "dead" space;
3. reduction of anatomical "dead" space;
4. danger of regurgitation and aspiration of gastric contents;
5. danger of overdose of inhalational anesthetic.

Choose the correct combination of answers: A - all answers are correct; B - 1, 4, 5; B - 1, 2, 4; G - 1.5; D - 3, 4.

4. Select the signs of an overdose of ether anesthesia (the fourth level of the surgical stage).

Select all correct answers

- A. Pupil dilation;
- B. Thread-like pulse;
- B. Decrease in blood pressure;
- G. Clonic convulsions.;
- D. Absence of any reflexes.;

5. What level of depth of general anesthesia (anesthesia stage) is required for abdominal surgical interventions?

- A. I–II.;
- B. III(2)–III(3).;
- B. II–III(1).;
- G. III(1)–III(2).;
- D. III(2)–IV.;
- E. II–IV.;

6. Essential anesthetics are characterized by: a) rapid hydrolytic social destruction in tissues; b) duration of effective regional anesthesia with a single injection into tissue; c) the admissibility of repeated administration of significant doses of the drug to prolong anesthesia; d) practically do not cause allergic reactions in the maximum permissible doses; e) are excreted from the body unchanged or undergo partial destruction in the liver. Choose the correct combination of answers:

1. a, c.
2. b, d.
3. a, b.
4. in, g.
5. g, d.

7. Name rational types of anesthesia during surgery for mastitis:

1. local infiltration anesthesia;
2. endotracheal anesthesia;
3. mask anesthesia (halothane);
4. intravenous anesthesia;
5. conduction anesthesia (retromammary blockade).

Choose the correct combination of answers: A - 1, 4; B - 4, 5; B - 2, 3; G - 3, 4; D - 3, 4, 5.

8. Late complications of spinal anesthesia include:

1. purulent meningitis;
2. motor paresis;
3. meningism;
4. headache;
5. respiratory arrest.

Choose the correct combination of answers: A - 1, 2, 4, 5; B - 2, 3, 4, 5; B - 1, 2, 3, 5; G - 1, 2, 3, 4; D - all answers are correct.

9. Contraindications to local anesthesia are:

1. pronounced inflammatory and scarring changes in tissues;
2. ongoing massive internal bleeding;
3. intolerance to anesthetics;
4. sharp nervous excitement of the patient;
5. the patient's age is less than 10 years.

Choose the correct combination of answers: A - 2, 4, 5; B - 1, 3, 5; B - 1, 2, 3, 4, 5; G - 3, 4, 5; D - 1, 3, 4, 5.

10. What drugs are used for spinal anesthesia?

Select all correct answers

- A. Procaine;
- B. Lidocaine;
- B. Bupivacaine;
- G. Trimekain.;

TASK

Patient N., 42 years old, was operated on for uterine fibroids, supravaginal amputation of the uterus was performed. I was on bed rest for 5 days. When getting out of bed on the 6th day, the patient suddenly fell. Shortness of breath, chest pain, and bluishness of the skin of the face and upper half of the chest appeared.

What is your conclusion?

**"NARCOSIZE"
OPTION No. 12**

1. What medications are used for traditional premedication?

- 1. hexobarbital, sodium thiopental.
- 2. atropine, methocynium iodide.
- 3. trimeperedine, morphine, fentanyl.
- 4. strophanthin-K, lily of the valley glycoside.
- 5. calcium gluconate, calcium chloride.

Choose the correct combination of answers: A - 1, 2, 4; B - 3, 4, 5; B - 2, 3; G - 4, 5; D - 1, 3, 4, 5.

2. What are the positive properties of nitrous oxide?

Select all correct answers

- A. Bronchodilator effect.;
- B. Rapid onset of general anesthesia and rapid restoration of consciousness;
- B. No toxic effect on parenchymal organs.;
- D. Pronounced analgesic effect.;
- D. Lack of irritation of mucous membranes and hypersecretion.;

3. The advantages of endotracheal anesthesia are:

- 1. reliable prevention of aspiration of gastric contents;
- 2. reduction of anatomical "dead" space;
- 3. increase in anatomical "dead" space;
- 4. ensuring complete muscle relaxation;
- 5. providing the opportunity to operate on the face, neck, head.

Choose the correct combination of answers: A - 1, 2, 5; B - 3, 4, 5; B - 1, 2, 4, 5; G - 1.5; D - all answers are correct.

4. Which breathing circuit is the safest for the patient?

- A. Semi-open.;
- B. Semi-closed.;
- V. Open.;
- G. Closed.;

5. Select gaseous narcotic anesthetics.

Select all correct answers

- A. Diethyl ether.;
- B. Methoxyflurane;
- B. Nitrous oxide.;
- G. Enflurane;
- D. Cyclopropane;

6. Which of the following types of local anesthesia relate to conduction anesthesia? a) case anesthesia; b) anesthesia according to Oberst-Lukashevich; c) perirenal block; d) blockade of nerve plexuses and trunks; e) epidural anesthesia. Choose the correct combination of answers:

- 1. b, d, d.
- 2. a, b, c.
- 3. b, d.
- 4. c, d, d.
- 5 B.

7. Case blockade is used for:

1. injuries to the limbs;
2. inflammatory diseases of the extremities;
3. rib fractures;
4. snake bites;
5. carrying out infiltration anesthesia as a basis.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4, 5; B - 1, 3, 4, 5; G - 1, 2, 4, 5; D - all answers are correct.

8. The purpose of premedication is:

1. prevention of vagal effect;
2. increased tone of the sympathetic nervous system;
3. suppression of salivation;
4. relieving emotional stress;
5. prevention of vomiting and regurgitation.

Choose the correct combination of answers: A - 1, 5; B - 1, 4, 5; B - 3, 4; G - 1, 2, 3, 4; D - 1, 2, 3, 4, 5.

9. For spinal anesthesia the following is used:

1. 5% procaine solution;
2. 1-2% lidocaine solution;
3. 0.5-2% trimecaine solution;
4. 10% procaine solution;
5. 1% sovcaïne solution.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 1, 4; G - 1.5; D - 4, 5.

10. What concentration of procaine is used when performing infiltration anesthesia?

- A. 0.25–0.5%.
- B. 0.5–1.0%.
- B. 1.0–2.0%.
- G. 2.0–5.0%.
- D. 10%.

TASK

In a weakened 70-year-old patient, after cholecystectomy performed under endotracheal anesthesia using non-depolarizing relaxants, hypoventilation of the lungs, cyanosis, and muscle relaxation are noted.

What causes this condition, what should the doctor do? Which of the following drugs eliminate these phenomena: strophanthin, diazepam, trimeperidine, neostigmine methyl sulfate, fentanyl?

"NARCOSIZE"

OPTION No. 13

1. How can a patient be transported after premedication?

Select all correct answers

- A. On a gurney.;
- B. On foot, accompanied by medical personnel.;
- B. On foot when feeling normal.;
- G. In a chair.;
- D. After 2–12 hours;

2. What are the positive properties of halothane?

Select all correct answers

- A. Rapid onset of general anesthesia and rapid restoration of consciousness;
- B. Pronounced bronchodilator effect.;
- B. Good muscle relaxant effect.;
- D. Long-term relaxation of motor muscles.;
- D. Explosion and fire safety.;

3. What medications are used for traditional premedication?

1. hexobarbital, sodium thiopental.
2. atropine, methocynium iodide.
3. trimeperidine, morphine, fentanyl.
4. strophanthin-K, lily of the valley glycoside.
5. calcium gluconate, calcium chloride.

Choose the correct combination of answers: A - 1, 2, 4; B - 3, 4, 5; B - 2, 3; G - 4, 5; D - 1, 3, 4, 5.

4. Select the main mechanism of disruption of neuromuscular transmission by “short-acting” muscle relaxants.

- A. Depolarization of the postsynaptic membrane and slowdown of repolarization.;
- B. Blocking of cholinergic receptors without depolarization of the postsynaptic membrane.;
- B. Impaired release of acetylcholine;
- D. Inhibition of acetylcholinesterase.;

5. What is necessary for tracheal intubation?

Select all correct answers

- A. Sterile wipes;
- B. Endotracheal tubes.;
- B. Gastric tube;
- G. Laryngoscope.;
- D. Bronchoscope;

6. What complications are possible with spinal anesthesia? a) respiratory arrest; b) the occurrence of headaches, paresis, paralysis; c) meningitis; d) drop in blood pressure; e) spinal cord damage. Choose the correct combination of answers:

- 1. b, c, d, e.
- 2. a, c.
- 3. a, c, d.
- 4. a, b, c, d.
- 5. Everything is correct.

7. What is the correct body position when performing surgery under spinal anesthesia with Sovcaine solution?

- A) Withlowered upper body (Trendelenburg position).
- B) with the upper half of the body raised.
- B) Ghorizontal.
- G) horizontal on the side.
- D) in a sitting position, bending forward.

Choose the correct answer.

8. What is the mechanism of action of local anesthetics?

- A. The synthesis of the neurotransmitter is disrupted, as a result of which the transmission of impulses along the nerve fiber is blocked.;
- B. The neurotransmitter is inactivated, as a result of which the transmission of impulses along the nerve fiber is blocked.;
- B. Sodium channels are blocked and depolarization processes are disrupted.;
- D. Anesthetic molecules increase transmembrane potential;

9. There are the following types of conduction anesthesia:

- 1. anesthesia of nerve trunks;
- 2. anesthesia of the nerve plexuses;
- 3. paravertebral;
- 4. spinal;
- 5. epidural.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 2, 3, 4; B - 1, 2, 4, 5; G - 1, 2, 5; D - all answers are correct.

10. What is the maximum amount of local anesthetic dry matter allowed when performing local anesthesia (procaine, lidocaine, trimecaine)?

- A. 200–400 mg;
- B. 500 mg.;
- B. 600–800 mg;
- G.1.0 g.;
- D.2.0 g.;

TASK

Patient D., 50 years old, was diagnosed with cardiac arrest.

What actions, in your opinion, should resuscitation measures begin with and what is the sequence of actions of the doctor: a) giving the patient a Trendelenburg position; b) performing closed cardiac massage; c) breathing “mouth

to mouth”; d) mechanical defibrillation; e) ensuring airway patency; f) the ratio of the number of breaths and chest compression.

**"NARCOSIZE"
OPTION No. 14**

1. How can a patient be transported after premedication?

Select all correct answers

- A. On a gurney.;
- B. On foot, accompanied by medical personnel.;
- B. On foot when feeling normal.;
- G. In a chair.;
- D. After 2–12 hours;

2. What drugs are used for induction of anesthesia?

Select all correct answers

- A. Fentanyl.;
- B. Sodium thiopental;
- B. Droperidol;
- G. Deprivan.;
- D. Suxamethonium iodide;
- E. Diazepam;

3. What is included in premedication before a planned operation?

- A. Narcotic analgesics and antispasmodics 30–40 minutes before surgery;
- B. Sleeping pills and sedatives at night, in the morning - sedatives, narcotic analgesics with atropine 30–40 minutes before surgery;
- B. Sleeping pills and sedatives at night, in the morning - sedatives, narcotic analgesics and atropine.;
- D. Narcotic analgesics and atropine 1.5–2 hours before surgery;

4. What are the advantages of performing anesthesia using a semi-closed circuit?

Select all correct answers

- A. Economical;
- B. Possibility of more accurate dosing of the anesthetic mixture.;
- B. Significant reduction in air pollution in the operating room;
- D. Greater safety for the patient.;

5. The advantages of endotracheal anesthesia are:

- 1. reliable prevention of aspiration of gastric contents;
- 2. reduction of anatomical “dead” space;
- 3. increase in anatomical “dead” space;
- 4. ensuring complete muscle relaxation;
- 5. providing the opportunity to operate on the face, neck, head.

Choose the correct combination of answers: A - 1, 2, 5; B - 3, 4, 5; B - 1, 2, 4, 5; G - 1.5; D - all answers are correct.

6. There are the following types of conduction anesthesia:

- 1. anesthesia of nerve trunks;
- 2. anesthesia of the nerve plexuses;
- 3. paravertebral;
- 4. spinal;
- 5. epidural.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 2, 3, 4; B - 1, 2, 4, 5; G - 1, 2, 5; D - all answers are correct.

7. Late complications of spinal anesthesia include:

- 1. purulent meningitis;
- 2. motor paresis;
- 3. meningism;
- 4. headache;
- 5. respiratory arrest.

Choose the correct combination of answers: A - 1, 2, 4, 5; B - 2, 3, 4, 5; B - 1, 2, 3, 5; G - 1, 2, 3, 4; D - all answers are correct.

8. What types of anesthesia are preferable during surgery for pain?nation?

1. intravenous anesthesia (barbiturates).
2. conduction anesthesia (according to Lukashevich-Oberst).
3. anesthesia with trichlorethylene.
4. infiltration anesthesia.
5. plexus anesthesia.

Choose the correct combination of answers: A - 1, 2; B - 3, 4; V - 3, 5; D - 3, 4; D - 1, 2, 3, 4, 5.

9. Which intravenous anesthetic is preferable for induction of anesthesia in persons with blood loss of more than 1000 ml, hypovolemia, low blood pressure?

- A) Gexobarbital.
- B) sodium thiopental.
- B) Toetamine
- G) fentanyl + droperidol.

Choose the correct answer.

10. What is the mechanism of action of local anesthetics?

- A. The synthesis of the neurotransmitter is disrupted, as a result of which the transmission of impulses along the nerve fiber is blocked.;
- B. The neurotransmitter is inactivated, as a result of which the transmission of impulses along the nerve fiber is blocked.;
- B. Sodium channels are blocked and depolarization processes are disrupted.;
- D. Anesthetic molecules increase transmembrane potential;

TASK

In a weakened 70-year-old patient, after surgery - cholecystectomy, hypoventilation of the lungs, cyanosis, and muscle relaxation are noted after the use of non-depolarizing relaxants during anesthesia (residual curarization phenomena). Which of the following drugs eliminates these phenomena: strophanthin, sedcusen, promedol, prozerin, fentanyl?

ANSWERS "NARCOSIS"

OPTION 1	OPTION 8
14	1 - G
2 - DE	2 - BG
3 - D	3 - D
4 - ABCD	4 - AG
5 B	5 - D
6 - 3	6 - B
7 - A	7 - A
8 - G	8 - AB
9 - G	9 - A
10 - V	10 - ABCD
OPTION 2	OPTION 9
1 - G	1 - D
2 - AG	2 - AG
3 - G	3 - D
4 - A	4 - B
5 - A	5 - B
6 - 5	6 - B
7 - BVG	7 - B
8 - A	8 - A
9 - A	9 - A
10 - V	10 - A
OPTION 3	OPTION 10
1 - D	1 - B
2 - B	2 - VD
3 - D	3 - B
4 - DE	4 - D

5 - BG
6 - 4
7 - A
8 - B
9 - ABCD
10 - 3

OPTION 4

1 - B
2 - ABVD
3 - B
4 - AG
5 - VD
6 - AB
7 - A
8 - 5
9 - BVG
10 - 1

OPTION 5

1 - D
2 - B
3 - A
4 - BVG
5 - BVD
6 - B
7 - A
8 - 4
9 - D
10 - ABC

OPTION 6

1 - B
2 - A
3 - BG
4 - AB
5 B
6 - B
7 - ABCD
8 - 3
9 - G
10 - 1

OPTION 7

1 - B
2 - A
3 - 4
4 - A
5 - BG
6 - ABC
7 - B
8 - B
9 - A
10 - 3

5 - B
6 - G
7 - G
8 - A
9 - B
10 - 3

OPTION 11

1 - A
2 - BVG
3 - B
4 - ABCD
5 B
6 - 1
7 - D
8 - G
9 - B
10 - BVG

OPTION 12

1 - B
2 - BVD
3 - B
4 - A
5 - VD
6 - 1
7 - G
8 - G
9 - G
10 - A

OPTION 13

1 - AG
2 - ABCG
3 - B
4 - B
5 - BG
6 - 3
7 - A
8 - B
9 - D
10 - A

OPTION 14

1 - AG
2 - AB
3 - B
4 - AG
5 - B
6 - D
7 - G
8 - A
9 - B
10 - V

"INJURIES. DAMAGE"
OPTION #1

1. Common predisposing nonmicrobial factors for postoperative wound suppuration include: a) old age; b) fatigue of surgeons during prolonged surgery; c) taking hormones and immunosuppressants; d) trauma to the edges of the wound with a tool or linen; e) cachexia of the patient. Choose the correct combination of answers:

- 1) a B C.
- 2) a, b, d.
- 3) b, d.
- 4) a, c, d.
- 5) e, g, d.

2. A necessary condition for primary wound healing is: a) the presence of foci of necrosis and hematomas in the wound; b) contact of the edges of the wound; c) maintaining the viability of the wound edges; d) small damage area; e) bacterial contamination of wound tissue is above a critical level. Choose the correct combination of answers:

1. a, c.
2. b, d.
3. b, c.
4. g, d.
5. everything is true.

3. Determine the sequence of examination of a patient with acute pathology of the abdominal organs: a) clarifying the patient's complaints and medical history; b) plain radiography of the abdominal organs; c) emergency laboratory testing of blood and urine; d) assessment of the patient's condition and physical examination of organs and systems; e) Ultrasound of the abdominal organs; f) emergency laparoscopy. Choose the correct combination of answers:

- 1) a B C D E F.
- 2) d, a, d, c, b, f.
- 3) d, e, f, a, b, c.
- 4) b, d, f, a, c, d.
- 5) a, d, c, b, d, f.

4. Select the definition of bruise.

A. Damage to soft tissues and organs while maintaining their macroscopic structure without compromising the integrity of the skin and mucous membranes.;

B. Damage to soft tissues and organs while maintaining their macroscopic structure with disruption of the integrity of the skin or mucous membranes.;

D. Extensive tissue damage with disruption of their anatomical integrity.;

5. The following types of displacement of fragments are distinguished:

- 1) combined;
- 2) at an angle;
- 3) epiphyseal;
- 4) by length;
- 5) lateral.

Choose the correct combination of answers: A - 2, 4, 5; B - 1, 2, 4; C - 1, 3, 5; D - 3, 4, 5; E - 2, 3, 4.

6. Dislocations that are old are called fresh:

- A. Up to 2 days;;
- B. 1–2 weeks;;
- B. Up to 1 week;;
- D. Up to 3–4 weeks;;
- D. More than 4 weeks;

7. What is the area of the patient's palm compared to the entire surface area of their body?

- A. 0.1%;
- B. 1%.;
- B. 2–3%.;
- G. 3%.;
- D. 5%.;
- E. 9%.;

8. What does pre-hospital medical care for burn victims include?

Select all correct answers

- A. Applying a sterile bandage to burn surfaces, with the exception of the face;
- B. Immobilization.;
- B. Administration of analgesics.;
- D. Administration of tetanus toxoid and prototetanus serum.;
- D. Administration of cardiac drugs in case of hemodynamic disturbances (cordiamin, cardiac glycosides).;
- E. Carrying out artificial respiration if it is disrupted or stopped.;
- G. For deep and extensive burns - infusion therapy.;
- Z. Gentle transportation in the shortest possible time to a specialized hospital.;

9. What properties does gauze dressing have?

- A. Elasticity;
- B. Hemostatic;
- B. Hydrophobicity;
- G. Hygroscopicity;

10. Methods for stable fixation of fragments:

- 1. Dieterichs tire;
- 2. Kramer tire;
- 3. gypsum bandage;
- 4. intramedullary osteosynthesis;
- 5. extramedullary osteosynthesis;
- 6. compression-distraction osteosynthesis.

Choose the correct combination of answers: A - 1, 2, 4, 5; B - 3, 4, 5; B - 3, 4, 5, 6; G - 1, 4, 5, 6; D - 4, 5, 6.

SITUATIONAL TASK

After being beaten on the head, the patient lost consciousness. When he woke up, he got up and with difficulty came to the hospital emergency room. 8 hours after the injury, he lost consciousness again and became covered in a cold, sticky feeling. Blood pressure decreased and skin pallor increased.

What could happen and what are your actions?

"INJURIES. DAMAGE"

OPTION #2

1. Gunshot wounds are characterized by: a) the presence of an inlet hole of a smaller size than the outlet; b) the presence of a destruction zone; c) the presence of an area of bruise and necrosis; d) the presence of a molecular shock zone; e) the presence of a burn zone; f) asepticity of the wound channel. Choose the correct combination of answers:

- 1) b, c, d.
- 2) c, d, f.
- 3) a, b, d, f.
- 4) a B C D.
- 5) everything is true.

2. For local treatment of purulent wounds in the inflammatory phase, use: a) fat-soluble ointments; b) proteolytic enzymes; c) water-soluble ointments; d) washing with antiseptics; e) immunization. Choose the correct combination of answers:

- 1) a, b.
- 2) a B C.
- 3) b, c, d.
- 4) a, d.
- 5) a, d, d.

3. Types of injuries include:

Select all correct answers

- A. agricultural;;
- B. industrial;;
- V. transport;;
- G. children's;;
- D. household;;
- E. military;;
- J. sports.;

4. Specify first aid measures for long-term compartment syndrome.

Select all correct answers

- A. Mechanical ventilation according to indications;
- B. Indirect cardiac massage according to indications.;
- B. Splinting;
- G. Administration of antidote.;
- D. Administration of diuretics;
- E. Application of a tourniquet;

5. The following types of fractures are distinguished by location:

- 1) epiphyseal;
- 2) subperiosteal;
- 3) diaphyseal;
- 4) metaphyseal;
- 5) epiphysiolysis

Choose the correct combination of answers: A - 1, 2, 4; B - 1, 2, 3; B - 1, 2, 3, 4; G - 1, 3, 4; D - all answers are correct.

6. The following signs of dislocations are distinguished.

Select all correct answers

- A. History of trauma with a characteristic mechanism;
- B. Joint pain.;
- B. Change in the axis of the limb.;
- G. Pathological mobility.;
- D. Forced specific position of the limb.;
- E. Lack of active and sharp limitation of passive movements in the joint.;
- G. "Spring fixation" in the joint.;

7. The appearance of coagulative necrosis is caused by the following:

Select all correct answers

- A. boiling water, steam;;
- B. flame;;
- B. acids;;
- G. alkalis;;
- D. hot objects.;

8. Burn disease develops when:

Select all correct answers

- A. superficial burns with an area of more than 50%;;
- B. deep burns with an area of more than 10%;;
- B. superficial burns with an area of more than 25%;;
- G. deep burns with an area of more than 30%;;
- D. superficial burns with an area of more than 75%.;

9. Is it possible to reuse dressing material?

- A. Yes;

- B. Yes, but with repeated sterilization;
- B. Yes, if it is not contaminated;
- G. No, never;

10. Indicate the points for holding the wires during skeletal traction:

1. olecranon;
2. anterior superior iliac spine;
3. greater trochanter of the femur;
4. femoral condyles;
5. tibial tuberosity;
6. supramalleolar region;
7. ankles;
8. calcaneus.

Choose the correct combination of answers: A - 1, 2, 3, 4, 5, 8; B - 1, 3, 4, 5, 8; B - 1, 3, 4, 5, 6, 8; G - 1, 4, 5, 8; D - all answers are correct.

SITUATIONAL TASK

After a skull injury, the patient did not regain consciousness for 24 hours. Having come to his senses, he began to complain of pain in the lower abdomen. It turned out that he had not urinated since the injury. We decided to drain the urine with a catheter, but received about 20 ml of urine stained with blood.

What type of damage are we talking about and what needs to be done to clarify the diagnosis?

**"INJURIES. DAMAGE"
OPTION #3**

1. The following types of wound healing are distinguished: a) by secondary resorption of the hematoma; b) by biological adhesion of tissues; c) secondary intention; d) primary intention; e) under the bandage; f) under a plaster splint; g) under the scab. Choose the correct combination of answers:

- 1) a, b, d.
- 2) d, f, g.
- 3) c, g, g.
- 4) c, d, d.
- 5) everything is true.

2. When should primary treatment of a wound be performed on a patient admitted in a state of severe shock?

- 1) immediately upon admission;
- 2) immediately after the patient comes out of shock;
- 3) 2 hours after admission;
- 4) the next day;
- 5) after a blood transfusion.

3. If perforation of a hollow organ is suspected, the main method of examination is:

- 1) colonoscopy;
- 2) plain radiography of the abdominal organs;
- 3) Ultrasound;
- 4) sigmoidoscopy;
- 5) gastroscopy.

4. Name the main symptom of hemarthrosis of the knee joint.

- A. Increase in joint volume.;
- B. Hemorrhage into soft tissues.;
- B. Limitation of movements in the joint.;
- G. Symptom of patella balloting.;

5. Callus consists of the following layers:

- 1) periosteal;
- 2) endosteal;
- 3) fascial;
- 4) intermedial;
- 5) parosseous.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 2, 4, 5; B - 1, 2, 3, 5; G - 1, 2, 4; D - all answers are correct.

6. Specify the indications for surgical treatment of dislocations.

Select all correct answers

- A. Open dislocation;
- B. Irreversible dislocation;
- B. Pathological dislocation;
- G. Old dislocation;
- D. Habitual dislocation;

7. What is the total area of the burn when one lower limb, both upper limbs, head and neck are affected?

- A. 18%;
- B. 36%.
- B. 45%;
- G. 46%.
- D. 72%.

8. What is characteristic of burn shock?

Select all correct answers

- A. Blood loss.;
- B. Plasma loss.;
- B. Rapid occurrence of collapse.;
- G. Hemolysis;
- D. Leukocytosis with a shift of the leukocyte formula to the left.;
- E. No bleeding.;
- G. Renal dysfunction;

9. When dressing purulent wounds, must the dressing applied to the wound be sterile?

- A. Yes;
- B. No;
- B. Desirable;
- G. Must be simply clean;

10. To apply skeletal traction for a fracture of the leg bones, measures are carried out in the following order:

1. anesthesia of the fracture site;
2. passing the needle through the heel bone;
3. anesthesia of the needle insertion site;
4. securing the load and bracket.

Determine the sequence of actions: A - 1, 2, 3, 4; B - 3, 1, 2, 4; B - 3, 2, 1, 4; G - 2, 3, 1, 4; D - 1, 3, 2, 4.

SITUATIONAL TASK

As a result of a car accident, a 74-year-old patient developed confusion, lack of blood pressure, pulse in the peripheral arteries (pulse is determined only in the carotid and femoral arteries or by heart contractions), shallow and rapid breathing?

What is the phase of terminal states? What to do with the patient?

"INJURIES. DAMAGE"

OPTION #4

1. AtIf there is bleeding from a postoperative wound, you must: a) remove postoperative sutures; b) inspect the wound; c) stitch a bleeding vessel; d) evacuate the wound; e) aspirate the contents through the drain. Choose the correct combination of answers:

- 1) a B C.
- 2) c, d, d.
- 3) a, b, d.
- 4) a, c, d.
- 5) everything is true.

2. What manipulations are performed during primary surgical treatment of a wound? a) excision of the edges of the wound; b) stopping bleeding; c) removal of foreign bodies from the wound; d) washing the wound with antibiotics; e) excision of the wound bottom; f) excision of the wound walls. Choose the correct combination of answers:

- 1) a, c, d, e.
- 2) a, b, c, d, f.
- 3) b, c, d, d.
- 4) a, b, d, d.
- 5) everything is true.

3. Identify the clinical signs of soft tissue contusion:

- 1) pain;
- 2) hemorrhage;
- 3) skin hyperemia with clear boundaries;
- 4) swelling;
- 5) dysfunction of the organ.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4, 5; B - 1, 4, 5; G - 1, 2, 4, 5; D - all answers are correct.

4. In the clinical course of traumatic shock, the following phases are distinguished:

Select all correct answers

- A. erectile;;
- B. hypovolemic;;
- V. torpid;;
- G. motor.;

5. In what order does the histological picture change during the formation and maturation of callus?

- 1) Formation of primary callus.
- 2) Formation of connective tissue callus.
- 3) Osteoclastosis.
- 4) Productive reaction of the periosteum.
- 5) Secondary callus.

Specify the correct sequence of stages of bone formation calluses: A - 3, 2, 4, 1, 5; B - 3, 4, 2, 1, 5; B - 3, 1, 4, 2, 5; G - 3, 1, 2, 4, 5; D - 3, 4, 1, 2, 5.

6. Select the characteristic complaints of the patient with a fracture.

Select all correct answers

- A. Pain in the area of the fracture;
- B. Fever.;
- B. Pain in the area of the fracture when moving.;
- D. Dysfunction of the limb;
- D. Weakness, dizziness.;

7. Which of the following are considered complications of burns?

Select all correct answers

- A. Burn shock;
- B. Convulsive syndrome.;
- B. Development of infection.;
- G. Scar contractures.;

8. What happens with deep burns?

Select all correct answers

- A. Formation of a scab.;
- B. Cleansing through the development of purulent-demarcation inflammation.;
- B. Formation of thin-walled bubbles.;
- D. Charring of the upper layers of skin without damaging the underlying ones.;

9. Can one dressing nurse work in both “clean” and “purulent” dressing rooms?

- A. No;
- B. Only in exceptional cases;
- V. Yes, first in the “clean” one, and at the end of the day in the “purulent” one;

10. What are the goals of transport immobilization?

Select all correct answers

- A. Prevention of further displacement of bone fragments.;
- B. Creating conditions for transporting the victim.;
- B. Creation of optimal conditions for consolidation of the fracture.;
- D. Reduction of pain.;

SITUATIONAL TASK

After a fall, the patient cannot lift his leg off the ground due to sharp pain in the hip joint. The foot is rotated outward. The patient was unable to rise to his feet due to pain in the joint area.

What happened and what is first aid for the victim?

"INJURIES, DAMAGE" OPTION #5

1. Which of the following is characteristic of the inflammation phase of a wound process?

- 1) violation of the permeability of the vascular wall.
- 2) development of inflammatory edema.
- 3) development of the granulation shaft.
- 4) leukocyte infiltration of tissues.
- 5) development of tissue acidosis.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 1 5; B - 1, 2, 5; G - 1, 2, 4, 5; D - all answers are correct.

2. What means help remove purulent fluid from a wound?him?

- 1) drainages.
- 2) proteolytic enzymes.
- 3) hypertonic sodium chloride solution.
- 4) antibiotic solution.
- 5) calcium gluconate + sodium alginate + nitrofurantoin.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4, 5; B - 1, 3, 4, 5; G - 1, 2, 3, 5; D - all answers are correct.

3. How quickly does the clinical picture of traumatic toxicosis develop?

- A) Immediately after compression of the limb.
- B) After releasing the limb from compression.
- B) 4-8 hours after the limb is released.
- G) Within 24-48 hours after the limb is released.
- D) 2-4 days after the limb is released.

Choose the correct answer.

4. What is called the Algovier shock index?

- A. The ratio of heart rate to systolic blood pressure;
- B. The ratio of systolic blood pressure to heart rate;
- B. The ratio of cardiac output to minute volume.;
- D. The ratio of systolic blood pressure to the patient's age;

5. Determine the basic principles of treatment of fractures:

- 1) reposition of bone fragments;
- 2) fixation of bone fragments in the correct position by immobilization;
- 3) removal of the hematoma by puncture from the fracture zone;
- 4) accelerating the processes of bone consolidation and restoration of organ functions.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 3, 4; G - 1, 2, 4; D - all answers are correct.

6. When does the formation of secondary callus begin?

- A. At 3-6 weeks;
- B. By the end of the 2nd week.;
- B. In the 2nd month.;
- D. After 7-9 days;

7. Select the basic principles of general treatment of burns.

Select all correct answers

- A. Fighting pain.;
- B. Antishock therapy.;
- B. Regular blood transfusions.;
- G. Treatment of acute toxemia.;

- D. Prevention and control of infectious complications.;
- E. Nutritional therapy and exercise therapy;

8. Burns are divided into:

Select all correct answers

- A. chemical;;
- B. mechanical;;
- V. radial;;
- G. thermal.;

9. Is it possible to perform dressings on “clean” and “purulent” patients in one dressing room?

- A. It is possible, subject to the order;
- B. It is possible, if there is only one dressing station;
- B. It is impossible;

10. What is used for transport immobilization?

Select all correct answers

- A. Shinu Diterichs.;
- B. Shield;
- V. Gudushauri apparatus.;
- G. Stair bus.;
- D. Shinu Bellera.;

SITUATIONAL TASK

A patient with a thermal burn of the left upper limb and torso was admitted to the emergency room. The patient is sharply excited and does not make contact. The pulse is frequent, weak filling. On the burn surface there are areas of necrosis, as well as burst blisters with remnants of the epidermis.

Determine the area and degree of the burn, as well as the phase of the burn disease. When can you start treating a burn surface?

**“INJURIES. DAMAGE”
OPTION #6**

1. Necessary condition for primary wound healing:

- A) presence of blood clots in the wound;
- B) tight contact of the wound edges;
- B) injection of antibiotics into the wound area;
- G) presence of drainage in the wound;
- D) presence of infection.

Choose the correct answer.

2. Which of these methods can be used for local treatment of purulent wounds in the inflammation phase?

- 1) ointment dressings.
- 2) proteolytic enzymes.
- 3) dressings with hypertonic solution.
- 4) washing with antiseptics.
- 5) immunization.

Choose the correct combination of answers: A - 1, 2; B - 1, 2, 3; B - 2, 3, 4; G - 1,5; D - 1, 4, 5.

3. Identify the main pathogenetic factors in the development of traumatic toxicosis:

- 1) painful irritation;
- 2) fat embolism of internal organs;
- 3) plasma and blood loss;
- 4) blood clotting disorder;
- 5) traumatic toxemia.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 3, 4; B -1,4,5; G - 1, 3, 5; D - 2, 3, 4.

4. What is called the Allover shock index?

- A. The ratio of heart rate to systolic blood pressure;
- B. The ratio of systolic blood pressure to heart rate;

- B. The ratio of cardiac output to minute volume.;
- D. The ratio of systolic blood pressure to the patient's age;

5. Surgical treatment of fractures is indicated in the following cases:

- 1) with ununited or improperly healed fractures;
- 2) with fresh fractures of the femoral neck (medial);
- 3) with transverse fractures;
- 4) when muscles and fascia get between bone fragments (interposition);
- 5) with impacted fractures.

Choose the correct combination of answers: A - 2, 3, 4, 5; B - 1, 3, 5; B - 3, 4, 5; G - 1, 2, 4; D - 1, 2, 3, 4.

6. Name the absolute clinical signs of a fracture.

Select all correct answers

- A. Swelling in the area of the fracture.;
- B. Characteristic deformation of the limb at the fracture site.;
- B. Crepitation of bone fragments.;
- G. Shortening of the limb.;
- D. Pathological mobility.;

7. What local features characterize an electrical burn?

- 1) Coagulative necrosis.
- 2) Liquefaction necrosis.
- 3) Painless.
- 4) Progressive necrosis.
- 5) Formation of "current signs".
- 6) Education Bull.

Choose the correct combination of answers: A - 2, 3, 4, 5; B - 4, 5, 6, 1; B - 1, 3, 4, 5; G - 2, 4, 5, 6; D - 2, 3, 4, 6.

8. The patient has an open hip fracture and arterial bleeding. What is the sequence of indicated actions when providing first aid?

1. Administration of painkillers.
2. Application of a Dieterichs splint.
3. Applying a bandage to the wound.
4. Administration of hemostatic agents.
5. Application of a tourniquet.

Choose the correct combination of answers: A - 2, 3, 4, 5, 1; B - 5, 1, 3, 2, 4; B - 3, 1, 4, 5, 2; G - 4, 5, 3, 1, 2; D - 1, 2, 3, 4, 5.

9. Should the dressing nurse wear sterile gloves?

- A. Yes;
- B. No;
- B. Desirable;

10. Name the basic rules of transport immobilization.

Select all correct answers

- A. At least two joints must be included in immobilization;
- B. Give the limb a physiologically advantageous position.;
- B. Perform primary reposition.;
- D. Place the splint on a soft pad or clothing.;

SITUATIONAL TASK

The condition of the patient with a wound to the left jugular vein suddenly deteriorated sharply: breathing became shallow and uneven, the pupils were dilated, blood pressure dropped sharply, and facial muscle spasms appeared. Soon respiratory and cardiac arrest occurred.

What is the cause of death?

**"INJURIES. DAMAGE"
OPTION #7**

1. Which of the listed wounds progresses most favorably?

- A) inflicted with an axe.

- B) shrapnel wounds.
- IN) bullet wounds.
- G) caused by sharp cutting instruments.
- D) caused by blunt objects.

Choose the correct answer.

2. When should primary treatment of a patient's wound be performed? delivered in a state of severe shock?

- A) immediately upon admission.
- B) immediately after the patient comes out of shock.
- IN) 2 hours after admission.
- G) the next day.
- D) after blood transfusion has been established.

Choose the correct answer.

3. Specify the main periods of the clinical course of traumatic toxicosis:

- 1) reactive period;
- 2) period of increasing edema and vascular insufficiency;
- 3) toxic period;
- 4) period of acute renal failure;
- 5) recovery period.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 3, 4; B - 2, 4, 5; G - 1, 3, 5; D - 1, 4, 5.

4. What are the main measures for shock in the prehospital stage?

Select all correct answers

- A. Elimination of asphyxia and ensuring adequate breathing.;
- B. Stopping external bleeding.;
- B. Pain relief.;
- D. Introduction of plasma replacement solutions.;
- D. Application of skeletal traction;
- E. Transport immobilization.;
- G. Fast and gentle transportation.;

5. What are the main local symptoms that are important for diagnosing a fracture?

1. Pain, swelling.
2. Limb deformity.
3. Lacerated wound with a large amount of crushed tissue.
4. Pathological mobility of the limb.
5. Shortening of the limb.

Choose the correct combination of answers: A - 2, 3, 4; B - 2, 4, 5; B - 3,4,5; G - 1, 2, 3; D - 1, 3, 5.

6. What is the duration of the second phase of consolidation?

- A. 3–6 weeks;
- B. 2 weeks;
- V. 3 months;
- D. 1 year or more.;

7. Characteristic features of burn shock are:

- 1) excitement in the first hours after the burn;
- 2) torpid phase of shock in the first hours after the burn;
- 3) hypovolemia;
- 4) hypercapnia;
- 5) oliguria.

Choose the correct combination of answers: A - 2, 4, 5; B - 1, 3, 4; B - 2,3,5; G— 1.3, 5; D— 1,4,5.

8. Acute burn toxemia continues:

- A) 2-72 hours;
- B) 7-8 days;
- B) 10-15 days;
- D) 15-20 days;
- D) more than 20 days.

Choose the correct answer.

9. When is the first dressing performed after a planned operation?

- A. On the same day;

- B. The next day;
- V. It doesn't matter;
- G. On the 3rd day;

10. Select from the following what can be used for transport immobilization of the upper limb?

Select all correct answers

- A. Tight bandage;
- B. Ladder bus.;
- B. Scarf bandage.;
- G. Bellera Tire.;
- D. Shina Diterichs.;

SITUATIONAL TASK

At a railway crossing, a man's leg was amputated at the level of the middle third of his thigh by the wheels of a locomotive.

What should be done to stop the bleeding? What to do next with the victim?

**"INJURIES, DAMAGE"
OPTION #8**

1. What are the signs of the development of putrefactive infection in a wound?

- 1) foul odor.
- 2) absence of granulations.
- 3) gray color of exudate.
- 4) chills in the absence of pain.
- 5) severe pain in the absence of chills.

Choose the correct combination of answers: A - 1, 2, 5; B - 2, 3, 4; B - 1, 2, 3, 4; G - 1, 2, 5; D - 1, 3, 5.

2. Contraindications for primary surgical treatment of forearm wounds are:

- A) wound contamination;
- B) crushing the edges of the wound;
- B) the presence of an open fracture of the radius;
- G) shock III degree;
- D) tendon damage.

Choose the correct answer.

3. Specify the main periods of the clinical course of traumatic toxicosis:

- 1) reactive period;
- 2) period of increasing edema and vascular insufficiency;
- 3) toxic period;
- 4) period of acute renal failure;
- 5) recovery period.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 3, 4; B - 2, 4, 5; G - 1, 3, 5; D - 1, 4, 5.

4. What are the main stages of providing hospital care to a victim with severe trauma and traumatic shock?

Select all correct answers

- A. Primary examination;
- B. Full sanitary treatment.;
- B. Elimination of respiratory disorders.;
- D. Correction of hemodynamic disorders.;
- D. Diagnosis and treatment of other injuries.;
- E. Conducting psychological tests;

5. What are the main local symptoms that are important for diagnosing a fracture?

- 1. Pain, swelling.
- 2. Limb deformity.
- 3. Lacerated wound with a large amount of crushed tissue.
- 4. Pathological mobility of the limb.
- 5. Shortening of the limb.

Choose the correct combination of answers: A - 2, 3, 4; B - 2, 4, 5; B - 3,4,5; G - 1, 2, 3; D - 1, 3, 5.

6. What are the first aid measures for fractures?

Select all correct answers

- A. Pain relief.;
- B. Reposition.;
- B. Transport immobilization.;
- D. Application of skeletal traction.;

7. Predicting burn severity. Which answer matches relatively favorable prognosis?

- A) According to the rule of nines - 45%.
 - B) According to the "hundreds" rule – 81-100.
 - B) According to the "hundreds" rule – 40-60.
 - D) Superficial burn - 20%.
 - D) According to the Frank index - 30-60 units.
- Choose the correct answer.

8. What periods are distinguished during a burn disease and in what sequence do they occur?

- 1) Acute burn toxemia.
- 2) Dehydration phase.
- 3) Burn shock.
- 4) Septicotoxemia.
- 5) Hydration phase.
- 6) Convalescence.

Choose the correct combination of answers: A - 1, 3, 2, 4; B - 3, 5, 1, 6; B - 3, 1, 4, 6; G - 1, 3, 6, 2; D - 3, 4, 1, 6.

9. When is the dressing room wet cleaned?

Select all correct answers

- A. Every day before starting work;
- B. Every day after finishing work;
- B. After each dressing;
- G. Once a week;

10. Select from the following what can be used for transport immobilization of the lower limb?

Select all correct answers

- A. Tight bandage;
- B. Ladder bus.;
- B. Scarf bandage.;
- G. Bellera Tire.;
- D. Shina Diterichs.;
- E. Bandaging to another limb.;

SITUATIONAL TASK

The patient was diagnosed with a fracture of the radius with interposition.
What treatment method is indicated in this case?

**"INJURIES. DAMAGE"
OPTION #9**

1. Characteristic signs of staphylococcal infection during wound suppuration are:

- 1) rapid development of the inflammatory process;
- 2) sluggish course of the inflammatory process;
- 3) severe pain in the sutured wound;
- 4) absence of pain in the wound;
- 5) severe intoxication.

Choose the correct combination of answers: A - 1, 3, 5; B - 2, 4, 5; B - 2, 3, 5; G - 1, 4, 5; D - 3, 5.

2. What manipulations are included in the primary surgical treatment of a wound?

- 1) excision of the edges of the wound.
- 2) stop bleeding.
- 3) removal of foreign bodies from the wound.
- 4) washing the wound with antibiotics.
- 5) suturing tightly or draining.

Choose the correct combination of answers: A - 1, 3, 4, 5; B - 1, 2, 3, 5; B - 2, 3, 4, 5; G - 1, 2, 4, 5; D - all answers are correct.

3. The clinical picture of a concussion is characterized by:

- 1) loss of consciousness at the time of injury;
- 2) retrograde amnesia;
- 3) loss of functions of certain brain structures;
- 4) impaired sensitivity, hemiparesis;
- 5) dizziness.

Choose the correct combination of answers: A - 1, 2; B - 1, 3, 4; B - 1, 2, 4; G - 1, 4; D - 1, 2, 5.

4. What are the main stages of providing hospital care to a victim with severe trauma and traumatic shock?

Select all correct answers

- A. Primary examination;
- B. Full sanitary treatment.;
- B. Elimination of respiratory disorders.;
- D. Correction of hemodynamic disorders.;
- D. Diagnosis and treatment of other injuries.;
- E. Conducting psychological tests;

5. Which method refers to the non-operative method of fixing bone fragments?

- A) Silk stitching.
- B) Fastening with metal plates.
- B) Application of skeletal traction.
- G) Insertion of pins into the osteoarticular canal.
- D) Application of compression-distraction method.

Choose the correct answer.

6. Specify the relative signs of a fracture.

Select all correct answers

- A. Local pain in the area of the fracture.;
- B. Edema, hematoma in the area of the fracture.;
- B. Pathological mobility.;
- D. Dysfunction of the limb;
- D. Shortening and forced position of the limb.;
- E. Deformation of the limb.;

7. Burn disease develops:

- 1) For superficial burns up to 10% of the body surface area.
- 2) More than 15% of body area.
- 3) More than 20% of body area.
- 4) For deep ones - from 5 to 10% of the body area.
- 5) More than 10% of body area.

Choose the correct combination of answers: A - 1, 4; B - 2.5; B - 2.4; D - 1.5; D-3.5.

8. With deep burns, the formation of a scab continues:

- A) 1-2 days;
- B) 3-7 days;
- B) 8-10 days;
- D) 11-15 days;
- D) more than 15 days.

Choose the correct answer.

9. Where do you start bandaging a limb?

- A. From the distal end;
- B. From the proximal end;
- V. It doesn't matter;

10. What is included in the rules for applying a plaster cast?

Select all correct answers

- A. Giving the limb a physiologically advantageous position.;
- B. Immobilization of adjacent joints.;
- B. Preventing the bandage from twisting;
- D. Leaving the fingers or toes free.;
- D. Creation of conditions for skeletal traction.;

SITUATIONAL TASK

The patient has an open hip fracture and arterial bleeding.
What will first aid consist of?

"INJURIES. DAMAGE" OPTION No. 10

1. Early symptoms of an anaerobic infection are:

- 1) increased body temperature;
- 2) inappropriate behavior of the patient;
- 3) pain in the wound area;
- 4) increase in limb volume;
- 5) frequent weak pulse.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4, 5; B - 1, 2, 3, 4; G - 1, 3, 4, 5; D - all answers are correct.

2. Early primary surgical treatment of the wound is performed:

- A) within 24 hours;
B) within 36 hours;
B) within 48 hours;
G) within 3 days;
D) later than 3 days against the background of antibiotic administration.
Choose the correct answer.

3. The clinical picture of a concussion is characterized by:

1. loss of consciousness at the time of injury;
2. retrograde amnesia;
3. loss of functions of certain brain structures;
4. impaired sensitivity, hemiparesis;
5. dizziness.

Choose the correct combination of answers: A - 1, 2; B - 1, 3, 4; B - 1, 2, 4; G - 1, 4; D - 1, 2, 5.

4. Select the main components of basic shock therapy.

Select all correct answers

- A. Replenishment of blood volume;
B. Combating paresis of the gastrointestinal tract.;
B. Oxygen therapy.;
D. Correction of acidosis.;
D. Immunostimulating therapy.;

5. Local causes of delayed fracture healing include:

- 1) soft tissue interposition;
- 2) avitaminosis;
- 3) displacement of bone fragments that was not corrected during reposition;
- 4) disturbance of mineral metabolism;
- 5) impaired blood supply to bone fragments.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1,3,4; G - 3, 4, 5; D- 1,3,5.

6. What are the basic rules for x-ray examination for fractures?

Select all correct answers

- A. The damaged area should be located in the center of the image.;
B. It is mandatory to take photographs in two projections, perpendicular to one another.;
B. At least one adjacent joint must be visible on the radiograph;
D. If necessary, it is possible to take an image of a symmetrical zone.;
D. The x-ray must show two adjacent joints;

7. The following phases of local clinical manifestations of radiation burns are distinguished:

- 1) primary reaction;
- 2) latent period;

- 3) period of hyperemia and edema;
- 4) period of bubble formation;
- 5) period of development of ulcers and necrosis.

Choose the correct combination of answers: A - 1, 2, 3, 5; B - 2, 3, 4, 5; B - 1, 2, 3, 4; G - 1, 3, 4, 5; D - 1, 2, 5.

8. Based on what data can we assume in the first hours deep burn?

- 1) Pain sensitivity is preserved.
- 2) There is no pain sensitivity.
- 3) There is swelling of the unaffected underlying parts of the extremities.
- 4) There is no swelling.
- 5) With thermography there is a decrease in heat transfer.

Choose the correct combination of answers: A - 1, 2, 5; B - 1, 3, 5; V - 2,3,5; G-2,4,5; D-2,5.

9. When applying a bandage to the lower limb, the doctor should stand towards the patient:

- A. face;
- B. back;

10. Select types of plaster casts.

Select all correct answers

- A. Longueta.;
- B. Circular bandage;
- B. Spiral bandage;
- G. Bridge bandage;
- D. Longuet-circular bandage.;
- E. Window bandage;
- G. Hip bandage;

SITUATIONAL TASK

After applying a circular plaster cast for a fracture of the bones of the right leg, a patient developed pain and cyanosis of the toes, a feeling of "crawling goosebumps" in the limb and chilliness. The quality of the plaster was not checked before application; it dries poorly and does not harden.

What is the reason for this and what needs to be done?

**"INJURIES. DAMAGE"
OPTION No. 11**

1. What is a wound called?

- A. Any damage accompanied by a violation of the integrity of any organ or tissue;
- B. Any damage accompanied by a violation of the integrity of the skin;
- B. Any damage to body tissues, accompanied by a violation of the integrity of the integumentary tissues;

2. What is the volume of primary treatment of a wound at the bottom of which there is a large vascular bundle?

- A) no treatment is performed, treatment is conservative.
- B) the edges, walls and bottom of the wound are excised along with the vascular bundle, the wound is stitched up.
- B) To conservative treatment followed by the application of secondary seams.
- G) excise the edges and walls of the wound without affecting the vascular bundle, remove foreign bodies and necrotic tissues, and administer antibiotics.
- D) the wound is excised and drained without suturing.

Choose the correct answer.

3. With closed lung injury, the following complications may occur: opinions:

- 1) closed pneumothorax;
- 2) open pneumothorax;
- 3) valvular pneumothorax;
- 4) soft tissue emphysema;
- 5) wet lung.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 1, 4, 5; B - 1, 3, 4, 5; G - 2, 3, 4, 5; D - 1, 2, 3, 5.

4. When examining a victim with traumatic shock in a hospital, determine:

Select all correct answers

- A. adequacy of external respiration;;
- B. the presence of ongoing external or internal bleeding;;
- B. failure of the valve apparatus of the saphenous veins;;
- G. hemodynamic state;;
- D. presence of neurological disorders;;
- E. anamnesis according to the "ample" system;

5. It is generally accepted that dislocation occurs in the bone whose articular surface is located distal to the other bones of the joint; the exception is dislocation:

- A) humerus;
 - B) ulna;
 - B) phalanges of the finger;
 - D) femur;
 - D) vertebra.
- Choose the correct answer.

6. What is used for pain relief for fractures?

Select all correct answers

- A. Injection of procaine into the hematoma;
- B. Conduction anesthesia.;
- B. Infiltration anesthesia according to Vishnevsky.;
- G. Anesthesia;

7. Burn disease develops:

1. For superficial burns up to 10% of the body surface area.
2. More than 15% of body area.
3. More than 20% of body area.
4. For deep ones - from 5 to 10% of the body area.
5. More than 10% of body area.

Choose the correct combination of answers: A - 1, 4; B - 2.5; B - 2.4; D - 1.5; D-3.5.

8. Superficial burns include:

1. 1st degree burns;
2. second degree burns;
3. Sha degree burns;
4. 3rd degree burns;
5. IV degree burns.

Choose the correct combination of answers: A - 1; B - 1, 2; B - 1, 2, 3; G-1,2,3,4.

9. What type of bandage is the beginning of any bandage?

- A. Spiral;
- B. Circular;
- B. Creeping;
- G. Cruciform;

10. Name the main disadvantages of a plaster cast.

Select all correct answers

- A. Inability to retain bone fragments in areas with large muscle mass.;
- B. Possibility of formation of bedsores.;
- B. Inability to monitor the skin under the bandage.;
- D. Muscle atrophy of the limb, venous stasis;

SITUATIONAL TASK

What should be the action in a patient with IV degree frostbite of the foot with developed wet gangrene of the foot, sepsis?

"INJURIES. DAMAGE" OPTION No. 12

1. Select the main clinical signs of wounds:

Select all correct answers

- A. pain;
- B. hematoma;

- B. bleeding;
- G. inflammatory changes;
- D. gaping;

2. What is the name of the suture that is applied to close a wound if 14 days have not passed since the injury?

- A) Primary seam.
- B) primary delayed suture.
- B) Ranterior secondary suture.
- G) late secondary suture.
- D) provisional seam.

Choose the correct answer.

3. Rupture of a hollow organ with closed abdominal trauma is accompanied byis given:

- 1) development of peritonitis;
- 2) hematuria;
- 3) the presence of free gas in the pelvic cavity;
- 4) the presence of free gas under the diaphragm dome.

Choose the correct combination of answers: A - 1, 2; B - 1, 3; B - 1, 4; G - 1, 2, 4.

4. Select the reasons for the development of traumatic shock.

Select all correct answers

- A. Painful impulses.;
- B. Endotoxiosis;
- B. Hypothermia.;
- G. Blood loss.;
- D. Kidney failure.;

5. It is generally accepted that dislocation occurs in the bone whose articular surface is located distal to the other bones of the joint; the exception is dislocation:

- A) humerus;
- B) ulna;
- IN) phalanges of the finger;
- G) femur;
- D) vertebra.

Choose the correct answer.

6. Which of the following are considered complications of fractures?

Select all correct answers

- A. Bleeding;
- B. Traumatic shock.;
- B. Damage to internal organs and great vessels, nerve trunks.;
- G. Congestive pneumonia.;
- D. Fat embolism.;
- E. Wound infection, osteomyelitis, sepsis.;

7. The most effective element of the first medical aidcabbage soup at the scene of the incident with limited area (up to10% of the body surface) burns of I-II severity is:

- 1) lubricating the burned surface with Vaseline oil;
- 2) applying a dry aseptic dressing;
- 3) applying a bandage with an antiseptic solution;
- 4) cooling the burned area for 8-10 minutes with running cold water;
- 5) use of fat-soluble ointment.

8. What degree of frostbite is characterized by necrotic damage to the surface layer of the skin without damage to the germ layer and restoration of destroyed elements of the skin?live in 1-2 weeks?

- 1) frostbite of the first degree;
- 2) frostbite of the second degree;
- 3) frostbite of the third degree;
- 4) frostbite of III-IV degree;
- 5) IV degree frostbite.

9. What is the functionally advantageous position for the ankle joint?

- A. Dorsiflexion;
- B. Plantar extension;
- B. Middle position;

10. Select the benefits of skeletal traction.

Select all correct answers

- A. Graduality and accuracy of reposition.;
- B. The ability to monitor the skin of the limb.;
- B. Possibility of carrying out physiotherapeutic procedures.;

- D. Constant forced position of the limb.;
- D. Possibility of movement in the joints.;

SITUATIONAL TASK

During a car accident, the patient received an extensive laceration in the left buttock area. Delivered to the clinic 7 hours after the injury with signs of incipient inflammation.

Your diagnosis, first aid and treatment.

"INJURIES. DAMAGE" OPTION No. 13

1. Based on their origin, the following types of wounds are distinguished:

Select all correct answers

- A. surgical wounds;
- B. purulent wounds;
- B. accidental wounds;
- G. mixed wounds;

2. What are the deadlines for late PHO?

- A. First 12 hours;
- B. First 24 hours;
- B. 24–48 hours from the moment of injury;
- G. 48–72 hours;
- D. more than 72 hours;

3. Highlight the most effective instrumental methods diagnosis of closed abdominal injuries:

- 1) scintigraphy;
- 2) esophagogastroduodenoscopy;
- 3) thermography;
- 4) laparoscopy;
- 5) radiography.

Choose the correct combination of answers: A - 2, 4, 5; B - 1, 2, 4, 5; B - 3, 4, 5; G - 4, 5; D - 4, 5.

4. Select the reasons for the development of traumatic shock.

Select all correct answers

- A. Painful impulses.;
- B. Endotoxemia;
- B. Hypothermia.;
- G. Blood loss.;
- D. Kidney failure.;

5. Which of the following are considered complications of fractures?

Select all correct answers

- A. Bleeding;
- B. Traumatic shock.;
- B. Damage to internal organs and great vessels, nerve trunks.;
- G. Congestive pneumonia.;
- D. Fat embolism.;
- E. Wound infection, osteomyelitis, sepsis.;

6. Name the absolute indications for osteosynthesis.

Select all correct answers

- A. Open fracture.;
- B. Damage to great vessels, nerves, internal organs by fragments;
- B. Interposition of soft tissues.;
- G. False joint.;
- D. Comminuted fracture.;
- E. Incorrectly healed fracture with impaired limb function.;

7. What periods are distinguished during a burn disease and what is their sequence? a) acute

burn toxemia; b) dehydration phase; c) burn shock; d) septicotoxemia; e) hydration phase; e) convalescence.

Choose the correct combination of answers:

- 1) a, c, b, d.

- 2) b, c, d, f.
- 3) c, a, d, f.
- 4) a, c, e.
- 5) c, d, a, f.

8. What microorganism most often grows on a burn surface in the first days after injury?

1. Pseudomonas aeruginosa;
2. Proteus;
3. coli,
4. hemolytic streptococcus,
5. Staphylococcus aureus.

9. What properties does gauze dressing have?

- A. Elasticity;
- B. Hemostatic;
- B. Hydrophobicity;
- G. Hygroscopicity;

10. Name the main disadvantages of a plaster cast.

Select all correct answers

- A. Inability to retain bone fragments in areas with large muscle mass.;
- B. Possibility of formation of bedsores.;
- B. Inability to monitor the skin under the bandage.;
- D. Muscle atrophy of the limb, venous stasis;

SITUATIONAL TASK

The patient, a cattleman by profession, received a blow to the right cheek with a hoof while caring for animals, on which a laceration formed.

What is the danger and how to prevent complications?

**"INJURIES. DAMAGE"
OPTION No. 14**

1. Surgical wounds have the following characteristics:

Select all correct answers

- A. as a rule, they are applied for medicinal purposes;
- B. they are applied deliberately;
- B. they are applied under aseptic conditions;
- G. they are applied with minimal tissue trauma;
- D. are not accompanied by pain;
- E. are usually accompanied by serious bleeding;

2. What is the volume of primary treatment of a wound at the bottom of which there is a large vascular bundle?

- A) no treatment is performed, treatment is conservative.
 - B) the edges, walls and bottom of the wound are excised along with the vascular bundle, the wound is stitched up.
 - B) To conservative treatment followed by the application of secondary seams.
 - G) excise the edges and walls of the wound without affecting the vascular bundle, remove foreign bodies and necrotic tissues, and administer antibiotics.
 - D) the wound is excised and drained without suturing.
- Choose the correct answer.

3. Which of the following factors can lead to injury?

Select all correct answers

- A. Mechanical force.;
- B. High or low temperature.;
- B. Biological factors.;
- G. Electric current;
- D. Radioactive radiation.;
- E. Chemicals.;

4. Select the main components of basic shock therapy.

Select all correct answers

- A. Replenishment of blood volume;
- B. Combating paresis of the gastrointestinal tract.;
- B. Oxygen therapy.;
- D. Correction of acidosis.;
- D. Immunostimulating therapy.;

5. What layers are distinguished in the primary callus?

Select all correct answers

- A. Paraosseous.;
- B. Medullary.;
- B. Periosteal.;
- G. Endosteal.;
- D. Intermediate.;

6. What is used for extramedullary osteosynthesis?

Select all correct answers

- A. Plates.;
- B. Screws.;
- V. Spokes.;
- G. Staples.;
- D. Nails.;

7. Based on what data in the first hours after thermal injury can we assume is a deep burn? a) pain sensitivity is preserved; b) pain sensitivity is absent; c) there is swelling of unaffected surrounding tissues; d) there is no swelling; e) with thermography there is a decrease in heat transfer. Choose the correct combination of answers:

- 1) a, b, d.
- 2) a, c, d.
- 3) b, c, d.
- 4) b, d, d.
- 5) b, d.

8. What degree of frostbite is characterized by necrotic damage to the surface layer of the skin without damage to the germ layer and restoration of destroyed elements of the skin? live in 1-2 weeks?

- 1. frostbite of the first degree;
- 2. frostbite of the second degree;
- 3. frostbite of the third degree;
- 4. frostbite of III-IV degree;
- 5. IV degree frostbite.

9. Is it possible to reuse dressing material?

- A. Yes;
- B. Yes, but with repeated sterilization;
- B. Yes, if it is not contaminated;
- G. No, never;

10. Select from the following what can be used for transport immobilization of the upper limb?

Select all correct answers

- A. Tight bandage;
- B. Ladder bus.;
- B. Scarf bandage.;
- G. Bellera Tire.;
- D. Shina Diterichs.;

SITUATIONAL TASK

The hunter was bitten by a wolf.
What can develop and what measures can be taken to prevent this disease?

ANSWERS "TRAUMAS. DAMAGES"

OPTION 1

- 14
- 2 - 3
- 3 - 5
- 4 - A
- 5 - A
- 6 - A
- 7 - B
- 8 - ABES
- 9 - G
- 10 - V

Shake? Brain contusion? Compression?
Brain swelling.

OPTION 2

- 14
- 2 - 3
- 3 - BVJ
- 4 - ABVE
- 5 - G
- 6 - ABCDEJ
- 7 - BVD
- 8 - BV
- 9 - G
- 10 - V

Blunt abdominal trauma, bladder rupture

OPTION 3

- 13
- 2 - 2
- 3 - 2
- 4 - G
- 5 B
- 6 - ABGD
- 7 - B
- 8 - BGZ
- 9 - A
- 10 - D

Preagonal state

OPTION 4

- eieven
- 2 - 2
- 3 - G
- 4 - AB
- 5 B
- 6 - AVG
- 7 - AVG
- 8 - AB
- 9 - B
- 10 - AG

Hip dislocation

OPTION 9

- 1 - A
- 2 - B
- 3 - D

OPTION 5

- 1 - G
- 2 - G
- 3 - B
- 4 - A
- 5 - G
- 6 - B
- 7 - ABGD
- 8 - AVG
- 9 - A
- 10 - ABG

Burn of 45% of the body surface, stage of burn shock, wound treatment after recovery from shock

OPTION 6

- 1 - B
- 2 - B
- 3 - G
- 4 - A
- 5 - D
- 6 - BVD
- 7 - B
- 8 - B
- 9 - A
- 10 - ABG

Air embolism

OPTION 7

- 1 - G
- 2 - B
- 3 - B
- 4 - ABVGEZH
- 5 B
- 6 - A
- 7 - G
- 8 - B
- 9 - B
- 10 - ABC

Tourniquet application, transportation

OPTION 8

- 1 - B
- 2 - G
- 3 - B
- 4 - AVGD
- 5 B
- 6 - AB
- 7 - D
- 8 - B
- 9 - AB
- 10 - BDE

Open reduction indicated

OPTION 12

- 1 - AED
- 2 - B
- 3 - B
- 4 - A

- 4 - AVGD
- 5 - B
- 6 - ABGD
- 7 - B
- 8 - B
- 9 - A
- 10 - ABVG

Temporary stop of bleeding, application of a bandage to the wound, anesthesia, immobilization, transportation are indicated.

OPTION 10

- 1 - D
- 2 - A
- 3 - D
- 4 - BUG
- 5 - D
- 6 - ABCG
- 7 - D
- 8 - B
- 9 - A
- 10 - ABGDE

The plaster cast is tightly applied, the quality of the plaster is poor. Remove the bandage, apply it correctly from high-quality plaster

OPTION 11

- 1 - B
- 2 - G
- 3 - B
- 4 - ABGDE
- 5 - D
- 6 - ABG
- 7 - B
- 8 - B
- 9 - B
- 10 - AUG

Emergency amputation, detoxification, antibiotic therapy + specific therapy are indicated

- 5 - D
- 6 - ABCDE
- 7 - 4
- 8 - 2
- 9 - B
- 10 - ABCD

Infected laceration of the left buttock - PSO, specific prevention

OPTION 13

- 1 - AB
- 2 - G
- 3 - G
- 4 - A
- 5 - ABCDE
- 6 - ABVGE
- 7 - 3
- 8 - 5
- 9 - G
- 10 - AUG

Possible rabies - specific prevention

OPTION 14

- 1 - ABCD
- 2 - G
- 3 - ABGDE
- 4 - AG
- 5 - AVGD
- 6 - AB
- 7 - 3
- 8 - 2
- 9 - G
- 10 - ABC

Possible rabies - specific prevention

**"INFECTION"
OPTION #1**

1. According to the source of occurrence, the following types of surgical infection are distinguished: a) endogenous; b) exogenous; c) mixed; d) specific; e) nonspecific. Choose the correct combination of answers:

- 1) a B C.
- 2) g, d.
- 3) c, d, d.
- 4) a, b.
- 5) everything is true.

2. Therapeutic measures in the presence of a boil boil down to:

- 1) wiping the surrounding skin with 70% alcohol;
- 2) in the presence of necrotic masses - squeezing them out followed by a bandage with a hypertonic solution;
- 3) injection with penicillin and procaine;
- 4) taking sulfonamides orally;
- 5) local UV irradiation.

Choose the correct combination of answers: A - 1, 3, 4, 5; B - 1, 2; B - 1, 2, 4, 5; G - 3, 5; D - all answers are

correct.

3. What is the direction of the incisions when opening a retromammary abscess?

- A. Radial;
- B. Semi-oval near the areola;
- B. Semi-oval at the lower edge of the gland;
- G. Circular around the nipple;

4. Therapeutic measures for erythematous erysipelas localized on the lower leg, boil down to:

- 1) applying wet dressings with nitrofurazone;
- 2) intramuscular administration of antibiotics;
- 3) desensitizing therapy (diphenhydramine, calcium chloride);
- 4) UV irradiation of the inflammation site;
- 5) warm baths with potassium permanganate.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 2, 3, 5; G - 1, 2, 3, 5; D - all answers are correct.

5. Select the definition of abscess.

Select all correct answers

- A. Accumulation of pus in various body cavities.
- B. Accumulation of pus in hollow organs.
- B. Limited accumulation of pus in various tissues.
- D. Limited accumulation of pus in fatty tissue.

6. Non-clostridial anaerobic microflora includes: a) fusobacteria; b) peptostreptococci; c) streptococci; d) proteus; e) staphylococci; f) eubacteria; g) peptococci. Choose the correct combination of answers:

- 1) c, g, g.
- 2) Where.
- 3) a, b, f, g.
- 4) c, d, d.
- 5) everything is true.

7. Which of the following is indicated in the treatment of anaerobic infection?

Select all correct answers

- A. Surgical treatment of the wound;
- B. Hyperbaric oxygenation.;
- B. Packing the wound;
- D. The use of anti-gangrenous serums.;
- D. Detoxification therapy.;
- E. Antibacterial therapy.;

8. What is characteristic of a wound with an anaerobic infection?

Select all correct answers

- A. The tissues inside the wound are sharply swollen;
- B. A large amount of purulent discharge.;
- B. Severe hyperemia of the skin around the wound.;
- D. Scanty discharge of a putrefactive nature.;
- D. The wound tissue is dirty gray in color.;
- E. The phenomena of inflammation are determined only in the tissues of the wound.;

9. Early symptoms of anaerobic infection are: a) high body temperature; b) inappropriate behavior of the patient; V) bursting pain in the wound; d) swelling of wound tissue; e) frequent weak pulse. Choose the correct combination of answers:

- 1) a B C.
- 2) b, c, d, d.
- 3) a B C D.
- 4) a, c, d, e.
- 5) everything is true.

10. Name the main localization of tuberculosis when bones are affected:

- 1) diaphyses of long tubular bones;
- 2) diaphyses of the phalanges of the fingers;
- 3) vertebral bodies;

- 4) flat bones;
- 5) epiphyses of long tubular bones.

Choose the correct combination of answers: A - 1, 3; B - 1, 2, 3; B - 2, 3, 4; G - 2, 3, 5; D - 1, 3, 5.

TASK

A 30-year-old man consulted a surgeon at the clinic with complaints of a painful lump in the upper lip with pus in the center, pain in this area, headache, and an increase in body temperature to 39 °C. Upon examination, a cone-shaped raised skin infiltrate with a diameter of 0.5 cm, the tip of the necrotic rod is determined in the center. The swelling spreads to the eye area, as a result of which the palpebral fissure is somewhat narrowed.

Make a diagnosis. What are the tactics of the clinic doctor? What treatment will you use? Is surgery necessary?

"INFECTION" OPTION #2

1. To general non-microbial etiological factors for the development of purulent surgical infection include: a) the age of the patient; b) diabetes mellitus; c) taking hormonal drugs; d) ineffective hemostasis; e) electrocoagulation and electrosurgery. Choose the correct combination of answers;

- 1) a, b.
- 2) a B C.
- 3) c, d, d.
- 4) g, d.
- 5) everything is true.

2. What is the location and direction of the incision when opening a retromammary abscess?

- A) Radial in the upper quadrants of the breast.
 - B) Semi-oval at the lower edge of the gland.
 - B) Radial in the lower half of the mammary gland.
 - D) Semi-oval above the upper edge of the gland.
 - D) Circular around the nipple.
- Choose the correct answer.

3. Select the main methods of treating carbuncle.

Select all correct answers

- A. Physiotherapy.
- B. Injection of the carbuncle with antibiotics.
- B. Excision of necrotic tissue within healthy tissue.
- D. Dissection of the skin and subcutaneous tissue to healthy tissue.
- D. Detoxification therapy.
- E. General antibacterial therapy.

4. For acute mastitis in the serous stage, treatment comes down to:

- 1) cut;
- 2) prevention of lactostasis;
- 3) supporting the mammary gland with a scarf bandage;
- 4) general antibacterial therapy;
- 5) retromammary procaine blockade with antibiotics and proteolytic enzymes.

Choose the correct combination of answers: A - 1; B - 1, 2, 3; B - 3, 4, 5; G - 2, 3, 4, 5; D - all answers are correct.

5. Select the clinical forms of erysipelas.

Select all correct answers

- A. Erythematous.
- B. Bullous.
- B. Necrotic.
- G. Erythematous-hemorrhagic.
- D. Erythematous-bullous.
- E. Phlegmonous.

6. Early symptoms of anaerobic infection are: a) high body temperature; b) inappropriate behavior of the patient; c) bursting pain in the wound; d) swelling of wound tissue; e) frequent weak pulse. Choose the correct

combination of answers:

1. a B C.
2. b, c, d, d.
3. a B C D.
4. a, c, d, e.
5. everything is true.

7. What is characteristic of a wound with an anaerobic infection?

Select all correct answers

- A. The tissues inside the wound are sharply swollen;
- B. A large amount of purulent discharge.;
- B. Severe hyperemia of the skin around the wound.;
- D. Scanty discharge of a putrefactive nature.;
- D. The wound tissue is dirty gray in color.;
- E. The phenomena of inflammation are determined only in the tissues of the wound.;

8. Select possible types of surgical treatment for anaerobic infection.

Select all correct answers

- A. Making "strap" incisions;
- B. Wide excision of necrotic tissue in the affected area.;
- B. Amputation of the affected limb.;
- G. Opening and drainage.;

9. TOnon-clostridial anaerobic microflora includes: a) fusobacteria; b) peptostreptococci; c) streptococci; d) proteus; e) staphylococci; f) eubacteria; g) peptococci. Choose the correct combination of answers:

1. c, g, g.
2. Where.
3. a, b, f, g.
4. c, d, d.
5. everything is true,

10. During osteoarticular tuberculosis, the following phases are distinguished:

- 1) general tuberculosis intoxication;
- 2) prearthritic;
- 3) arthritic;
- 4) post-aging;
- 5) relapse.

Choose the correct combination of answers: A- 1, 3, 5; B - 2, 3, 4; B - 1, 2, 5; G - 1, 2, 3, 4; D - all answers are correct.

TASK

Patient K., 40 years old, consulted a doctor. 2 days before his visit, during carpentry work, a splinter got under the nail plate of the third finger of the left hand. I removed the splinter myself. At the time of treatment, the patient complained of severe tugging pain under the nail. Pressure on the nail increases the pain. When examined under the nail plate, an oblong-shaped accumulation of pus is determined, reaching almost the nail hole.

What is your diagnosis? Surgical tactics? Conservative treatment/Surgery? Which exactly? Type of pain relief? Is tetanus prophylaxis necessary?

"INFECTION"

OPTION #3

1. Local non-microbial etiological factors for the development of purulent surgical infection include: a) traumatic performance of surgical procedures; b) electrocoagulation and electrosurgery; c) imposition of a large number of ligatures; d) use of non-absorbable suture material; e) ineffective hemostasis; f) duration of implementation of the operational assistance. Choose the correct combination of answers:

- 1) a B C.
- 2) c, d, d.
- 3) Where.
- 4) a, c, d.
- 5) everything is true.

2. What should be done with phlegmon of soft tissues in the softening stage?

- A) Cold (hypothermia).
- B) Wide incision and drainage.
- B) Puncture followed by bacteriological examination.
- G) Hot compress.
- D) Procaine injection with antibiotics.

Choose the correct answer.

3. What is the direction of the incisions when opening an intramammary abscess?

- A. Radial.
- B. Semi-oval near the areola.
- B. Semi-oval at the lower edge of the gland.
- G. Circular around the nipple.

4. Furuncle - purulent inflammation:

Select all correct answers

- A. sweat gland;
- B. fiber surrounding the hair follicle;
- V. hair follicle;
- G. sebaceous gland with surrounding fiber.

5. Carbuncle - purulent-necrotic inflammation:

Select all correct answers

- A. sweat glands;
- B. hair follicle;
- B. sebaceous gland with surrounding tissue;
- G. several hair follicles;
- D. subcutaneous tissue and skin.

6. When clostridial anaerobic infection develops, the following types of surgical treatment are used: a) drainageformation of an abscess; b) wide dissection of the wound; c) dissection of fascial sheaths; d) amputation with dissection of the stump; e) amputation with application of a tourniquet and suturing of the stump. Choose the correct combination of answers:

- 1) a, c, d.
- 2) a, b, d.
- 3) b, c, d.
- 4) b, c, d.
- 5) g, d.

7. TOnon-clostridial anaerobic microflora includes: a) fusobacteria; b) peptostreptococci; c) streptococci; d) proteus; e) staphylococci; f) eubacteria; g) peptococci. Choose the correct combination of answers:

1. c, g, g.
2. Where.
3. a, b, f, g.
4. c, d, d.
5. everything is true,

8. Daily therapeutic dose of antitetanus serum:

- A) 3000-5000 ME;
- B) 10,000-20,000 ME;

- B) 50,000 ME;
 - D) 100,000-150,000 ME;
 - D) 200,000IU.
- Choose the correct answer.

9. Treatment of tetanus includes: a) antitetanus globulin; b) tetanus toxoid; c) antitetanuscollar; d) tranquilizers and barbiturates; e) muscle relaxants; e) mechanical ventilation. Choose the correct combination of answers:

1. a B C D.
2. c, d, d, f.
3. a, c, d.
4. b, d, f.
5. everything is true.

10. Clinical signs of bone tuberculosis:

- 1) damage to the diaphysis of long tubular bones;
- 2) frequent damage to nearby joints;
- 3) damage to the growth zone of the bone;
- 4) negative Alexandrov's symptom;
- 5) amyotrophy.

Choose the correct combination of answers: A- 1,2, 3; B -2, 3,4; B- 1,4, 5; G- 1, 3, 5; D - 2, 3, 5.

TASK

The seamstress turned to the clinic surgeon complaining of leg pain the phalanx of the second finger of the right hand. I didn't sleep at night. From the medical history it is known that the day before, while working, she was pricked with a long needle in the area of the "pad" of the nail phalanx of the second finger of the right hand. On examination: on the palmar surface of the distal phalanx there is pronounced tension and tenderness of the soft tissues, local hyperthermia and hyperemia, at the injection site there is a detachment of the epidermis with a diameter of 0.3 cm with an accumulation of pus underneath.

What is your diagnosis? Doctor's tactics? Type of operational access? How to check whether the process has spread to the neighboring phalanx? Is drainage necessary? Management of the patient in the postoperative period?

"INFECTION" OPTION #4

1. The main signs of bacterial toxic shock: a) high body temperature; b) bradycardia; c) chills; d) drop in blood pressure; d) oliguria. Choose the correct combination of answers:

- 1) a, c, d, e.
- 2) a, b, c, d.
- 3) b, c, d, d.
- 4) a, c, d.
- 5) everything is true,

2. The following clinical signs are characteristic of a carbuncle:

- 1) painful infiltrate;
- 2) painless infiltration;
- 3) the presence of skin necrosis and purulent pustules;
- 4) the presence of necrosis with small hemorrhagic vesicles;
- 5) enlargement of regional lymph nodes.

Choose the correct combination of answers: A - 1, 3, 5; B - 2, 3, 5; B -2,4,5; G- 1, 3, 4; D - 1,4,5.

3. Name the factors predisposing to the development of mastitis.

Select all correct answers

- A. Nipple cracks.
- B. Stagnation of milk.
- B. Pathological birth.
- D. Repeated births.
- D. Long-term feeding of the child.

4. Select the features of surgical treatment of carbuncle.

Select all correct answers

- A. Cross-shaped incision;

- B. Wide dissection of tissues to healthy ones;
- B. Closed drainage;
- D. Minimal tissue dissection;
- D. Excision of necrotic tissue;

5. What microorganism causes erysipelas? a) staphylococcus; b) streptococcus; c) *Pseudomonas aeruginosa*; d) *Proteus vulgaris*; e) peptococcus.

- 1) A.
- 2) b.
- 3) V.
- 4) G.
- 5) d.

6. Local signs of an infectious wound process caused by non-clostridial anaerobic microflora include: a) gray wound tissue; b) copious amounts of dirty gray, brown discharge; c) absence of necrosis; d) abundance of necrotic tissue; e) the presence of bright pink granulations; f) accumulation of gas in soft tissues. Select correct combination of answers:

- 1) a, b, d.
- 2) c, d, f.
- 3) a, b, d.
- 4) a, b, d, f.
- 5) everything is true.

7. When clostridial anaerobic infection develops, the following types of surgical treatment are used: a) drainage formation of an abscess; b) wide dissection of the wound; c) dissection of fascial sheaths; d) amputation with dissection of the stump; e) amputation with application of a tourniquet and suturing of the stump. Choose the correct combination of answers:

1. a, c, d.
2. a, b, d.
3. b, c, d.
4. b, c, d.
5. g, d.

8. What does emergency tetanus prophylaxis include?

Select all correct answers

- A. Passive immunization.;
- B. Administration of antibiotics.;
- B. Active immunization.;
- G. PSO of the wound.;

9. Operational aid for putrefactive infection includes: a) the widest possible dissection of the wound; b) removal of necrotic subcutaneous tissue; c) dissection of fascial sheaths; d) removal of devitalized muscles; e) evert and fixing the edges of the wound. Choose the correct combination of answers:

1. a B C.
2. g, d.
3. b, d.
4. a, c, d.
5. everything is true.

10. Identify early radiological signs of tuberculosis of bones and joints:

- 1) osteoporosis;
- 2) osteosclerosis;
- 3) absence of periostitis;
- 4) the presence of a sequestration box;
- 5) dense bone sequestra;
- 6) sequestrum of the "melting sugar" type.

Choose the correct combination of answers: A - 2, 4, 5; B - 1, 4, 5; B - 1, 4, 6; G - 1, 3, 6; D - 2, 3, 6.

TASK

A 6-year-old child complains of an increase in body temperature to 37.6 °C and pain in the area of the right hip joint when walking. There is atrophy of the muscles of the right lower limb, smoothness of the inguinal and gluteal folds. X-ray examination revealed destruction of the femoral head.

What disease should be suspected?

"INFECTION"

OPTION #5

1. What is characteristic of inflammatory changes in the composition of peripheral blood?

Select all correct answers

- A. Leukocytosis;
- B. Anemia;
- B. Shift of the leukocyte formula to the left;
- D. Increase in ESR;
- D. Lymphocytosis;

2. Taking into account clinical signs, the following forms can be distinguished: faces:

- 1) erythematous;
- 2) bullous;
- 3) phlegmonous;
- 4) purulent;
- 5) necrotic.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4, 5; B - 1, 2, 3, 5; G - 1, 3, 4, 5; D - all answers are correct.

3. According to the source of occurrence, the following types of surgical infection are distinguished: a) endogenous; b) exogenous; c) mixed; d) specific; e) nonspecific. Choose the correct combination of answers:

- 1. a B C.
- 2. g, d.
- 3. c, d, d.
- 4. a, b.
- 5. everything is true.

4. For the treatment of erythematous erysipelas, the following is used:

Select all correct answers

- A. wet antiseptic dressings;
- B. antibiotics;
- B. sulfonamides;
- G. desensitizing therapy;
- D. UV irradiation of the affected areas of the skin.

5. What treatment method is used for soft tissue phlegmon in the stage of purulent melting?

- 1) cold (hypothermia);
- 2) wide incision and drainage;
- 3) puncture followed by bacteriological examination;
- 4) hot compress;
- 5) novocaine injection with antibiotics.

6. In the complex treatment of gas gangrene, the following is used: a) excision of necrotic tissue; b) the widest possible dissection of tissue; c) antibacterial monotherapy; d) detoxification infusion therapy; e) hyperbaric oxygenation; e) antibacterial combined therapy; g) muscle relaxants + mechanical ventilation. Choose the correct combination of answers:

- 1) a, b, d, d, f.
- 2) d, f, g.
- 3) c, g, g.
- 4) b, f, g.
- 5) everything is true.

7. Early symptoms of anaerobic infection are: a) high body temperature; b) inappropriate behavior of the patient; V)bursting pain in the wound; d) swelling of wound tissue; e) frequent weak pulse. Choose the correct combination of answers:

- 1. a B C.
- 2. b, c, d, d.
- 3. a B C D.
- 4. a, c, d, e.
- 5. everything is true.

8. For emergency specific prevention of tetanus, you can use:

Select all correct answers

- A. ADS-M-anatoxin;;
- B. tetanus toxoid;
- V. PSCHI;;
- G. PSS.;

9. When clostridial anaerobic infection develops, the following types of surgical treatment are used: a) drainageformation of an abscess; b) wide dissection of the wound; c) dissection of fascial sheaths; d) amputation with dissection of the stump; e) amputation with application of a tourniquet and suturing of the stump. Choose the correct combination of answers:

- 1. a, c, d.
- 2. a, b, d.
- 3. b, c, d.
- 4. b, c, d.
- 5. g, d.

10. The following forms of tuberculous lymphadenitis are distinguished:

- 1) serous;
- 2) infiltrative;
- 3) caseous;
- 4) purulent;
- 5) indurative.

Choose the correct combination of answers: A - 1, 3, 4; B - 2, 3, 4; B - 2.4, 5; G -1.3, 5; D-2, 3.5.

TASK

During examination, a conglomerate of enlarged cervical lymph nodes was revealed in the patient; palpation was painful. History for the disease lasted 2 months, the nodes gradually enlarged. Body temperature 37.8 °C. The patient's husband was seen by a TB specialist 6 months ago.

What is your presumptive diagnosis?

**"INFECTION"
OPTION #6**

1. The forms of erysipelas include: a) erythematous; b) bullous; c) catarrhal; d) phlegmonous; e) necrotic; e) gangrenous. Choose the correct combination of answers:

- 1) a, b, d, f.
- 2) a, b, d, d.
- 3) b, c, d, f.
- 4) c, d, d, f.
- 5) everything is true.

2. Furuncle - purulent inflammation:

Select all correct answers

- A. sweat gland;
- B. fiber surrounding the hair follicle;
- V. hair follicle;
- G. sebaceous gland with surrounding fiber.

3. To generalnon-microbial etiological factors for the development of purulent surgical infection include: a) the age of the patient; b) diabetes mellitus; c) taking hormonal drugs; d) ineffective hemostasis; e) electrocoagulation and electrosurgery. Choose the correct combination of answers;

- 1) a, 6.
- 2) a B C.
- 3) c, d, d.
- 4) g, d.
- 5) everything is true.

4. For acute mastitis in the serous stage, treatment consists of:

Select all correct answers

- A. immobilization of the mammary gland;
- B. general antibacterial therapy;
- B. retromammary novocaine blockade with antibiotics;
- G. section;
- D. physical therapy.

5. Select the features of surgical treatment of carbuncle.

Select all correct answers

- A. Cross-shaped incision;
- B. Wide dissection of tissues to healthy ones;
- B. Closed drainage;
- D. Minimal tissue dissection;
- D. Excision of necrotic tissue;

6. Operational aid for putrefactive infection includes: a) the widest possible dissection of the wound; b) removal of necrotic subcutaneous tissue; c) dissection of fascial sheaths; d) removal of devitalized muscles; e) evert and fixing the edges of the wound. Choose the correct combination of answers:

- 1. a B C.
- 2. g, d.
- 3. b, d.
- 4. a, c, d.
- 5. everything is true.

7. Local signs of an infectious wound process caused by non-clostridial anaerobic microflora include: a) gray wound tissue; b) copious amounts of dirty gray, brown discharge; c) absence of necrosis; d) abundance of necrotic tissue; e) the presence of bright pink granulations; f) accumulation of gas in soft tissues. Select correct combination of answers:

- 1. a, b, d.
- 2. c, d, s.
- 3. a, b, d.
- 4. a, b, d, f.
- 5. everything is true.

8. Select possible types of surgical treatment for anaerobic infection.

Select all correct answers

- A. Making "strap" incisions;
- B. Wide excision of necrotic tissue in the affected area.;
- B. Amputation of the affected limb.;
- G. Opening and drainage.;

9. In the complex treatment of gas gangrene, the following is used: a) excision of necrotic tissue; b) the widest possible dissection of tissue; c) antibacterial monotherapy; d) detoxification infusion therapy; e) hyperbaric oxygenation; e) antibacterial combined therapy; g) muscle relaxants + mechanical ventilation. Choose the correct combination of answers:

- 1. a, b, d, d, f.
- 2. d, f, g.
- 3. c, g, g.
- 4. b, f, g.
- 5. everything is true.

10. Determine the characteristic clinical manifestations of tuberculous lymphadenitis:

- 1) the presence of a dense infiltrate with areas of softening;
- 2) periadenitis;
- 3) absence of periadenitis;
- 4) high body temperature;
- 5) symptom of crepitus in the lesion.

Choose the correct combination of answers: A - 1, 2; B - 1, 3, 4; B - 2, 4; G - 2.5; D-2, 4.

TASK

A victim with shrapnel wounds to the lower extremities was delivered from the scene of hostilities.

a) What specific infectious complications can we expect in such a victim? b) Methods for emergency prevention.

"INFECTION"

OPTION #7

1. What microorganism causes erysipelas? a) staphylococcus; b) streptococcus; c) Pseudomonas aeruginosa; d) Proteus vulgaris; d) peptococcus.

- 1) A.
- 2) b.
- 3) V.
- 4) G.
- 5) d.

2. Select the features of surgical treatment of carbuncle.

Select all correct answers

- A. Cross-shaped incision;
- B. Wide dissection of tissues to healthy ones;
- B. Closed drainage;
- D. Minimal tissue dissection;
- D. Excision of necrotic tissue;

3. Local non-microbial etiological factors for the development of purulent surgical infection include: a) traumatic performance of surgical procedures; b) electrocoagulation and electrosurgery; c) imposition of a large number of ligatures; d) use of non-absorbable suture material; e) ineffective hemostasis; f) duration of implementation of the operational assistance. Choose the correct combination of answers:

- 1) a B C.
- 2) c, d, d.
- 3) Where.
- 4) a, c, d.
- 5) everything is true.

4. What is the direction of the incisions when opening a retromammary abscess?

- A. Radial;
- B. Semi-oval near the areola;
- B. Semi-oval at the lower edge of the gland;
- G. Circular around the nipple;

5. Select the definition of cellulitis.

- A. Diffuse purulent inflammation of the subcutaneous fatty tissue.
- B. Diffuse inflammation of subcutaneous fatty tissue and cellular spaces.
- B. Limited accumulation of pus in fatty tissue.
- D. Purulent inflammation of various body cavities.
- D. Purulent inflammation of hollow organs.

6. Treatment of tetanus includes: a) antitetanus globulin; b) tetanus toxoid; c) antitetanus collar; d) tranquilizers and barbiturates; e) muscle relaxants; e) mechanical ventilation. Choose the correct combination of answers:

1. a B C D.
2. c, d, d, f.
3. a, c, d.
4. b, d, f.
5. everything is true.

7. According to the clinical course, the following forms of tetanus are distinguished:

1. erased;
2. subacute;
3. acute;
4. chronic;
5. lightning fast.

Choose the correct combination of answers: A - 1, 2, 4; B - 2, 3, 4; B - 3, 4, 5; G - 1, 2, 3; D - 1, 3, 4, 5.

8. Select the causative agents of anaerobic clostridial infection.

Select all correct answers

- A. Cl. perfringens.;
- B. Cl. tetani.;
- B. E. coli.;
- G. Cl. oedomatien.;
- D. Cl. septicum;
- E. Klebsiella.;
- J. Cl. histolyticus.;

9. Daily therapeutic dose of antitetanus serum:

- A) 3000-5000 ME;
- B) 10,000-20,000 ME;
- B) 50,000 ME;
- D) 100,000-150,000 ME;
- D) 200,000IU.

Choose the correct answer.

10. In the presence of enlarged lymph nodes, the following are important to establish the diagnosis of tuberculous lymphadenitis:

- 1) contact with a patient with tuberculosis;
- 2) enlarged dense painless mobile lymphatic nodes;
- 3) a conglomerate of lymph nodes fused together;
- 4) positive tuberculin tests;
- 5) results of puncture biopsy of the lymph node.

Choose the correct combination of answers: A- 1,2,3; B-2, 4, 5; B- 1,3,4,5; G- 1,2,4,5.

TASK

Patient E., 32 years old, was operated on as an emergency for acute phlegmonous appendicitis. An appendectomy was performed. The postoperative wound was not drained. On the 3rd day, the patient's body temperature increased to 38.2°C, and the pain in the wound area intensified, despite the anesthesia. On the dressing: the skin in the area of the sutures is of normal color, but upon palpation along the wound, compaction is determined (tissue infiltration).

What complication developed in the patient? What actions will you take to clarify the diagnosis and treat the complication?

**"INFECTION"
OPTION #8**

1. What structural elements are affected by a boil? a) hair follicle; b) sebaceous gland; c) muscles; d) sweat gland; d) subcutaneous tissue. Choose the correct combination of answers:

- 1) a, b, d.
- 2) a, b, d.
- 3) a, d, d.
- 4) a, c, d.
- 5) everything is true.

2. For the treatment of erythematous erysipelas, the following is used:

Select all correct answers

- A. wet antiseptic dressings;
- B. antibiotics;
- B. sulfonamides;
- G. desensitizing therapy;
- D. UV irradiation of the affected areas of the skin.

3. What is characteristic of inflammatory changes in the composition of peripheral blood?

Select all correct answers

- A. Leukocytosis;
- B. Anemia;
- B. Shift of the leukocyte formula to the left;
- D. Increase in ESR;
- D. Lymphocytosis;

4. What are the ways of bacterial contamination of breast tissue? a) implantation; b) intracanalicular; c) metastatic; d) hematogenous; e) lymphogenous; e) injection. Choose the correct combination of answers:

- 1) a, c, e.
- 2) b, d, d.
- 3) a, d, d.
- 4) b, d, f.
- 5) everything is true.

5. Select the definition of abscess.

Select all correct answers

- A. Accumulation of pus in various body cavities.
- B. Accumulation of pus in hollow organs.
- B. Limited accumulation of pus in various tissues.
- D. Limited accumulation of pus in fatty tissue.

6. According to the clinical course, the following forms of tetanus are distinguished:

- 1. erased;
- 2. subacute;
- 3. spicily;
- 4. chronic;
- 5. lightning fast.

Choose the correct combination of answers: A – 1, 2, 4; B – 2, 3, 4; B – 3, 4, 5; G – 1, 2, 3; D – 1, 3, 4, 5.

7. In the complex treatment of gas gangrene, the following is used: a) excision of necrotic tissue; b) the widest possible dissection of tissue; c) antibacterial monotherapy; d) detoxification infusion therapy; e) hyperbaric oxygenation; e) antibacterial combined therapy; g) muscle relaxants + mechanical ventilation. Choose the correct combination of answers:

- 1. a, b, d, d, f.
- 2. d, f, g.
- 3. c, d, g.
- 4. b, f, g.
- 5. Everything is correct.

8. What does emergency tetanus prophylaxis include?

Select all correct answers

- A. Passive immunization.;
- B. Administration of antibiotics.;
- B. Active immunization.;
- G. PSO of the wound.;

9. Identify the initial signs of tetanus:

- 1. twitching pain in the wound;
- 2. trismus;
- 3. increased local sweating;
- 4. muscle contraction in the wound;
- 5. "sardonic" smile.

Choose the correct combination of answers: A – 1, 2, 5; B – 2, 3, 5; B – 1, 4, 5; G – 1, 3, 4; D – 1, 2, 4, 5.

10. Tuberculosis of the fingers and toes is characterized by:

- 1) presence of pain in the finger;
- 2) no pain in the finger;
- 3) fusiform thickening of the finger;
- 4) hyperemia and swelling of the skin;
- 5) absence of hyperemia and edema.

Choose the correct combination of answers: A - 1, 3, 5; B - 2, 3, 5; B - 2, 3,4; G- 1, 3,4; D - 2, 3.

TASK

A 23-year-old woman was treated conservatively for the infiltrative form of mastitis without success within a week after the disease. On the 8th day, body temperature increased to 40.5o. Pulse rate 120 per minute. The mammary gland is sharply enlarged, the skin is swollen, hyperemic, in this area there are blisters filled with hemorrhagic contents, with areas of necrosis, infiltration is palpated in the lower quadrants of the gland, fluctuation is determined in one of the areas. Leukocytes - 16.4 x 10⁹/l, protein and casts are detected in the urine.

What is your diagnosis? Select the method of treatment and pain relief, characterize the incisions for this form of mastitis.

**"INFECTION"
OPTION #9**

1. What treatment method is used for soft tissue phlegmon in the stage of purulent melting?

- 1) cold (hypothermia);
- 2) wide incision and drainage;
- 3) puncture followed by bacteriological examination;

- 4) hot compress;
- 5) novocaine injection with antibiotics.

2. For acute mastitis in the serous stage, treatment consists of:

Select all correct answers

- A. immobilization of the mammary gland;
- B. general antibacterial therapy;
- B. retromammary novocaine blockade with antibiotics;
- G. section;
- D. physical therapy.

3. The main signs of bacterial toxic shock: a) high body temperature; b) bradycardia; c) chills; d) drop in blood pressure; e) oliguria. Choose the correct combination of answers:

- 1) a, c, d, e.
- 2) a, b, c, d.
- 3) b, c, d, d.
- 4) a, c, d.
- 5) everything is true,

4. The following clinical signs are characteristic of a carbuncle:

- 1) painful infiltrate;
- 2) painless infiltration;
- 3) the presence of skin necrosis and purulent pustules;
- 4) the presence of necrosis with small hemorrhagic vesicles;
- 5) enlargement of regional lymph nodes.

Choose the correct combination of answers: A - 1, 3, 5; B - 2, 3, 5; B - 2,4,5; G- 1, 3, 4; D - 1,4,5.

5. Hidradenitis - purulent inflammation:

- A. hair follicle;
- B. sebaceous gland;
- B. sweat gland;
- D. fiber surrounding the sweat gland.

6. Identify the initial signs of tetanus:

1. jerking pain in the wound;
2. lockjaw;
3. increased local sweating;
4. muscle contraction in the wound;
5. "sardonic" smile.

Choose the correct combination of answers: A - 1, 2, 5; B - 2, 3, 5; B - 1, 4, 5; G - 1, 3, 4; D - 1, 2, 4, 5.

7. Operational aid for putrefactive infection includes: a) the widest possible dissection of the wound; b) removal of necrotic subcutaneous tissue; c) dissection of fascial sheaths; d) removal of devitalized muscles; e) evert and fix the edges of the wound. Choose the correct combination of answers:

1. a B C.
2. g, d.
3. b, d.
4. a, c, d.
5. everything is true.

8. Which of the following is indicated in the treatment of anaerobic infection?

Select all correct answers

- A. Surgical treatment of the wound;
- B. Hyperbaric oxygenation.;
- B. Packing the wound;
- D. The use of anti-gangrenous serums.;
- D. Detoxification therapy.;
- E. Antibacterial therapy.;

9. Select the causative agents of anaerobic clostridial infection.

Select all correct answers

- A. Cl. Perfringens.;
- B. Cl. Tetani.;
- B. E. coli.;

- G. Cl. Oedomatien.;
- D. Cl. Septicum;
- E. Klebsiella.;
- J. Cl. Histolyticus.;

10. Identify the clinical signs characteristic of the arthritic stage of tuberculous gonitis:

- 1) presence of pain in the joint;
- 2) no pain in the joint;
- 3) positive symptom of patellar balloting;
- 4) negative symptom of patellar balloting;
- 5) infrequent formation of purulent fistulas.

Choose the correct combination of answers: A - 1, 3, 5; B - 2, 3, 5; B - 2.4, 5; G -1.4, 5; D- 1,3, 4.

TASK

A woman was admitted to the surgical department a month after giving birth. Complaints of pain in the nipple and areola area. Sick for a week. On examination, the mammary gland is not enlarged in size and not swollen. In the area of the areola there is hyperemia, infiltration of the underlying glandular tissue is determined. Milk mixed with pus is released from the nipple.

Make a diagnosis. What is the name of inflammation of the milky ducts of the mammary gland, the areola? What is the treatment strategy?

**"INFECTION"
OPTION No. 10**

1. In case of acute intramammary mastitis in the infiltration stage, treatment comes down to: a) incision; b) prevention of lactostasis; c) suspending the mammary gland with a scarf; d) general antibacterial therapy; e) retromammary butVocaine blockade with antibiotics and proteolytic enzymes. Choose the correct combination of answers:

- 1) A.
- 2) a, b, c.
- 3) c, d, d.
- 4) b, c, d, d.
- 5) everything is true.

2. Carbuncle - purulent-necrotic inflammation:

Select all correct answers

- A. sweat glands;
- B. hair follicle;
- B. sebaceous gland with surrounding tissue;
- G. several hair follicles;
- D. subcutaneous tissue and skin.

3. The forms of erysipelas include: a) erythematous; b) bullous; c) catarrhal; d) phlegmonous; e) necrotic; e) gangrenous. Choose the correct combination of answers:

- 1) a, b, d, f.
- 2) a, b, d, d.
- 3) b, c, d, f.
- 4) c, d, d, f.
- 5) everything is true.

4. Select the definition of cellulitis.

- A. Diffuse purulent inflammation of the subcutaneous fatty tissue.
- B. Diffuse inflammation of subcutaneous fatty tissue and cellular spaces.
- B. Limited accumulation of pus in fatty tissue.
- D. Purulent inflammation of various body cavities.
- D. Purulent inflammation of hollow organs.

5. Name the main methods of treating boils.

Select all correct answers

- A. Excision of the infiltration zone.
- B. Physiotherapy.
- B. Opening of the purulent cavity.
- D. Removal of the necrotic core.

D. Short novocaine block in the area of inflammation.

6. Daily therapeutic dose of antitetanus serum:

- A) 3000-5000 ME;
- B) 10,000-20,000 ME;
- B) 50,000 ME;
- D) 100,000-150,000 ME;
- D) 200,000IU.

Choose the correct answer.

7. Identify the initial signs of tetanus:

- 1. twitching pain in the wound;
- 2. trismus;
- 3. increased local sweating;
- 4. muscle contraction in the wound;
- 5. "sardonic" smile.

Choose the correct combination of answers: A - 1, 2, 5; B - 2, 3, 5; B - 1, 4, 5; G - 1, 3, 4; D - 1, 2, 4, 5.

8. What is characteristic of a wound with an anaerobic infection?

Select all correct answers

- A. The tissues inside the wound are sharply swollen;
- B. A large amount of purulent discharge.;
- B. Severe hyperemia of the skin around the wound.;
- D. Scanty discharge of a putrefactive nature.;
- D. The wound tissue is dirty gray in color.;
- E. The phenomena of inflammation are determined only in the tissues of the wound.;

9. What does emergency tetanus prophylaxis include?

Select all correct answers

- A. Passive immunization.;
- B. Administration of antibiotics.;
- B. Active immunization.;
- G. PSO of the wound.;

10. Name the main localization of tuberculosis when bones are affected:

- 1. diaphyses of long tubular bones;
- 2. diaphyses of the phalanges of the fingers;
- 3. vertebral bodies;
- 4. flat bones;
- 5. epiphyses of long tubular bones.

Choose the correct combination of answers: A - 1, 3; B - 1, 2, 3; B - 2, 3, 4; G - 2, 3, 5; D - 1, 3, 5.

TASK

In a patient who is in the clinic for an extensive laceration of the lower limb, received in the field, 1 day after the injury, obvious signs of intoxication, pain in the wound, a feeling of "cutting" the bandage into the wound appeared, the epidermis on the damaged limb exfoliates in the form blisters, crepitus is detected in the soft tissues.

a) What complication do you suspect in the patient? b) Name the type of pathogen. c) Provide a classification of complications.

**"INFECTION"
OPTION No. 11**

1. What are the ways of bacterial contamination of breast tissue? a) implantation; b) intracanalicular; c) metastatic; d) hematogenous; e) lymphogenous; e) injection. Choose the correct combination of answers:

- 1) a, c, e.
- 2) b, d, d.
- 3) a, d, d.
- 4) b, d, f.
- 5) everything is true.

2. Select the definition of cellulitis.

- A. Diffuse purulent inflammation of the subcutaneous fatty tissue.
- B. Diffuse inflammation of subcutaneous fatty tissue and cellular spaces.

- B. Limited accumulation of pus in fatty tissue.
- D. Purulent inflammation of various body cavities.
- D. Purulent inflammation of hollow organs.

3. What microorganism causes erysipelas? a) staphylococcus; b) streptococcus; c) Pseudomonas aeruginosa; d) Proteus vulgaris; e) peptococcus.

- 1) A.
- 2) b.
- 3) V.
- 4) G.
- 5) d.

4. Name the main methods of treating boils.

Select all correct answers

- A. Excision of the infiltration zone.
- B. Physiotherapy.
- B. Opening of the purulent cavity.
- D. Removal of the necrotic core.
- D. Short novocaine block in the area of inflammation.

5. What is the direction of the incisions when opening an intramammary abscess?

- A. Radial.
- B. Semi-oval near the areola.
- B. Semi-oval at the lower edge of the gland.
- G. Circular around the nipple.

6. Select the causative agents of anaerobic clostridial infection.

Select all correct answers

- A. Cl. perfringens.;
- B. Cl. tetani.;
- B. E. coli.;
- G. Cl. oedematien.;
- D. Cl. septicum;
- E. Klebsiella.;
- J. Cl. histolyticus.;

7. Treatment of tetanus includes: a) antitetanus globulin; b) tetanus toxoid; c) antitetanus collar; d) tranquilizers and barbiturates; e) muscle relaxants; e) mechanical ventilation. Choose the correct combination of answers:

1. a B C D.
2. c, d, d, f.
3. a, c, d.
4. b, d, f.
5. everything is true.

8. Daily therapeutic dose of antitetanus serum:

- A) 3000-5000 ME;
- B) 10,000-20,000 ME;
- B) 50,000 ME;
- D) 100,000-150,000 ME;
- D) 200,000IU.

Choose the correct answer.

9. Select possible types of surgical treatment for anaerobic infection.

Select all correct answers

- A. Making "strap" incisions;
- B. Wide excision of necrotic tissue in the affected area.;
- B. Amputation of the affected limb.;
- G. Opening and drainage.;

10. Clinical signs of bone tuberculosis:

1. damage to the diaphysis of long tubular bones;
2. frequent damage to nearby joints;
3. damage to the growth zone of the bone;
4. negative Alexandrov's symptom;

5. muscle atrophy.

Choose the correct combination of answers: A- 1,2, 3; B -2, 3,4; B- 1.4, 5; G- 1, 3, 5; D - 2, 3, 5.

TASK

On the 3rd day after birth, a 24-year-old woman developed a feeling of heaviness and tension in the right mammary gland, which gradually intensified, and a tumor-like appearance began to be detected. formation, quite mobile, with clear boundaries, lumpy surface, painless. When pressing on it, milk is released freely, expressing is painless, after expressing the woman felt relief, body temperature 36.8 °C. However, on the 4th-5th day the body temperature increased to 37.2-37.4 °C. Blood leukocytes $7.2 \times 10^9/l$. The woman went to the clinic.

What process has developed in the woman? What is your diagnosis? What treatment will you prescribe: is it possible conservative or is it necessary to resort to surgical intervention?

LESSON TOPIC: "SURGICAL INFECTION" OPTION No. 12

1. What incision will be optimal when performing drainage surgery for acute purulent intramammary mastitis?

- 1) paraareolar incision;
- 2) semi-oval incision;
- 3) radial section;
- 4) incision along the lower transitional fold;
- 5) an incision is not needed, you can limit yourself to puncture of the abscess.

2. Select the definition of abscess.

Select all correct answers

- A. Accumulation of pus in various body cavities.
- B. Accumulation of pus in hollow organs.
- B. Limited accumulation of pus in various tissues.
- D. Limited accumulation of pus in fatty tissue.

3. What structural elements are affected by a boil? a) hair follicle; b) sebaceous gland; c) muscles; d) sweat gland; d) subcutaneous tissue. Choose the correct combination of answers:

- 1) a, b, d.
- 2) a, b, d.
- 3) a, d, d.
- 4) a, c, d.
- 5) everything is true.

4. Therapeutic measures in the presence of a boil boil down to:

- 1) wiping the surrounding skin with 70% alcohol;
- 2) in the presence of necrotic masses - squeezing them out followed by a bandage with a hypertonic solution;
- 3) injection with penicillin and procaine;
- 4) taking sulfonamides orally;
- 5) local UV irradiation.

Choose the correct combination of answers: A - 1, 3, 4, 5; B - 1, 2; B - 1, 2, 4, 5; G - 3, 5; D - all answers are correct.

5. Select the clinical forms of erysipelas.

Select all correct answers

- A. Erythematous.
- B. Bullous.
- B. Necrotic.
- G. Erythematous-hemorrhagic.
- D. Erythematous-bullous.
- E. Phlegmonous.

6. What does emergency tetanus prophylaxis include?

Select all correct answers

- A. Passive immunization.;
- B. Administration of antibiotics.;
- B. Active immunization.;
- G. PSO of the wound.;

7. Select the causative agents of anaerobic clostridial infection.

Select all correct answers

- A. Cl. perfringens.;
- B. Cl. tetani.;
- B. E. coli.;
- G. Cl. oedomatien.;
- D. Cl. septicum;
- E. Klebsiella.;
- J. Cl. histolyticus.;

8. Identify the initial signs of tetanus:

- 1) jerking pain in the wound;
- 2) lockjaw;
- 3) increased local sweating;
- 4) muscle contraction in the wound;
- 5) "sardonic" smile.

Choose the correct combination of answers: A - 1, 2, 5; B - 2, 3, 5; B - 1, 4, 5; G - 1, 3, 4; D - 1, 2, 4, 5.

9. TONon-clostridial anaerobic microflora includes: a) fusobacteria; b) peptostreptococci; c) streptococci; d) proteus; e) staphylococci; f) eubacteria; g) peptococci. Choose the correct combination of answers:

1. c, g, g.
2. Where.
3. a, b, f, g.
4. c, d, d.
5. everything is true,

10. During osteoarticular tuberculosis, the following phases are distinguished:

1. general tuberculosis intoxication;
2. prearthritic;
3. arthritic;
4. post-aging;
5. relapse.

Choose the correct combination of answers: A- 1, 3, 5; B - 2, 3, 4; B - 1, 2, 5; G - 1, 2, 3, 4; D - all answers are correct.

TASK

A 30-year-old man consulted a surgeon at the clinic with complaints of a painful lump in the upper lip with pus in the center, pain in this area, headache, and an increase in body temperature to 39 °C. Upon examination, a cone-shaped raised skin infiltrate with a diameter of 0.5 cm, the tip of the necrotic rod is determined in the center. The swelling spreads to the eye area, as a result of which the palpebral fissure is somewhat narrowed.

Make a diagnosis. What are the tactics of the clinic doctor? What treatment will you use? Is surgery necessary?

**"INFECTION"
OPTION No. 13**

1. Therapeutic measures for erythematous erysipelas localized on the lower leg, boil down to:

- 1) applying wet dressings with nitrofurazone;
- 2) intramuscular administration of antibiotics;
- 3) desensitizing therapy (diphenhydramine, calcium chloride);
- 4) UV irradiation of the inflammation site;
- 5) warm baths with potassium permanganate.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 2, 3, 5; G - 1, 2, 3, 5; D - all answers are correct.

2. Hidradenitis - purulent inflammation:

- A. hair follicle;
- B. sebaceous gland;
- B. sweat gland;
- D. fiber surrounding the sweat gland.

3. What treatment method is used for soft tissue phlegmon in the stage of purulent melting?

- 1) cold (hypothermia);
- 2) wide incision and drainage;
- 3) puncture followed by bacteriological examination;
- 4) hot compress;
- 5) novocaine injection with antibiotics.

4. Select the main methods of treating carbuncle.

Select all correct answers

- A. Physiotherapy.
- B. Injection of the carbuncle with antibiotics.
- B. Excision of necrotic tissue within healthy tissue.
- D. Dissection of the skin and subcutaneous tissue to healthy tissue.
- D. Detoxification therapy.
- E. General antibacterial therapy.

5. Name the factors predisposing to the development of mastitis.

Select all correct answers

- A. Nipple cracks.
- B. Stagnation of milk.
- B. Pathological birth.
- D. Repeated births.
- D. Long-term feeding of the child.

6. Select possible types of surgical treatment for anaerobic infection.

Select all correct answers

- A. Making "strap" incisions;
- B. Wide excision of necrotic tissue in the affected area.;
- B. Amputation of the affected limb.;
- G. Opening and drainage.;

7. For emergency specific prevention of tetanus, you can use:

Select all correct answers

- A. ADS-M-anatoxin;;
- B. tetanus toxoid;;
- V. PSCHI;;
- G. PSS.;

8. According to the clinical course, the following forms of tetanus are distinguished:

1. erased;
2. subacute;
3. spicly;
4. chronic;
5. lightning fast.

Choose the correct combination of answers: A - 1, 2, 4; B - 2, 3, 4; B - 3, 4, 5; G - 1, 2, 3; D - 1, 3, 4, 5.

9. Early symptoms of anaerobic infection are: a) high body temperature; b) inappropriate behavior of the patient; V)bursting pain in the wound; d) swelling of wound tissue; e) frequent weak pulse. Choose the correct combination of answers:

1. a B C.
2. b, c, d, d.
3. a B C D.
4. a, c, d, e.
5. everything is true.

10. Identify early radiological signs of tuberculosis of bones and joints:

1. osteoporosis;
2. osteosclerosis;
3. absence of periostitis;
4. presence of a sequestration box;
5. dense bone sequestra;
6. sequesters of the "melting sugar" type.

Choose the correct combination of answers: A - 2, 4, 5; B - 1, 4, 5; B - 1, 4, 6; G - 1, 3, 6; D - 2, 3, 6.

TASK

A 70-year-old patient was admitted to the surgical department, eight days ago she was injected into her right buttock with a 25% solution of magnesium sulfate - 10.0. I am worried about pain in the left buttock area, the temperature has risen to 39.0. Upon examination, the skin is not externally changed, there is slight swelling, palpation is painful over a considerable distance, fluctuation is not determined, however, locally there is an area of pronounced infiltration, sharply painful on palpation.

What disease did you suspect in the patient? Which technique will you choose to confirm the diagnosis and localization of the process? If you decide to have surgery, what incision will you make? If you find pus, what additional needs to be done to completely empty the abscess? Define limited and diffuse inflammation of adipose tissue.

**"INFECTION"
OPTION No. 14**

1. For acute mastitis in the serous stage, treatment comes down to:

- 1) cut;
- 2) prevention of lactostasis;
- 3) supporting the mammary gland with a scarf bandage;
- 4) general antibacterial therapy;
- 5) retromammary procaine blockade with antibiotics and proteolytic enzymes.

Choose the correct combination of answers: A - 1; B - 1, 2, 3; B - 3, 4, 5; G - 2, 3, 4, 5; D - all answers are correct.

2. Select the clinical forms of erysipelas.

Select all correct answers

- A. Erythematous.
- B. Bullous.
- B. Necrotic.
- G. Erythematous-hemorrhagic.
- D. Erythematous-bullous.
- E. Phlegmonous.

3. What should be done with phlegmon of soft tissues in the softening stage?

- A) Cold (hypothermia).
- B) Wide incision and drainage.
- B) Puncture followed by bacteriological examination.
- G) Hot compress.
- D) Procaine injection with antibiotics.

Choose the correct answer.

4. Hidradenitis - purulent inflammation:

- A. hair follicle;
- B. sebaceous gland;
- B. sweat gland;
- D. fiber surrounding the sweat gland.

5. Select the main methods of treating carbuncle.

Select all correct answers

- A. Physiotherapy.
- B. Injection of the carbuncle with antibiotics.
- B. Excision of necrotic tissue within healthy tissue.
- D. Dissection of the skin and subcutaneous tissue to healthy tissue.
- D. Detoxification therapy.
- E. General antibacterial therapy.

6. For emergency specific prevention of tetanus, you can use:

Select all correct answers

- A. ADS-M-anatoxin;;
- B. tetanus toxoid;;
- V. PSCHI;;
- G. PSS.;

7. Which of the following is indicated in the treatment of anaerobic infection?

Select all correct answers

- A. Surgical treatment of the wound;
- B. Hyperbaric oxygenation.;
- B. Packing the wound;

- D. The use of anti-gangrenous serums.;
- D. Detoxification therapy.;
- E. Antibacterial therapy.;

8. Local signs of an infectious wound process caused by non-clostridial anaerobic microflora include: a) gray wound tissue; b) copious amounts of dirty gray, brown discharge; c) absence of necrosis; d) abundance of necrotic tissue; e) the presence of bright pink granulations; f) accumulation of gas in soft tissues. Select correct combination of answers:

1. a, b, d, f.
2. c, d, s.
3. a, b, d.
4. a, b, d, f.
5. everything is true.

9. When clostridial anaerobic infection develops, the following types of surgical treatment are used: a) drainageformation of an abscess; b) wide dissection of the wound; c) dissection of fascial sheaths; d) amputation with dissection of the stump; e) amputation with application of a tourniquet and suturing of the stump. Choose the correct combination of answers:

1. a, c, d.
2. a, b, d.
3. b, c, d.
4. b, c, d.
5. g, d.

10. Tuberculosis of the fingers and toes is characterized by:

1. presence of pain in the finger;
2. no pain in the finger;
3. fusiform thickening of the finger;
4. hyperemia and swelling of the skin;
5. absence of hyperemia and edema.

Choose the correct combination of answers: A - 1, 3, 5; B - 2, 3, 5; B - 2, 3,4; G- 1, 3,4; D - 2, 3.

TASK

In a patient who is in the clinic for an extensive laceration of the lower limb, received in the field, 1 day after the injury, obvious signs of intoxication, pain in the wound, a feeling of "cutting" the bandage into the wound appeared, the epidermis on the damaged limb exfoliates in the form blisters, crepitus is detected in the soft tissues.

a) What complication do you suspect in the patient? b) Name the type of pathogen. c) Provide a classification of complications.

ANSWERS "SURGICAL INFECTION"

OPTION 1	OPTION 8
14	12
2 – A	2 – BVGD
3 – B	3 – AVG
4 – B	4 – 2
5 – B	5 – B
6 - 3	6 - D
7 – ABGDE	7 – 1
8 – AGD	8 – AG
9 – 5	9 – D
10 – G	10 – G
Facial furuncle. A possible complication is thrombosis of the facial and orbital veins with the development of basal, cavernous meningitis, and arachnoiditis.	Gangrenous mastitis. Emergency surgery under anesthesia is indicated. Wide opening, necrectomy, possibly mastectomy. Antibacterial, detoxification, immunotherapy
Urgent hospitalization, bed rest, liquid food, and surgical treatment are indicated.	

<p>OPTION 2</p> <p>12 2 – B 3 – AUGWHERE 4 – G 5 – ABVE 6 - 5 7 – AGD 8 – ABC 9 – 3 10 – B</p> <p>Subungual panaritium. The operation involves removing the nail plate, since the lesion has reached the growth zone. Anesthesia - conduction anesthesia according to Oberst-Lukashevich. Tetanus prophylaxis is necessary.</p>	<p>OPTION 9</p> <p>12 2 – ABCD 3 – 1 4 – A 5 – B 6 - D 7 – 5 8 – ABGDE 9 – AGJ 10 – A</p> <p>Galactophoritis is an inflammation of the milk ducts of the mammary gland. Areolitis is inflammation of the areola. Pumping, antibiotics, suppression of lactation. If an abscess forms, surgical treatment is required.</p>
<p>OPTION 3</p> <p>15 2 – B 3 – A 4 – BVG 5 – IOP 6 - 4 7 – 3 8 – G 9 – 5 10 – D</p> <p>Subcutaneous felon like a cufflink. The operation is an opening with longitudinal-lateral incisions. After opening - inspection with a probe, palpation of the adjacent phalanx for the presence of spread of the process. Drainage is necessary.</p>	<p>OPTION 10</p> <p>14 2 – IOP 3 – 2 4 – B 5 – BGD 6 – G 7 – D 8 – AGD 9 – AG 10 – G</p> <p>Gas gangrene. Pathogen Cl. Perfringens</p>
<p>OPTION 4</p> <p>eleven 2 -A 3 – AB 4 – ABD 5 – 2 6 - 1 7 – 4 8 – AG 9 – 5 10 – G</p> <p>Tuberculous coxitis.</p>	<p>OPTION 11</p> <p>12 2 – B 3 – 2 4 – BGD 5 – A 6 - AGJ 7 – 5 8 – G 9 – ABC 10 – D</p> <p>Acute milk stagnation. Treatment is elevated position of the mammary gland, immobilization. Continue feeding and pumping. Prescribe oxytocin. It must be remembered that it is difficult to differentiate from serous mastitis, therefore, when the temperature rises, one should suspect the onset of mastitis.</p>

<p>OPTION 5</p> <p>1 - AVG 2 - B 3 - 4 4 - BVGD 5 - 2 6 - 1 7 - 5 8 - BVG 9 - 4 10 - D</p> <p>Tuberculosis of the cervical lymph nodes</p>	<p>OPTION 12</p> <p>13 2 - B 3 - 2 4 - A 5 - ABVE 6 - AG 7 - AGJ 8 - D 9 - 3 10 - B</p> <p>Facial furuncle. A possible complication is thrombosis of the facial and orbital veins with the development of basal, cavernous meningitis, and arachnoiditis. Urgent hospitalization, bed rest, liquid food, and surgical treatment are indicated.</p>
<p>OPTION 6</p> <p>12 2 - BVG 3 - 2 4 - ABCD 5 - ABD 6 - 5 7 - 1 8 - ABC 9 - 1 10 - D</p> <p>Gas gangrene, tetanus. Antiganrenosis serum. Tetanus toxoid, antitetanus serum, immunoglobulin.</p>	<p>OPTION 13</p> <p>1 - B 2 - B 3 - 2 4 - AUGWHERE 5 - AB 6 - ABC 7 - BVG 8 - D 9 - 5 10 - G</p> <p>Post-injection infiltrate, differentiate with an abscess. Perform a puncture; if there is pus, open the abscess with a linear incision along Langer's lines. Inspection of the purulent cavity with a finger, elimination of pockets and leaks. Limited purulent inflammation - abscess; unrestricted - phlegmon.</p>
<p>OPTION 7</p> <p>12 2 - ABD 3 - 5 4 - B 5 B 6 - 5 7-D 8 - AGJ 9 - G 10 - V</p> <p>Infiltration or suppuration of the wound. Puncture, wound inspection. In case of suppuration - opening the wound, using water-soluble osmoactive ointments based on polyethylene glycol, washing with antiseptics, antibacterial therapy.</p>	<p>OPTION 14</p> <p>1 - G 2 - ABVE 3 - B 4 - B 5 - AUGWHERE 6 - BVG 7 - ABGDE 8 - 1 9 - 4 10 - G</p> <p>Gas gangrene. Pathogen Cl. Perfringens</p>

"LYMPHO-CIRCULATORY DISORDER, ONCOLOGY"

OPTION #1

1. What pathological processes are important in the development of trophic ulcers? a) chronic disorders of blood and lymph circulation; b) traumatic effects; c) diseases of the nervous system;

d) metabolic disorders; e) systemic diseases; f) infectious diseases; g) tumors. Choose the correct combination of answers:

- 1) a, b, d, f.
- 2) b, d, f, g.
- 3) c, d, d.
- 4) d, f, g.
- 5) everything is true.

2. Acute deep vein thrombosis is characterized by:

- 1) sharp pain in the affected limb;
- 2) pale or cyanotic skin;
- 3) high body temperature;
- 4) hyperemia along the saphenous vein;
- 5) severe swelling of the limb.

Choose the correct combination of answers: A- 1.4; B- 1,2, 5; B- 1.3, 5; G-2.4; D-3.5.

3. What is characteristic of dry gangrene?

Select all correct answers

- A. Tissue swelling;
- B. Change in skin color;
- B. Intoxication.;
- D. Presence of a demarcation line.;
- D. Mummification of necrotic tissues.;
- E. Putrid smell.;

4. The symptom of intermittent claudication is characteristic of:

- A. obliterating atherosclerosis;;
- B. postthrombotic disease;;
- B. diabetic foot syndrome;;
- G. varicose veins.;

5. III degree of chronic ischemia corresponds to the appearance of the symptom of intermittent claudication:

- A. after walking a distance of less than 50 m at rest;;
- B. after walking a distance of about 200 m;;
- B. after walking a distance of about 500 m.;

6. With gastroscopy you can: a) determine the location of the tumor; b) evaluate the surface of the tumor; c) establish the stage of the tumor process; d) assess the condition of regional lymph nodes; e) assess the presence or absence of ulcerations. Choose the correct combination of answers:

- 1) a B C.
- 2) in, g.
- 3) a, d, d.
- 4) c, d.
- 5) a, b, d.

7. What is considered a necessary condition for the occurrence of implantation metastases?

- A. Localization of the tumor in the abdominal cavity.;
- B. Abundant blood supply to the tissues surrounding the tumor;
- B. Tumor growth outside the organ.;
- D. Tumor growth beyond the serous membrane covering the organ;

8. The syndrome of minor signs includes:

Select all correct answers

- A. weight loss and loss of appetite;;
- B. unexplained increase in body temperature;;
- B. the appearance of blood in the stool;;
- G. weakness and fatigue;;
- D. anemia;;
- E. leukocytosis.;

9. During the operation, the patient was found to have a tumor growing through all layers of the stomach wall, regional metastases were identified, but there were no distant metastases. The tumor is mobile. What is the stage of the process?

- A) I.
 - B) II.
 - B) III.
 - D) IV.
 - D) The malignancy of the tumor is doubtful.
- Choose the correct answer.

10. Name palliative operations for malignant tumors:

- 1) removal of metastases along with the tumor;
- 2) application of internal bypass anastomoses for obstruction of the organ lumen;
- 3) stopping bleeding from the tumor;
- 4) removal of the primary tumor leaving unresected metastases;
- 5) super radical operations.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 2, 3, 4, 5; G - 1, 4; D - 2, 3, 5.

TASK

A young man came to the appointment complaining of pain in his right foot, increase in body temperature to 37.5 °C. Upon examination, on the dorsal surface of the II-III toes of the right foot there are abrasions measuring 1.0x0.8 cm with a coating of fibrin, the skin around the wounds is hyperemic. The dorsum of the right foot is swollen, there is hyperemia in the form of longitudinal stripes on the dorsum of the foot and the medial surface of the lower leg to its middle third. In the groin area there is a moderately painful, densely elastic consistency with smooth edges, a node measuring 2.5x2 cm. The node is movable, the skin over it is not changed.

What is your diagnosis and treatment strategy?

**"LYMPHO-CIRCULATORY DISORDER, ONCOLOGY"
OPTION #2**

1. Artificial fistulas are: a) interorgan anastomosis, which arose as a result of injury; b) connecting hollow organs to each other for therapeutic purposes; c) interorgan anastomosis resulting from inflammation; d) interorgan anastomosis resulting from the cicatricial process; e) fistulas resulting from bone trauma; f) creating a connection between a hollow organ and the external environment for therapeutic purposes. Choose the correct combination of answers:

- 1) a, d.
- 2) b, f.
- 3) in, g.
- 4) c, e.
- 5) b, d.

2. Name the causes of acute venous insufficiency of the lower limbs:

- 1) iliac vein thrombosis;
- 2) deep vein thrombophlebitis;
- 3) obesity;
- 4) phlebeurysm;
- 5) traumatic vein injuries.

Choose the correct combination of answers: A - 1, 3, 5; B - 1, 2, 4; B - 2, 3, 4; G - 2, 3, 5; D - 1, 2, 5.

3. Trophic ulcers of the lower extremities against the background of arterial insufficiency are more often localized:

Select all correct answers

- A. in the distal parts of the fingers;;
- B. in the area of the medial malleolus;;
- V. in the heel area;;
- G. in any area of the segment with impaired arterial circulation;

4. What is characteristic of obliterating endarteritis?

Select all correct answers

- A. Predominant damage to arteries of medium and small caliber;
- B. Age over 40 years;
- B. Damage to the arteries of various regions;
- D. Damage to the entire vascular wall over a significant extent.;
- D. Can be eliminated by bypass.;

5. Surgical treatment of diabetic foot syndrome consists of:

- A. performing high amputation of a limb;;

- B. neorectomy;;
- B. amputation of the foot.;

6. A malignant tumor is distinguished by:

- 1) expansive growth;
- 2) metastasis to lymph nodes and organs;
- 3) tendency to relapse;
- 4) infiltrating growth;
- 5) presence of a capsule.

Choose the correct combination of answers: A - 1, 2, 3; B - 3, 4, 5; B - 2, 3, 4; G - 2, 3, 5; D - 2, 3, 4, 5.

7. According to the clinical classification, what stage does the following tumor belong to: a large tumor, does not spread beyond the organ, single metastases to regional lymph nodes are possible?

- A. Stage I.;
- B. Stage II.;
- B. III stage.;
- G. IV stage.;

8. Diagnosis is considered timely if a tumor is detected:

- A. at stage I or stage cancer in situ;;
- B. at stages III–IV, when radical treatment is impossible in most patients;;
- V. at stages II–III, radical treatment is possible in most patients;;
- G. at stages I, II and III, in which complete cure of patients is always possible;

9. Antiblastics includes:

- 1) gentle, non-traumatic tumor removal;
- 2) removal of visible metastases;
- 3) use of an electric knife or laser scalpel;
- 4) ligation of tubular organs above and below the tumor;
- 5) treating the wound with alcohol.

Choose the correct combination of answers: A- 1.2; B- 1.3; B-3.5; G- 1.4, 5; D-2, 4.

10. Which of the following categories is considered at risk for cancer?

Select all correct answers

- A. Persons whose occupation is associated with exposure to carcinogenic factors;
- B. Medical staff of oncology clinics.;
- B. Persons with so-called precancerous diseases.;
- G. Persons over 35 years old;

TASK

Patient M., 62 years old, suffering from varicose veins, 4 days ago felt nagging pain along the dilated vein of the lower third of the thigh, and a thickening in this area of the vein. After 2 days, the compaction spread to the upper border of the inner thigh, hyperemia and swelling appeared. On examination, there is a dense, painful cord on the inner surface of the thigh, reaching the upper third, skin hyperemia, swelling. There is no fluctuation. Body temperature 37.6 °C.

What is your diagnosis and treatment strategy?

**"LYMPHO-CIRCULATORY DISORDER, ONCOLOGY"
OPTION #3**

1. Bedsores most often form on: a) the sacrum; b) shoulder blades; c) anterior abdominal wall; d) back of the head; e) elbows; f) the front surface of the thighs; g) greater trochanter; h) thumb. Choose the correct combination of answers:

- 1) a, b, d, d. g.
- 2) b, d, f, h.
- 3) a, c, d, g.
- 4) e, h.
- 5) everything is true.

2. Prevention of deep vein thrombosis after surgery includes:

- 1) antibiotic therapy;
- 2) bandaging the limb before and after surgery;

- 3) prolonged bed rest after surgery;
- 4) early activation of patients after surgery;
- 5) use of vasodilators.

Choose the correct combination of answers: A- 1,2; B-4, 5; V-2, 3,5; G-2,4; D- 1,3, 5.

3. Trophic ulcers are formed when:

Select all correct answers

- A. insufficiency of venous circulation;;
- B. vitamin deficiency;;
- B. arterial circulatory insufficiency;;
- G. spinal cord damage;;
- D. damage to peripheral nerves;;
- E. diabetes mellitus;

4. Postthrombotic disease develops due to:

- A. thrombosis of the main arteries;;
- B. deep vein thrombosis;;
- B. DIC syndrome;;
- G. thrombophlebitis of the superficial veins;

5. With obliterating endarteritis, the following symptoms are revealed:

- 1) crawling sensation;
- 2) feeling of chilliness in the foot;
- 3) hair loss on the lower leg of the affected limb;
- 4) intermittent claudication;
- 5) thickening of the nail plates.

Choose the correct combination of answers: A - 1, 2, 3; B - 3, 4, 5; B - 1, 3; G - 2, 4; D - all answers are correct.

6. With gastroscopy you can establish:

- 1) tumor localization;
- 2) tumor color;
- 3) stage of the tumor process;
- 4) condition of regional lymph nodes;
- 5) the presence or absence of tumor decay.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 3, 4; B - 1, 4, 5; G - 2, 3, 4; D - 1, 2, 5.

7. The main syndromes in the diagnosis of malignant tumors include:

Select all correct answers

- A. "plus-tissue" syndrome;;
- B. pathological discharge syndrome;;
- B. malabsorption syndrome;;
- G. organ dysfunction syndrome;;
- D. syndrome of small signs.;

8. Indicate the main methods of treating benign tumors.

- A. Surgical;
- B. Chemotherapy;
- V. Luchevoy.;
- G. Combined.;

9. When can a patient whose malignant tumor has been removed be considered cured?

- A) If the tumor was small and completely removed.
- B) If no metastases are detected during surgery.
- B) If there are no signs of relapse within 5 years after surgery discovered.
- G) If the operation is performed in compliance with all oncological rules
- D) All of the above is true.

Choose the correct answer.

10. Ablastics includes all activities except:

Select all correct answers

- A. making incisions only within obviously unaffected tissues;;
- B. the need to avoid mechanical trauma to the tumor tissue;;
- B. the need to ligate the venous vessels extending from the formation as quickly as possible;;
- G. use of pharmacological drugs;;

D. ligation of a hollow organ with a ribbon above and below the tumor (to prevent cell migration along the lumen);

TASK

A 67-year-old patient underwent resection and replacement of the left hip joint with a metal prosthesis. On the 4th day, bursting pain and rapidly progressing swelling of the left lower limb appeared, spreading to the inguinal fold. Upon examination, the skin is shiny, tense, and "marbled" in color. Circumference of the left thigh and lower leg by 10 and 6 cm greater than the circumference of the right thigh and lower leg, respectively. The toes of the left foot are pale and their movements are limited. The pulsation on the left posterior tibial artery is weakened. Blood test: leukocytes $14 \times 10^9/l$, leukocyte formula shifted to the left, ESR 36 mm/h, prothrombin 110%, bleeding duration reduced.

What is your diagnosis and treatment tactics?

"LYMPHICIRCULATORY DISORDERS, ONCOLOGY"

OPTION #4

1. The formation of bedsores is promoted by: a) compression of tissues with a plaster cast; b) long-term presence of the endotracheal tube in the trachea; c) prolonged stay of drainage in the abdominal cavity; d) compression of tissues during prolonged lying position of the patient; e) disruption of innervation due to spinal cord injury; f) prolonged pressure of the stone on the wall of the gallbladder. Choose the correct combination of answers:

- 1) a B C.
- 2) b, d, f.
- 3) c, d, d.
- 4) c, d, f.
- 5) everything is true.

2. Select the causes of gangrene:

- 1) embolism of the great vessels;
- 2) arterial injury;
- 3) arterial thrombosis;
- 4) frostbite;
- 5) burn.

Choose the correct combination of answers: A— 1, 2; B - 1, 3, 4; B - 2, 4, 5; G - 1, 4, 5; D - all answers are correct.

3. What is characteristic of a trophic ulcer in arterial insufficiency?

Select all correct answers

- A. Presence of rough edges.;
- B. Fluctuation.;
- B. Fibrin deposits in the fundus;
- G. Purulent discharge.;
- D. Profuse bleeding.;

4. Compression therapy is considered:

- A. the main method of treating arterial insufficiency.;
- B. the main method of treating venous insufficiency.;
- B. one of the methods of conservative therapy for arterial insufficiency.;
- G. one of the methods of conservative therapy for venous insufficiency.;
- D. method of choice in the treatment of diabetic foot syndrome.;

5. List the methods for determining the functional ability of the venous valve apparatus:

- 1) finger and tourniquet tests;
- 2) rheovasography;
- 3) dopplerography;
- 4) infrared thermography;
- 5) contrast phlebography.

Choose the correct combination of answers:

A—1,2,3; B- 1,3, 5; B- 1, 2, 3, 5; G - 2, 3, 4; D - 2, 3, 4, 5.

6. Select absolute indications for removal of a benign tumor

- 1) compression of an organ by a tumor that impairs its functions;
- 2) constant injury to a superficial tumor with clothing or shoes;
- 3) acceleration of tumor growth;
- 4) long-term existence of the tumor;

5) suspicion of malignant degeneration.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 1, 3, 4, 5; B - 1, 2, 3, 5; G - 2, 3, 4, 5; D - all answers are correct.

7. Early diagnosis is considered if a tumor is detected:

- A. at stage I or stage cancer in situ;;
- B. at stages II–III, radical treatment is possible in most patients;;
- B. at stages III–IV, when radical treatment is impossible in most patients;;
- G. at stages I, II and III, in which complete cure of patients is always possible;

8. Indicate the main methods of treating malignant tumors.

Select all correct answers

- A. Surgical;
- B. Chemotherapy;
- B. Palliative.;
- G. Luchevoiy.;
- D. Combined.;

9. The concept of “ablastics” includes:

- 1) treating the surgical wound with alcohol;
- 2) preoperative radiotherapy;
- 3) frequent change of tools and linen;
- 4) preliminary ligation of blood vessels;
- 5) removal of the tumor within healthy tissue.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 1, 4; G - 3, 5; D - 4, 5.

10. Chemotherapy can be used independently for:

- A. early stages of malignant tumors;;
- B. tumor diseases of the blood;;
- V. is never used;;
- G. tumors of the stomach and colon.;

TASK

Patient T. has been suffering from varicose veins of the lower extremities for 45 years. 2 days ago, pain and thickening along the vein appeared below the inguinal fold. Objectively: body temperature is 37.3 °C, a dense painful cord is detected along the great saphenous vein distal to the inguinal fold by 3-4 cm. There is no swelling of the limb, the skin is of normal color.

What is your diagnosis and treatment tactics?

**"LYMPHICIRCULATORY DISORDERS, ONCOLOGY"
OPTION #5**

1. When examining patients with fistulas, the following instrumental research methods are used: a) X-ray contrast examination of organs; b) fistulography; c) radioisotope scanning; d) probing; e) endoscopic examination of organs; f) enzyme immunoassay; g) fistuloscopy. Choose the correct combination of answers:

- 1) a, b, d, e, g.
- 2) b, d, f.
- 3) a B C D E.
- 4) c, d, d, g.
- 5) everything is true.

2. Dry gangrene is characterized by:

- 1) development of putrefactive infection;
- 2) the presence of a demarcation line;
- 3) severe intoxication;
- 4) lack of intoxication;
- 5) mummification of necrotic tissues.

Choose the correct combination of answers: A- 1.2; B -2.3; B- 1.3; G- 1.4; D- 2, 4, 5.

3. The development of gangrene is possible in the following organs.

Select all correct answers

- A. Lung.;
- B. Limb.;

- B. Small intestine.;
- G. Liver.;
- D. Mammary gland.;

4. Treatment methods for purulent thrombophlebitis:

- 1) anticoagulants;
- 2) antibiotics;
- 3) bypass;
- 4) installation of an umbrella probe into the lumen of the vein;
- 5) ligation and removal of the vein.

Choose the correct combination of answers: A - 1, 2, 5; B - 1, 4; B - 2, 3, 5; G - 2,5; D - 1, 2.

5. What drugs are considered pathogenetically justified for the treatment of patients with obliterating endarteritis?

- 1) Desensitizing drugs.
- 2) Glucocorticoids.
- 3) Vasodilators.
- 4) Disaggregants.
- 5) Antibiotics.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3,4; B - 2,4; G - 1, 3,4; D - 2, 3.

6. During the operation, the patient was found to have a tumor growing through all layers of the stomach wall, regional metastases were identified, but there were no distant metastases. The tumor is mobile. What is the stage of the process?

- A) I.
- B) II.
- B) III.
- D) IV.
- D) The malignancy of the tumor is doubtful.

Choose the correct answer.

7. Which of the following categories is considered at risk for cancer?

Select all correct answers

- A. Persons whose occupation is associated with exposure to carcinogenic factors;
- B. Medical staff of oncology clinics.;
- B. Persons with so-called precancerous diseases.;
- G. Persons over 35 years old;

8. Ablastics includes the following activities:

Select all correct answers

- A. removal of the tumor en bloc with tissue and regional lymph nodes.;
- B. mandatory histological examination of the organ being removed.;
- B. before manipulating the tumor, limit the wound with napkins.;
- G. after removal of the tumor, change (processing) of instruments and gloves, limiting napkins.;

9. What is a tumor called?

- A. Pathological formation, independently developing in the cavities of organs and tissues, not distinguished by autonomous growth, polymorphism and cell atypia.;
- B. Pathological formation, independently developing in organs and tissues, characterized by autonomous growth, polymorphism and cell atypia.;
- B. Pathological formation characterized by autonomous growth, without cell polymorphism and atypia.;
- D. Pathological formation prone to metastasis and invasive growth.;

10. Polymorphism of tumor cells is called:

- A. morphological differences between tumor cells and tissue cells from which it developed.;
- B. difference in morphological criteria of tumor cells from its metastases.;
- B. the presence in the structure of the tumor of cells of different morphological characteristics;

TASK

After gastric surgery, on the 4th day, a 58-year-old patient suddenly developed sharp pain in the right lower limb, coldness of the limb, the lower leg was cold on palpation, there was no pulsation in the arteries of the foot and popliteal artery, with preserved pulsation in the femoral artery, pain sensitivity in the lower leg and the foot is lowered. What is your diagnosis and actions?

"LYMPHICIRCULATORY DISORDERS, ONCOLOGY"
OPTION #6

1. With obliterating endarteritis, the following symptoms are revealed:

1. crawling sensation;
2. feeling of chilliness in the foot;
3. hair loss on the lower leg of the affected limb;
4. intermittent claudication;
5. thickening of the nail plates.

Choose the correct combination of answers: A - 1, 2, 3; B - 3, 4, 5; B - 1, 3; G - 2, 4; D - all answers are correct.

2. Clinical signs of wet gangrene of the limb:

- 1) swelling of tissues, change in skin color;
- 2) intoxication;
- 3) delimitation of necrotic areas;
- 4) putrid odor;
- 5) lack of demarcation line.

Choose the correct combination of answers: A - 1, 2; B - 1, 3, 4, 5; B - 2, 4; G - 1, 2, 4, 5; D - 2, 3.

3. According to etiology, necrosis is divided into:

Select all correct answers

- A. straight;;
- B. indirect;;
- B. primary;;
- G. indirect;;
- D. secondary.;

4. Which of the following is dangerous in terms of the development of embolism?

- 1) Parietal thrombus of the heart.
- 2) Femoral artery thrombus.
- 3) Phlebitis of the ulnar vein.
- 4) Common thrombus of the veins of the leg and thigh.
- 5) Thrombus of the saphenofemoral anastomosis.

Choose the correct combination of answers: A- 1,4, 5; B -2, 3,4; B -2,3; G- 3, 5; D- 3,4.

5. Acute deep vein thrombosis is characterized by:

1. sharp pain in the affected limb;
2. pallor or cyanosis of the skin;
3. high body temperature;
4. hyperemia along the saphenous vein;
5. severe swelling of the limb.

Choose the correct combination of answers: A- 1,4; B- 1,2, 5; B- 1,3, 5; G-2,4; D-3,5.

6. The concept of "ablastics" includes:

1. treatment of the surgical wound with alcohol;
2. preoperative radiotherapy;
3. frequent change of tools and linen;
4. preliminary ligation of blood vessels;
5. removal of the tumor within healthy tissue.

Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 1, 4; G - 3, 5; D - 4, 5.

7. Indicate the basic principles of surgical treatment of benign tumors.

Select all correct answers

- A. Removal of the tumor within healthy tissues.;
- B. Removal along with the capsule, if any;
- B. Removal of regional lymph nodes.;
- D. Wide excision of the tumor with surrounding tissues, 5–8 cm from the visible border of the lesion.;

8. What is the principle of zoning?

- A. Removal of the entire tumor, as well as regional lymph nodes;
- B. The incision is made only in the area not affected by the tumor process.;
- B. The entire anatomical zone in which the tumor is located is removed.;

9. Currently, the following factors are included in the theory of the origin of tumors:

Select all correct answers

- A. mechanical;;
- B. chemical;;
- V. psychological;;
- G. physical;;
- D. biological;;
- E. genetic;;
- G. state of the immune and humoral systems.;

10. Malignant tumors are characterized by:

Select all correct answers

- A. pronounced atypia and cell polymorphism;;
- B. absence or minimal differences between tumor cells and maternal tissue cells;;
- B. expansive growth without invasion;;
- G. infiltrating growth;;
- D. rapid growth, ability to metastasize.;

TASK

A 76-year-old man came to you with complaints of constant pain in the calf muscles, aggravated by walking, and discoloration of 1 toe of his right foot. The feet are pale, the right foot is colder than the left, pulsation in the arteries of the foot is not detectable.

What is your diagnosis and actions?

"LYMPHICIRCULATORY DISORDERS, ONCOLOGY"

OPTION #7

1. Select characteristic signs of thromboembolism of the arteries of the limb:

- 1) gradual increase in pain;
 - 2) sudden sharp pain;
 - 3) cyanosis of the skin;
 - 4) pale skin;
 - 5) coldness of the extremity.
- Choose the correct combination of answers:
A- 1,2, 3; B-2, 3,4; B-4, 5; G-2, 4, 5; D- 1,3,5.

2. Name the optimal measures for the treatment of patients with wet gangrene of the limb in the presence of severe intoxication and high body temperature:

- 1) necrectomy;
 - 2) dressings with antiseptics;
 - 3) intra-arterial administration of antibiotics;
 - 4) chamber oxygen therapy;
 - 5) limb amputation.
- Choose the correct combination of answers: A - 1, 2; B - 2, 3; B - 1, 2, 3, 4; G - 3, 4; D - 5.

3. Circulatory necrosis is associated with:

Select all correct answers

- A. circulatory disorders;;
- B. impaired lymph circulation;;
- B. disturbance of innervation;;
- G. formation of circular trophic ulcers;

4. Select the causes of gangrene:

- 1. embolism of the great vessels;
- 2. injury to the arteries;
- 3. arterial thrombosis;
- 4. frostbite;
- 5. burn.

Choose the correct combination of answers: A— 1, 2; B - 1, 3, 4; B - 2, 4, 5; G - 1, 4, 5; D - all answers are correct.

5. List the causes of lymph circulation disorders:

- 1) congenital underdevelopment of lymphatic vessels;
- 2) chronic diseases of the lymph nodes (tuberculosis, syphilis);
- 3) compression of blood vessels by tumor, scars;

4) obliterating atherosclerosis.

Choose the correct combination of answers: A- 1,2; B- 1,2, 3; B -2, 3,4; G -3,4; D- 1,3,4.

6. Antiplastics includes:

1. careful, non-traumatic tumor removal;
2. removal of visible metastases;
3. use of an electric knife or laser scalpel;
4. ligation of tubular organs above and below the tumor;
5. treating the wound with alcohol.

Choose the correct combination of answers: A- 1,2; B- 1,3; B-3,5; G- 1,4, 5; D-2, 4.

7. When assessing cure for a malignant tumor, the following time period is taken as a basis:

- A. 3 years;;
- B. 2 years;;
- V. 5 years;;
- G. 15 years old;;
- D. 10 years old;

8. The fastest and most aggressive growth is observed in:

- A. highly differentiated tumors;;
- B. undifferentiated tumors;;
- B. poorly differentiated tumors.;

9. What is considered a necessary condition for the occurrence of implantation metastases?

- A. Localization of the tumor in the abdominal cavity.;
- B. Abundant blood supply to the tissues surrounding the tumor;
- B. Tumor growth outside the organ.;
- D. Tumor growth beyond the serous membrane covering the organ;

10. A true relapse is characterized by:

Select all correct answers

- A. re-development of the tumor in the same place after its complete removal surgically or otherwise;;
- B. re-development of the tumor after its incomplete removal;;
- B. re-formation of a tumor in another place after complete removal of the previous one, the morphological structure is similar;;
- G. only malignant tumors recur;

TASK

Patient M., 52 years old, complains of a feeling of heaviness in her legs when standing for a long time, arching pain, the appearance of swelling of the feet and lower legs by the end of the day, which completely disappears in a horizontal position, acute pain in the area of the inner surface of the right ankle. From the anamnesis it was revealed that the patient had been suffering from varicose veins of the lower extremities for 20 years. On examination, there is a pronounced dilation of the veins on the right and moderate dilation on the left lower extremities. The skin in the area of the medial ankle on the right is thinned, thickened, and hyperpigmented. There is moderate swelling of the lower third of the leg and foot on the right. In the center of hyperpigmentation, an oval-shaped wound is determined, up to a depth 5 mm, diameter up to 1.5 cm. The edges are dense, bluish, and inactive. The bottom is covered with necrotic tissue, fibrin, the discharge is serous-purulent, scanty, palpation is not painful.

- a) Establish the correct diagnosis, b) Which method of treatment (surgical or conservative) is more pathogenetically justified? c) Suggest local treatment.

"LYMPHICIRCULATORY DISORDERS, ONCOLOGY"

OPTION #8

1. Postthrombophlebitic syndrome of the lower extremities is more common consequence:

- 1) superficial vein thrombosis;
- 2) expansion of the saphenous veins;
- 3) thrombosis of the femoral artery;
- 4) deep vein thrombosis of the lower extremities.

Choose the correct combination of answers: A- 1, 2; B - 2; B -3, 4; G - 4.

2. List the causes of trophic ulcers:

- 1) violation of venous circulation;

- 2) disturbance of arterial circulation;
- 3) violation of lymph flow;
- 4) damage to the spinal cord, nerves;
- 5) diabetes.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 2, 3, 4; G - 1, 2, 3, 5; D - all answers are correct.

3. Swelling and cyanosis of the skin are characteristic of necrosis caused by:

- A. arterial obstruction;;
- B. violation of venous outflow;;
- B. violation of microcirculation.;

4. Prevention of deep vein thrombosis after surgery includes:

1. antibiotic therapy;
2. bandaging the limb before and after surgery;
3. long bed rest after surgery;
4. early activation of patients after surgery;
5. use of vasodilators.

Choose the correct combination of answers: A- 1,2; B-4, 5; V-2, 3,5; G-2,4; D- 1,3, 5.

5. Dry gangrene is characterized by:

1. development of putrefactive infection;
2. the presence of a demarcation line;
3. severe intoxication;
4. absence of intoxication;
5. mummification of necrotic tissues.

Choose the correct combination of answers: A- 1,2; B -2,3; B- 1,3; G- 1,4; D- 2, 4, 5.

6. When can a patient whose malignant tumor has been removed be considered cured?

- A) If the tumor was small and completely removed.
- B) If no metastases are detected during surgery.
- B) If there are no signs of relapse within 5 years after surgery discovered.
- G) If the operation is performed in compliance with all oncological rules
- D) All of the above is true.

Choose the correct answer.

7. Ablastics includes all activities except:

Select all correct answers

- A. making incisions only within obviously unaffected tissues;;
- B. the need to avoid mechanical trauma to the tumor tissue;;
- B. the need to ligate the venous vessels extending from the formation as quickly as possible;;
- G. use of pharmacological drugs;;
- D. ligation of a hollow organ with a ribbon above and below the tumor (to prevent cell migration along the lumen);

8. To assess the effectiveness of treatment of a malignant tumor, the following criteria can be used:

Select all correct answers

- A. immediate result of treatment;;
- B. 5-year survival rate;;
- B. duration of remission;;
- G. significant absence of tumor growth in the first 3 years;

9. According to the clinical classification, what stage does the following tumor belong to: a large tumor, does not spread beyond the organ, single metastases to regional lymph nodes are possible?

- A. Stage I.;
- B. Stage II.;
- B. III stage.;
- G. IV stage.;

10. Indicate the main routes of metastasis.

Select all correct answers

- A. Lymphogenic.;
- B. Contact.;
- B. Airborne.;
- G. Hematogenous.;

D. Implantation.;

TASK

Patient T., 63 years old, was admitted to the surgical department with complaints of severe pain in the calf muscles and feet when walking, which forces the patient to stop after 20 m, pain in the right foot at rest, worsening at night, cold feet. On examination: the skin of the lower extremities, especially the feet, is dry, pale, the nails are thickened, brittle, the muscles are atrophic, there is no hair, the feet are cool to the touch, especially the right one. The right foot with bluish spots, edematous, cyanotic, on the plantar surface of the first toe there is a sharply painful wound of a round shape, with a diameter of 1 cm, with dense, uneven edges, covered with dark brown necrotic masses, flaccid granulations. The discharge is scanty, serous-hemorrhagic, with an unpleasant putrefactive odor. Pulsation in the femoral, popliteal arteries, arteries of the leg and foot on both sides is not detected.

- a) Establish a diagnosis, b) List special research methods, c) List methods of complex treatment.

"LYMPHOCIRCULATORY DISORDERS, ONCOLOGY"

OPTION #9

1. List the methods for determining the functional ability of the venous valve apparatus:

1. finger and tourniquet tests;
2. rheovasography;
3. Dopplerography;
4. infrared thermography;
5. contrast venography.

Choose the correct combination of answers:

A—1,2,3; B- 1,3, 5; B- 1, 2, 3, 5; G - 2, 3, 4; D - 2, 3, 4, 5.

2. Name the method of treatment for labiform intestinal fistula:

- A) conservative treatment;
- B) fistula filling;
- B) diathermocoagulation of the fistula;
- D) resection of a section of intestine with a fistula;
- D) ligation of the fistula canal.

Choose the correct answer.

3. Select the stages of acute ischemia according to V.S. Savelyev.

Select all correct answers

- A. Functional disorders.;
- B. Organic disorders.;
- B. Necrotic.;
- G. Trophic ulcer.;
- D. Maceration.;

4. Name the causes of acute venous insufficiency of the lowerlimbs:

1. thrombosis of the iliac veins;
2. deep vein thrombophlebitis;
3. obesity;
4. varicose veins;
5. traumatic injuries of veins.

Choose the correct combination of answers: A - 1, 3, 5; B - 1, 2, 4; B - 2, 3, 4; G - 2, 3, 5; D - 1, 2, 5.

5. Clinical signs of wet gangrene of the limb:

1. swelling of tissues, change in skin color;
2. intoxication;
3. delimitation of necrotic areas;
4. putrid smell;
5. lack of demarcation line.

Choose the correct combination of answers: A - 1, 2; B - 1, 3, 4, 5; B - 2, 4; G - 1, 2, 4, 5; D - 2, 3.

6. Name palliative operations for malignant tumors:

- 1) removal of metastases along with the tumor;
- 2) application of internal bypass anastomoses for obstruction of the organ lumen;
- 3) stopping bleeding from the tumor;
- 4) removal of the primary tumor leaving unremoved metastases;
- 5) super radical operations.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 2, 3, 4, 5; G - 1, 4; D - 2, 3, 5.

7. Chemotherapy can be used independently for:

- A. early stages of malignant tumors;;
- B. tumor diseases of the blood;;
- V. is never used;;
- G. tumors of the stomach and colon.;

8. With intestinal tumors, hematogenous metastases are more common:

- A. in the brain;;
- B. in the flat bones of the skeleton;;
- V. in the liver;;
- G. in the soft tissues of the lower extremities;;
- D. in the mammary gland.;

9. The main syndromes in the diagnosis of malignant tumors include:

Select all correct answers

- A. "plus-tissue" syndrome;;
- B. pathological discharge syndrome;;
- B. malabsorption syndrome;;
- G. organ dysfunction syndrome;;
- D. syndrome of small signs.;

10. To what stage according to the clinical classification does the following tumor belong: a tumor of the intestine, occupying half of its diameter, growing through the mucous, submucosal and muscular layers, but not growing through the entire wall, without metastases?

- A. Stage I.;
- B. Stage II.;
- B. III stage.;
- G. IV stage.;

TASK

Patient B., 70 years old, was admitted to the hospital with complaints of intense pain in the left leg and foot, depriving him of sleep. Forced to sleep with one leg down. Notes an increase in body temperature to 38 ° C, a feeling of heat, chills, dry mouth, thirst, severe weakness, malaise, and headache. Deterioration of condition within 5 days. Before this, he noted chilliness of the feet, pain in the feet and calf muscles when walking after 20-50 m, and the periodic appearance of ulcers on the toes of the left foot. On examination, the condition is serious, hyperthermia, pulse 110 per minute, blood pressure 100/60 mm Hg. There is no pulsation in the vessels of the left leg at all levels; on the right, a sharply weakened pulsation is detected in the femoral artery below the inguinal fold. The right foot is cool and pale. The left foot and lower leg up to the upper third are pale, marble-bluish, swollen, cold to the touch, there is no skin sensitivity, the limb is enlarged in volume. On the foot and lower third of the leg, the skin is cyanotic, with dark red spots, blisters with hemorrhagic contents. When they are opened, tissues of a dirty gray color with a fetid odor appear.

a) Make the correct diagnosis, b) What method of treatment (conservative or surgical) is indicated in this case? c) If a surgical method is indicated, what is the scope and timing of the operation?

"LYMPHICIRCULATORY DISORDERS, ONCOLOGY"

OPTION No. 10

1. List the causes of lymph circulation disorders:

- 1. congenital underdevelopment of lymphatic vessels;
- 2. chronic diseases of the lymph nodes (tuberculosis, syphilis);
- 3. compression of blood vessels by tumor, scars;
- 4. obliterating atherosclerosis.

Choose the correct combination of answers: A- 1,2; B- 1,2, 3; B -2, 3,4; G -3,4; D- 1,3,4.

2. List the basic principles of treatment of trophic ulcers:

- 1) excision of ulcer;
- 2) mechanical, chemical necrectomy;
- 3) stimulation of reparative regeneration;
- 4) pathogenetic treatment;
- 5) plastic surgery of the ulcer surface with a displaced skin flap.

Choose the correct combination of answers: A - 1, 2; B - 3, 4; B - 4, 5; G - 2, 3; D - 2, 3, 4, 5.

3. Necrectomy and amputation are the main methods of treatment at the stage of ischemia:

- A. organic disorders;;
- B. functional disorders;;
- V. necrotic.;

4. Where are trophic ulcers of the lower extremities most often located in venous insufficiency?

- A. In the distal sections.;
- B. In the area of the medial malleolus.;
- B. In the heel area.;
- D. In any area of the segment with impaired venous outflow.;

5. With wet gangrene the following are present:

Select all correct answers

- A. tissue swelling;;
- B. change in skin color;;
- B. intoxication;;
- D. presence of a demarcation line;;
- D. putrid smell;;
- E. development of pathogenic microflora;

6. A superficially located benign tumor has the following symptoms:

- 1) round shape or lobular structure;
- 2) mobile, not connected to surrounding tissues;
- 3) motionless, fused with surrounding tissues;
- 4) palpation of the tumor is painless;
- 5) enlarged regional lymph nodes are palpated.

Choose the correct combination of answers: A - 1, 2, 4; B - 1, 3, 4; B - 1, 2, 3; G - 2, 4, 5; D - 1, 2, 5.

7. Polymorphism of tumor cells is called:

- A. morphological differences between tumor cells and tissue cells from which it developed;;
- B. difference in morphological criteria of tumor cells from its metastases;;
- B. the presence in the structure of the tumor of cells of different morphological characteristics;

8. Methods of physical antitumor include:

Select all correct answers

- A. use of an electric knife;;
- B. use of laser;;
- B. irradiation of the tumor before surgery and in the early postoperative period;;
- G. intravenous administration of drugs on the operating table;

9. Early diagnosis is considered if a tumor is detected:

- A. at stage I or stage cancer in situ;;
- B. at stages II–III, radical treatment is possible in most patients;;
- B. at stages III–IV, when radical treatment is impossible in most patients;;
- G. at stages I, II and III, in which complete cure of patients is always possible;

10. The syndrome of minor signs includes:

Select all correct answers

- A. weight loss and loss of appetite;;
- B. unexplained increase in body temperature;;
- B. the appearance of blood in the stool;;
- G. weakness and fatigue;;
- D. anemia;;
- E. leukocytosis.;

TASK

Patient S., 75 years old, suffers from coronary artery disease, post-infarction atherosclerosis, atrial fibrillation, and circulatory failure. He was admitted with pain in the right leg, numbness of the right foot, and inability to move actively 48 hours after the onset of the disease. He became acutely ill: suddenly there was a sharp, very intense pain in the right leg and foot, numbness, coldness, paresthesia, and a crawling sensation. Gradually, the pain decreased, it was mainly localized in the foot and lower third of the leg, and there was impaired movement and a complete lack of sensitivity. Upon examination, the general condition is moderate, body temperature is normal. On the left leg, the pulsation of the arteries is somewhat weakened and is detected at all levels. On the right lower limb, pulsation is only on the femoral artery, there is no pulsation on the lower leg and foot. The right foot and distal parts of the lower leg are cold to the touch, all types of sensitivity are absent, active movements are impossible, passive are difficult, palpation pain is noted above. The skin is pale, with bluish

spots. The toes and most of the foot are bluish-black, dried out, wrinkled, the demarcation line is clearly defined.

a) Establish a diagnosis, b) What radical or palliative surgical treatment is indicated for the patient? c) Timing of the operation?

"LYMPHICIRCULATORY DISORDERS, ONCOLOGY"

OPTION No. 11

1. Treatment methods for purulent thrombophlebitis:

1. anticoagulants;
2. antibiotics;
3. shunting;
4. installation of an umbrella probe into the lumen of the vein;
5. ligation and removal of the vein.

Choose the correct combination of answers: A - 1, 2, 5; B - 1, 4; B - 2, 3, 5; G - 2,5; D - 1, 2.

2. Where are trophic ulcers of the lower extremities most often located in venous insufficiency?

- A. In the distal sections.;
- B. In the area of the medial malleolus.;
- B. In the heel area.;
- D. In any area of the segment with impaired venous outflow.;

3. To perform indirect embolectomy use:

- A. Fogarty catheter.;
- B. Foley catheter.;
- B. Petzer catheter.;
- G. subclavian catheter.;

4. What is characteristic of dry gangrene?

Select all correct answers

- A. Tissue swelling;
- B. Change in skin color;
- B. Intoxication.;
- D. Presence of a demarcation line.;
- D. Mummification of necrotic tissues.;
- E. Putrid smell.;

5. List the causes of trophic ulcers:

1. violation of venous circulation;
2. disturbance of arterial circulation;
3. violation of lymph flow;
4. damage to the spinal cord, nerves;
5. diabetes.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 2, 3, 4; G - 1, 2, 3, 5; D - all answers are correct.

6. Which designation corresponds to a stomach tumor that does not extend beyond the mucous membrane, with no metastases in regional lymph nodes or distant organs?

- A) P2T1 N2 MO.
- B) P3T2NOM1.
- B) P3T3N2M1.
- D) P1 T1 N0 MO.

Choose the correct answer.

7. Malignant tumors are characterized by:

Select all correct answers

- A. pronounced atypia and cell polymorphism.;
- B. absence or minimal differences between tumor cells and maternal tissue cells.;
- B. expansive growth without invasion.;
- G. infiltrating growth.;
- D. rapid growth, ability to metastasize.;

8. Select indications for surgical treatment of benign tumors.

Select all correct answers

- A. Constant trauma to the tumor.;

- B. Violation of organ functions.;
- B. Before surgery, there is no absolute certainty that the tumor is not malignant.;
- D. Increased ESR and leukocytosis.;
- D. Cosmetic defects.;

9. What is called atypia of tumor cells?

- A. Difference between different cells according to morphological characteristics within one tumor.;
- B. Difference in morphological criteria of tumor cells from its metastases.;
- B. Morphological differences between tumor cells and tissue cells from which it developed.;

10. When assessing cure for a malignant tumor, the following time period is taken as a basis:

- A. 3 years.;
- B. 2 years.;
- V. 5 years.;
- G. 15 years old.;
- D. 10 years old.;

TASK

Patient K., 47 years old, came to the clinic with complaints of the appearance of a wound in the area of a postoperative scar with purulent discharge. 2 months ago he underwent a median laparotomy, suturing a perforated ulcer of the duodenal bulb. The early postoperative period proceeded without complications. He was discharged in satisfactory condition, the wound healed by primary intention. 7 days ago, a painful lump appeared in the area of the postoperative scar, an increase in body temperature to 38 °C, redness and swelling of the skin. 2 days ago, a wound with a diameter of 8 mm with purulent discharge. After this, the pain decreased and the body temperature returned to normal. Upon examination, in the upper third of the postoperative scar there is a wound with a diameter of 5-8 mm with serous-purulent discharge, a painful infiltrate is detected in the soft tissues around it, the skin is swollen and hyperemic. During inspection, the length of the wound canal 1.5 cm, ending in soft tissues, a lavsan ligature is determined at the bottom.

- a) What is your diagnosis? b) Additional research methods? c) Treatment?

"LYMPHICIRCULATORY DISORDERS, ONCOLOGY"

OPTION No. 12

1. What drugs are considered pathogenetically justified for the treatment of patients with obliterating endarteritis?

- 1. Desensitizing drugs.
- 2. Glucocorticoids.
- 3. Vasodilators.
- 4. Disaggregants.
- 5. Antibiotics.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 2, 4; G - 1, 3, 4; D - 2, 3.

2. With wet gangrene there are:

Select all correct answers

- A. tissue swelling.;
- B. change in skin color.;
- B. intoxication.;
- D. presence of a demarcation line.;
- D. putrid smell.;
- E. development of pathogenic microflora.;

3. Select the causes of acute arterial circulatory disorders.

Select all correct answers

- A. Damage to the main vessel.;
- B. Thrombosis.;
- B. Embolism.;
- G. Hyperplasia of the vascular wall.;

4. Name the method of treatment for labiform intestinal fistula:

- A) conservative treatment;
- B) fistula filling;
- B) diathermocoagulation of the fistula;
- D) resection of a section of intestine with a fistula;
- D) ligation of the fistula canal.

Choose the correct answer.

5. Select characteristic signs of thromboembolism of the arteries of the limb:

1. gradual increase in pain;
2. sudden acute pain;
3. bluishness of the skin;
4. pallor of the skin;
5. coldness of the limb.

Choose the correct combination of answers:

A- 1,2, 3; B-2, 3,4; B-4, 5; G-2, 4, 5; D- 1,3,5.

6. What is a tumor called?

- A. Pathological formation, independently developing in the cavities of organs and tissues, not distinguished by autonomous growth, polymorphism and cell atypia.;
- B. Pathological formation, independently developing in organs and tissues, characterized by autonomous growth, polymorphism and cell atypia.;
- B. Pathological formation characterized by autonomous growth, without cell polymorphism and atypia.;
- D. Pathological formation prone to metastasis and invasive growth.;

7. Indicate the main routes of metastasis.

Select all correct answers

- A. Lymphogenic.;
- B. Contact.;
- B. Airborne.;
- G. Hematogenous.;
- D. Implantation.;

8. What is the principle of case?

- A. Removal of the underlying cellular spaces and surrounding fascia along with the tumor;
- B. Dissection of tissue along the fascia;
- B. Wide excision of vessels, tendons and nerve trunks adjacent to the affected organ.;

9. Which designation corresponds to a stomach tumor that does not extend beyond the mucous membrane, with no metastases in regional lymph nodes or distant organs?

- A) P2T1 N2 MO.
- B) P3T2NOM1.
- B) P3T3N2M1.
- D) P1 T1 N0 MO.

Choose the correct answer.

10. Indicate the basic principles of surgical treatment of benign tumors.

Select all correct answers

- A. Removal of the tumor within healthy tissues.;
- B. Removal along with the capsule, if any;
- B. Removal of regional lymph nodes.;
- D. Wide excision of the tumor with surrounding tissues, 5–8 cm from the visible border of the lesion.;

TASK

Patient R., 78 years old, suffered an acute ischemic cerebrovascular accident 14 days ago with the development of right-sided hemiparesis, aphasia, and dysfunction of the pelvic organs, which is accompanied by urinary and fecal incontinence. Immobile, independent movements are impossible, forced position on the back. Over the past 3 days, relatives have noticed a deterioration in their general condition, increased body temperature, dry tongue, anxiety, tachycardia, sweating, and worsening appetite. When turning the patient, pallor and cyanosis of the skin in the sacral area were noted. Examined by a surgeon on his side. In the sacrum area the skin is cyanotic in an area measuring 7x5 cm with dark purple spots. The soft tissues are swollen, there is detachment of the epidermis, maceration, the appearance of blisters with red-brown contents, reddish and purple wounds. Palpation determines the tenderness of the surrounding tissues.

a) What is your diagnosis? b) Treatment tactics? c) Prevention of this complication in seriously ill patients?

"LYMPHICIRCULATORY DISORDERS, ONCOLOGY"

OPTION No. 13

1. Who is more likely to develop obliterating endarteritis?

- 1) In children.
- 2) For men 20-40 years old.

- 3) In women 30-60 years old.
- 4) For smokers.
- 5) Those who have suffered frostbite.

Choose the correct combination of answers: A- 1,5; B- 1,2, 3; V-2, 3,5; G-2,4, 5; D-2, 4.

2. Necrosis - death of tissues, entire organs or parts thereof:

- A. in a living organism;;
- B. after the death of a person.;

3. What is characteristic of obliterating atherosclerosis?

Select all correct answers

- A. Damage to the aorta and its large branches;
- B. Age less than 40 years;
- B. Damage to the arteries of the lower extremities only;
- D. Local damage to the vessel is possible;
- D. Bypass surgery is almost impossible.;

4. Trophic ulcers are formed when:

Select all correct answers

- A. insufficiency of venous circulation;;
- B. vitamin deficiency;;
- B. arterial circulatory insufficiency;;
- G. spinal cord damage;;
- D. damage to peripheral nerves;;
- E. diabetes mellitus;

5. Indicate the most important of the listed factors for preventing the development of gas gangrene.

- A. Excision of the edges of the wound.;
- B. Suturing the wound.;
- B. Drainage of the wound.;
- G. Washing the wound.;
- D. Antibacterial therapy.;
- E. Excision of non-viable tissue, washing of the wound.;

6. What is called atypia of tumor cells?

- A. Difference between different cells according to morphological characteristics within one tumor.;
- B. Difference in morphological criteria of tumor cells from its metastases.;
- B. Morphological differences between tumor cells and tissue cells from which it developed.;

7. A true relapse is characterized by:

Select all correct answers

- A. re-development of the tumor in the same place after its complete removal surgically or otherwise;;
- B. re-development of the tumor after its incomplete removal;;
- B. re-formation of a tumor in another place after complete removal of the previous one, the morphological structure is similar;;
- G. only malignant tumors recur;

8. A malignant tumor is distinguished by:

1. expansive growth;
2. metastasis to lymph nodes and organs;
3. tendency to relapse;
4. infiltrating growth;
5. presence of a capsule.

Choose the correct combination of answers: A - 1, 2, 3; B - 3, 4, 5; B - 2, 3, 4; G - 2, 3, 5; D - 2, 3, 4, 5.

9. A superficially located benign tumor has the following symptoms:

1. round shape or lobular structure;
2. mobile, not connected with surrounding tissues;
3. motionless, fused with surrounding tissues;
4. palpation of the tumor is painless;
5. enlarged regional lymph nodes are palpated.

Choose the correct combination of answers: A - 1, 2, 4; B - 1, 3, 4; B - 1, 2, 3; G - 2, 4, 5; D - 1, 2, 5.

10. Indicate the main methods of treating malignant tumors.

Select all correct answers

- A. Surgical;
- B. Chemotherapy;
- B. Palliative.;
- G. Luchevoy.;
- D. Combined.;

TASK

Patient T., 63 years old, was admitted to the surgical department with complaints of severe pain in the calf muscles and feet when walking, which forces the patient to stop after 20 m, pain in the right foot at rest, worsening at night, cold feet. On examination: the skin of the lower extremities, especially the feet, is dry, pale, the nails are thickened, brittle, the muscles are atrophic, there is no hair, the feet are cool to the touch, especially the right one. The right foot with bluish spots, edematous, cyanotic, on the plantar surface of the first toe there is a sharply painful wound of a round shape, with a diameter of 1 cm, with dense, uneven edges, covered with dark brown necrotic masses, flaccid granulations. The discharge is scanty, serous-hemorrhagic, with an unpleasant putrefactive odor. Pulsation in the femoral, popliteal arteries, arteries of the leg and foot on both sides is not detected.

- a) Establish a diagnosis, b) List special research methods, c) List methods of complex treatment.

"LYMPHO-CIRCULATORY DISORDER, ONCOLOGY"

OPTION No. 14

1. Which of the following is dangerous in terms of the development of embolism?

- 1. Parietal thrombus of the heart.
- 2. Thrombus of the femoral artery.
- 3. Phlebitis of the ulnar vein.
- 4. Common thrombus of the veins of the leg and thigh.
- 5. Thrombus of the saphenofemoral anastomosis.

Choose the correct combination of answers: A- 1,4, 5; B -2, 3,4; B -2,3; G- 3, 5; D- 3,4.

2. Indicate the most important of the listed factors in preventing the development of gas gangrene.

- A. Excision of the edges of the wound.;
- B. Suturing the wound.;
- B. Drainage of the wound.;
- G. Washing the wound.;
- D. Antibacterial therapy.;
- E. Excision of non-viable tissue, washing of the wound.;

3. Which of the following is characteristic of a trophic ulcer?

Select all correct answers

- A. Healing period is more than 2 months;
- B. Healing time less than 2 months;
- B. The presence of well-developed granulations.;
- D. The presence of flaccid granulations.;

4. Swelling and cyanosis of the skin are characteristic of necrosis caused by:

- A. arterial obstruction;;
- B. violation of venous outflow;;
- B. violation of microcirculation.;

5. The symptom of intermittent claudication is typical for:

- A. obliterating atherosclerosis;;
- B. postthrombotic disease;;
- B. diabetic foot syndrome;;
- G. varicose veins.;

6. Currently, the following factors are included in the theory of the origin of tumors:

Select all correct answers

- A. mechanical;;
- B. chemical;;
- V. psychological;;
- G. physical;;
- D. biological;;
- E. genetic;;
- G. state of the immune and humoral systems.;

7. To what stage according to the clinical classification does the following tumor belong: a tumor of the intestine, occupying half of its diameter, growing through the mucous, submucosal and muscular layers, but not growing through the entire wall, without metastases?

- A. Stage I.;
- B. Stage II.;
- B. III stage.;
- G. IV stage.;

8. Select absolute indications for removal of a benign tumor

- 1. compression of an organ by a tumor that disrupts its functions;
- 2. permanent injury to a superficial tumor with clothing or shoes;
- 3. acceleration of tumor growth;
- 4. long-term existence of the tumor;
- 5. suspicion of malignant degeneration.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 1, 3, 4, 5; B - 1, 2, 3, 5; G - 2, 3, 4, 5; D - all answers are correct.

9. With gastroscopy you can establish:

- 1. localization of the tumor;
- 2. tumor color;
- 3. stage of the tumor process;
- 4. condition of regional lymph nodes;
- 5. presence or absence of tumor decay.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 3, 4; B - 1, 4, 5; G - 2, 3, 4; D - 1, 2, 5.

10. The fastest and most aggressive growth is observed in:

- A. highly differentiated tumors.;
- B. undifferentiated tumors.;
- B. poorly differentiated tumors.;

TASK

Patient M., 62 years old, suffering from varicose veins, 4 days ago felt nagging pain along the dilated vein of the lower third of the thigh, and a thickening in this area of the vein. After 2 days, the compaction spread to the upper border of the inner thigh, hyperemia and swelling appeared. On examination, there is a dense, painful cord on the inner surface of the thigh, reaching the upper third, skin hyperemia, swelling. There is no fluctuation. Body temperature 37.6 °C.

What is your diagnosis and treatment strategy?

ANSWERS (“LYMPHO-CIRCULATORY DISORDERS, ONCOLOGY”)

<p>OPTION 1</p> <p>15 2 - B 3 - BGD 4 - A 5 - A 6 - 5 7 - G 8 - ABCD 9 - B 10 - B</p> <p>OPTION 2</p> <p>12 2 - B 3 - AB 4 - AG 5 B 6 - B 7 - B 8 - B</p>	<p>OPTION 8</p> <p>1 - G 2 - D 3 - B 4 - G 5 - D 6 - B 7 - ABCD 8 - BV 9 - B 10 - AGD</p> <p>OPTION 9</p> <p>1 - B 2 - G 3 - ABC 4 - B 5 - G 6 - B 7 - B 8 - B</p>
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9 - B
10 - AB

OPTION 3

eleven
2 - G
3 - ABCWHERE
4 - B
5 - D
6 - D
7 - ABGD
8 - A
9 - B
10 - ABCD

OPTION 4

15
2-D
3 - AB
4 - G
5 B
6 - B
7 -A
8 - ABG
9 - G
10 - B

OPTION 5

eleven
2 - D
3 - ABCD
4 - A
5 - G
6 - B
7 - AB
8 - AVG
9 - B
10 - V

OPTION 6

1 - D
2 - G
3 - AG
4 - A
5 B
6 - G
7 - AB
8 - A
9 - ABGD
10 - AGD

OPTION 7

1 - G
2 - D
3 - ABC
4 - D
5 B

9 - ABGD
10 - A

OPTION 10

1 - B
2 - D
3 - B
4 - B
5 - ABCDE
6 - A
7 - B
8 - ABC
9 - A
10 - ABCD

OPTION 11

1 - A
2 - B
3 - A
4 - BGD
5 - D
6 - A
7 - AGD
8 - ABCD
9 - B
10 - V

OPTION 12

1 - G
2 - ABCDE
3 - ABC
4 - G
5 - G
6 - B
7 - AGD
8 - A
9 - G
10 - AB

OPTION 13

1 - G
2 - A
3 - AG
4 - ABCWHERE
5 - E
6 - B
7 - A
8 - B
9 - A
10 - ABG

OPTION 14

1 - A
2 - E
3 - AG
4 - B
5 - A
6 - ABGD

6 - B	7 - A
7 - B	8 - B
8 - B	9 - D
9 - G	10 - B
10 - A	

"CLINICAL RESEARCH METHODS"
OPTION #1

1. Ultrasound examination is indicated for patients with the following diseases: a) stomach cancer; b) acute cholecystitis; c) duodenal ulcer; d) urolithiasis; e) hemorrhoids; e) phimosis; g) nodular goiter; h) duodenitis. Choose the correct combination of answers:

1. b, d, d.
2. a, b, d, g.
3. f, h.
4. in, g.
5. a, d, g.

2 Surgical interventions according to classification Altmeier are divided into: a) pure; b) conditionally pure; c) contaminated; d) dirty; e) infected; f) contaminated; g) infected. Choose the correct combination of answers:

- 1) a B C D.
- 2) d, f, g.
- 3) a, b, d.
- 4) a, c.
- 5) a, b, e.

3. What types of enemas are used immediately before surgery?

- A) hypertensive.
- B) siphon
- IN) cleansing

Choose the correct answer.

4. What is used to cleanse the intestines in preparation for a planned operation?

- A) Laxatives only
- B) Cleansing enemas the night before and the morning of surgery
- IN) Siphon enema in the evening and morning on the day of surgery
- G) Laxatives (if indicated) and cleansing enemas the evening before and the morning before surgery

5. What is included in premedication before a planned operation?

- A) Narcotic analgesics and antispasmodics in 30-40 minutes. before surgery
- B) Sleeping pills and sedatives, at night, in the morning - sedatives, narcotic analgesics with atropine 30-40 minutes in advance. before surgery.
- IN) Sleeping pills and sedatives at night, in the morning - sedatives, narcotic analgesics and atropine
- G) Narcotic analgesics and atropine 1.5-2 hours before surgery.

6. What are the main tasks of the immediate preoperative preparation of the patient?

- 1) clarification of the diagnosis.
- 2) identification of concomitant diseases.
- 3) determination of indications for surgery.
- 4) fight against endogenous infection.
- 5) elimination of hypovolemia and hypoproteinemia.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 3, 4, 5; G - 3, 4; D - 4, 5.

7. Specify the stages of the surgical operation:

- 1) surgical approach;
- 2) placing the patient on the operating table;
- 3) surgical procedure;
- 4) stop bleeding;
- 5) suturing the wound.

Choose the correct combination of answers: A - all answers are correct; B - 1, 2, 3; B - 1, 3, 5; G - 1, 3, 4, 5.

8. The characteristics of pain include all of the following, except:

- A. localization of pain
- B. irradiation (places of pain reflection)
- B. Time of appearance (day, night)
- D. Duration (constant, periodic, paroxysmal)
- D. intensity (strong, weak, interferes or does not interfere with sleep, work)
- E. pain on palpation

9. Laparoscopy is indicated for patients with the following diseases: a) duodenitis; b) nonspecific ulcerative colitis; c) acute paraproctitis; d) fibrocystic mastopathy; e) stomach cancer; f) acute pyelonephritis; g) acute ileofemoral venous thrombosis; h) mesenteric thrombosis. Choose the correct combination of answers:

- 1. b, d, d.
- 2. a, b, d, g.
- 3. c, d.
- 4. d, h.
- 5. b, f, g.

10. Which of the following blood substitutes is advisable to transfuse to a patient in whom hypoproteinemia was detected in the preoperative period?

- 1) povidone + sodium chloride + potassium chloride + calcium chloride + magnesium chloride + sodium bicarbonate.
- 2) gelatin.
- 3) hydrolysine.
- 4) dextran [cf. they say weight 50,000-70,000].
- 5) amino acid solution.

Choose the correct combination of answers: A - 1, 2; B - 1, 3; B - 3, 4; G - 2, 4, 5; D - 3, 5.

TASK

The patient is undergoing surgery for a tumor of the ascending colon. Before the operation, the attending physician bandaged the patient's legs with an elastic bandage and asked him to go to the toilet. After premedication, the patient was taken to the operating room. What mistakes were made, and what complications could this lead to?

"CLINICAL RESEARCH METHODS" OPTION #2

1. Laparoscopy is indicated for patients with the following diseases: a) duodenitis; b) nonspecific ulcerative colitis; c) acute paraproctitis; d) fibrocystic mastopathy; e) stomach cancer; f) acute pyelonephritis; g) acute ileofemoral venous thrombosis; h) mesenteric thrombosis. Choose the correct combination of answers:

- 1. b, d, d.
- 2. a, b, d, g.
- 3. c, d.
- 4. d, h.
- 5. b, f, g.

2. Specify the stages of the surgical operation: a) surgical approach; b) placing the patient on the operating table; c) surgical procedure; d) stopping bleeding; e) suturing the wound. Choose the correct combination of answers:

- 1) a B C.
- 2) a, c, d.
- 3) a, c, d, e.
- 4) b, c.
- 5) everything is true.

3. What is the preparation of a patient for elective surgery? directly on the day of surgery?

- 1) general hygienic bath.
- 2) shaving hair in the area of the surgical field.
- 3) premedication.
- 4) blood transfusion.
- 5) gastric lavage.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3; B - 3, 4; G - 2, 3, 5; D - 1, 3.

4. Prevention of deep vein thrombosis after surgery includes: a) antibiotic therapy; b) bandaging a limb; c) prolonged bed rest after surgery; d) early activation of patients after surgery; e) use of anticoagulants.

Select all correct answers

- 1) a, b;
- 2) g, d;
- 3) b, c, d;
- 4) b, d, d;
- 5) a, c, d;

5. What methods of preventing wound infection should be used before elective surgery? a) breathing exercises; b) activation of the patient; c) desensitization of the body; d) sanitation of the oral cavity; e) changing the patient's linen; f) hygienic shower; g) stimulation of diuresis; h) treatment of the surgical field. Choose the correct combination of answers:

- 1) a, d, d.
- 2) e, g.
- 3) a, b, g.
- 4) in, g.
- 5) d, d, f, h.

6. What is included in premedication before emergency surgery?

- A) Sedatives and hypnotics along with narcotic analgesics 1.5-2 hours before surgery
B) Narcotic analgesics and antispasmodics in 30-40 minutes. before surgery
IN) Narcotic analgesics and atropine in 30-40 minutes. before surgery
G) Narcotic analgesics and atropine 1.5-2 hours before surgery
D) All of the above are incorrect

7. What is the prevention of wound infection in the preoperative period?

- 1) sanitation of the oral cavity.
- 2) hygienic bath.
- 3) processing of the surgical field.
- 4) change of linen.
- 4) treatment of pyoderma.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4, 5; B - 1, 2, 4, 5; G - 1, 4, 5; D - all answers are correct.

8. What does the preliminary preparation of the surgical field for a planned operation include?

Select all correct answers

- A) Dry shaving
B) Putting on sterile linen
IN) Full sanitary treatment
G) Treating the surgical field with antiseptics

9. Select special operations:

- 1) microsurgical;
- 2) endoscopic;
- 3) simultaneous;
- 4) diagnostic;
- 5) endovascular.

Choose the correct combination of answers: A - 1, 2, 5; B - 1, 2, 3; B - 1, 3, 4, 5; G - 4, 5.

10. Select the main stages of surgical treatment of patients.

Select all correct answers

- A) Preoperative preparation
B) Dispensary observation
IN) Postoperative period
G) Surgery

Patient M., 62 years old, suffering from a bilateral inguinal-scrotal hernia, asked to go home on the eve of the operation. In the evening I took a shower, shaved the surgical field and returned to the hospital the next morning. What mistakes were made and what consequences could this lead to?

"CLINICAL RESEARCH METHODS"

OPTION #3

1. What sections are not included in the clinical history of a surgical patient?

Select all correct answers

- A. Etiology and pathogenesis;
- B. Examination and treatment plan;
- B. Pathological changes in organs;
- D. Preliminary diagnosis;
- D. Disease prevention;
- E. Observation diary;

2. When drawing up a work schedule for the operating room, which of the following numerical operations need to be planned first?

- 1) phlebectomy;
- 2) pneumonectomy;
- 3) colon resection;
- 4) small bowel resection;
- 5) application of secondary sutures.

3. What are the main tasks of the immediate preoperative preparation of the patient?

- 6) clarification of the diagnosis.
- 7) identification of concomitant diseases.
- 8) determination of indications for surgery.
- 9) fight against endogenous infection.
- 10) elimination of hypovolemia and hypoproteinemia.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 3, 4, 5; G - 3, 4; D - 4, 5.

4. What does the preliminary preparation of the surgical field include during a planned operation?

Select all correct answers

- A) Dry shaving
- B) Putting on sterile linen
- IN) Full sanitary treatment
- G) Treating the surgical field with antiseptics

5. Prevention of deep vein thrombosis after surgery includes: a) antibiotic therapy; b) bandaging a limb; c) prolonged bed rest after surgery; d) early activation of patients after surgery; e) use of anticoagulants.

Select all correct answers

- 1) a, b;
- 2) g, d;
- 3) b, c, d;
- 4) b, d, d;
- 5) a, c, d;

6. Determine the sequence of examination of a patient with acute pathology of the abdominal organs: a) clarifying the patient's complaints and medical history; b) plain radiography of the abdominal organs; c) emergency laboratory testing of blood and urine; d) assessment of the patient's condition and physical examination of organs and systems; e) Ultrasound of the abdominal organs; e) emergency laparoscopy. Choose the correct combination of answers:

- 1. a, b, c, d, e, f.
- 2. d, a, d, c, b, f.
- 3. g, d, f, a, b, c.
- 4. b, d, f, a, c, d.
- 5. a, d, c, b, d, f.

7. When should you shave your skin before elective surgery?

- 1) before admission to the hospital;
- 2) one day before surgery;

- 3) in the evening before the operation;
- 4) in the morning on the day of surgery;
- 5) immediately before the start of the operation on the operating table.

8. Prescribe treatment for bedsores in the ischemic stage.

- A) Treatment with 70% ethyl alcohol
- B) Treatment with Vaseline oil
- B) Treatment with camphor alcohol
- D) Treatment with a 5% solution of potassium permanganate.

9. Prescribe treatment for bedsores in the necrosis stage.

- A) Treatment with 70% ethyl alcohol
- B) Treatment with 5% potassium permanganate solution
- B) Bandages with Vishnevsky ointment
- D) Treatment with camphor alcohol.

10. Name the goals of preoperative preparation.

Select all correct answers

- A) Prevention of intraoperative complications
- B) Preparing the patient for complex examination methods
- IN) Prevention of postoperative complications

TASK

A patient with an intestinal fistula will undergo reconstructive surgery. What research methods are needed in this case?

"CLINICAL RESEARCH METHODS"

OPTION #4

1. How often does the attending physician prepare observation diaries for patients who are in satisfactory condition?

- A. Twice a day;
- B. Daily;
- B. Every other day;
- G. Once every 3 days;
- D. Only if the patient's condition worsens;

2. Contraindications to emergency surgery for widespread peritonitis are: a) fresh myocardial infarction; b) severe traumatic shock with combined injury; c) agonal state of the patient; d) early postoperative period; d) there are no contraindications. Choose the correct combination of answers:

- 1) a B C.
- 2) in, g.
- 3) b, c.
- 4) a, c.
- 5) d.

3. Highlight the main factors that determine the duration of the preoperative period.

- 1) nature of the disease.
- 2) the volume of the upcoming operation.
- 3) patient status.
- 4) type of pain relief.
- 5) urgency of the operation.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 3, 5; D - 2, 4, 5; D - 2, 3, 5.

4. A separate description in the medical history of the local pathological Russian status (st. localis) is mandatory for the following diseases: a) obliterating atherosclerosis of the vessels of the lower extremities; b) post-injection abscess of the gluteal region; c) varicose veins of the lower extremities; d) strangulated inguinal hernia; e) peptic ulcer of the stomach and duodenum; f) acute calculous cholecystitis; g) acute appendicitis; h) purulent

pleurisy; i) breast tumors. Choose the correct combination of answers:

1. a, b, c, d, i.
2. a, b, d, f, h.
3. c, d, h, i.
4. d, f, h, i.
5. Everything is correct.

5. The complex of infusion preparation before surgery includes: a) correction of water and electrolyte balance; b) administration of narcotic analgesics; c) tube enteral nutrition; d) correction of BCC deficiency; e) intramuscular administration of antibiotics; f) administration of specific immunostimulating drugs. Choose the correct combination of answers:

- 1) a, b.
- 2) in, s.
- 3) a, g.
- 4) g, d.
- 5) g, e.

6. For urinary retention in the postoperative period, the following are indicated:

- 1) warming the bladder area;
- 2) hypertensive enema;
- 3) intravenous administration of 10 ml of 40% methenamine solution;
- 4) use of diuretics;
- 5) bladder catheterization.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 3, 4, 5; B - 1, 2, 3, 5; G - 1, 3, 5; D - all answers are correct.

7. What is included in premedication before emergency surgery?

- A) Sedatives and hypnotics along with narcotic analgesics 1.5-2 hours before surgery
B) Narcotic analgesics and antispasmodics in 30-40 minutes. before surgery
IN) Narcotic analgesics and atropine in 30-40 minutes. before surgery
G) Narcotic analgesics and atropine 1.5-2 hours before surgery
D) All of the above are incorrect

8. What types of enemas are used immediately before surgery?

- A) hypertensive.
B) siphon
IN) cleansing

Choose the correct answer.

9. Specify the stages of the surgical operation:

- 1) surgical approach;
- 2) placing the patient on the operating table;
- 3) surgical reception;
- 4) stopping bleeding;
- 5) suturing the wound.

Choose the correct combination of answers: A - all answers are correct; B - 1, 2, 3; B - 1, 3, 5; G - 1, 3, 4, 5.

10. When do preoperative preparations begin for urgent surgical diseases?

- A) 1.5-2 hours before surgery
B) Directly in the operating room
IN) From the moment of diagnosis

TASK

A patient with blunt abdominal trauma and stable hemodynamics was transported by ambulance to a surgical hospital. The reception nurse called the doctor and sent the patient to the shower. What mistakes were made? What consequences can this lead to?

"CLINICAL RESEARCH METHODS"

OPTION #5

1. What sections make up the subjective part of the medical history?

Select all correct answers

- A. Passport part;
- B. Complaints;
- B. Medical history;
- G. Life history;
- D. Objective research;
- E. Data from additional research methods;

2. Radical surgery is:

- 1) an operation that claims to provide a complete cure;
- 2) an operation that completely eliminates the possibility of a return of the main source of the disease;
- 3) excision of the tumor within healthy tissue;
- 4) removal of the affected organ and blockade of metastasis pathways;
- 5) intervention aimed at completely eliminating the manifestations of the disease.

3. When does the preoperative period begin?

- A) first diseases.
 - B) from the moment of diagnosis.
 - IN) from the moment of admission to the surgical hospital.
 - G) from the moment the indications for surgery are established.
- Choose the correct answer.

4. The catabolic phase of the patient's postoperative condition is characterized by:

- 1) activation of the sympathetic-adrenal system;
- 2) increased blood glucose levels;
- 3) increased breakdown of proteins;
- 4) an increase in the vital capacity of the lungs;
- 5) decrease in diuresis.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4, 5; B - 1, 3, 5; G - 1, 2, 3, 5; D - all answers are correct.

5. The complex of infusion preparation before surgery includes: a) correction of water and electrolyte balance; b) vveadministration of narcotic analgesics; c) tube enteral nutrition; d) correction of BCC deficiency; e) intramuscular administration of antibiotics; f) administration of specific immunostimulating drugs. Choose the correct combination of answers:

- 1) a, b.
- 2) in, s.
- 3) a, g.
- 4) g, d.
- 5) g, e.

6. What does the preliminary preparation of the surgical field for a planned operation include?

Select all correct answers

- A) Dry shaving
- B) Putting on sterile linen
- IN) Full sanitary treatment
- G) Treating the surgical field with antiseptics

7. Assess the accuracy of clinical performance indicatorsorganisms, which are used to determine the cause of critical deterioration of the patient's condition:

- 1) pulse more than 120 per minute,
- 2) decrease in blood pressure to 80 mmHg
- 3) number of respirations 20 per minute;
- 4) cold clammy sweat;
- 5) bloating and inability to pass gas during the day.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 3, 4; G - 1, 3, 5; D - 1, 2, 4.

8. The phase of reverse development in an uncomplicated course of the postoperative period is characterized by:

- 1) lasting 2-3 days;
- 2) lasting 4-6 days;
- 3) positive nitrogen balance;
- 4) decreased activity of the sympathetic-adrenal system;
- 5) restoration of intestinal tract activity.

Choose the correct combination of answers: A - 1, 3, 5; B - 2, 3, 5; B - 2.5; G - 1, 4, 5; D - 2, 3, 4, 5.

9. What diseases require emergency surgery?

- 1) stomach cancer.
- 2) perforated gastric ulcer.
- 3) acute appendicitis.
- 4) malignant lung tumor.
- 5) strangulated inguinal hernia.
- 6) lipoma of the shoulder.

Choose the correct combination of answers: A - 2, 3, 5; B - 1, 3, 5; B - 2, 4, 6; G - 2, 3; D - 1, 4.

10. If perforation of a hollow organ is suspected, the main method of examination is:

1. colonoscopy;
2. plain radiography of the abdominal organs;
3. Ultrasound;
4. sigmoidoscopy;
5. gastroscopy.

TASK

After gastric surgery, on the 4th day, a 58-year-old patient suddenly developed sharp pain in the right lower limb, coldness of the limb, the lower leg was cold on palpation, there was no pulsation in the arteries of the foot and popliteal artery, with preserved pulsation in the femoral artery, pain sensitivity in the lower leg and the foot is lowered. What is your diagnosis, what should have been done to prevent this complication?

"CLINICAL RESEARCH METHODS"

OPTION #6

1. If perforation of a hollow organ is suspected, the main method of examination is:

1. colonoscopy;
2. plain radiography of the abdominal organs;
3. Ultrasound;
4. sigmoidoscopy;
5. gastroscopy.

2. Select special operations:

- 6) microsurgical;
- 7) endoscopic;
- 8) simultaneous;
- 9) diagnostic;
- 10) endovascular.

Choose the correct combination of answers: A - 1, 2, 5; B - 1, 2, 3; B - 1, 3, 4, 5; G - 4, 5.

3. Determine the main tasks of the preoperative period.

- 1) clarification of the diagnosis.
- 2) determination of indications for surgery.
- 3) preparing the patient for surgery.
- 4) determining the timing and nature of the operation.
- 5) determining the scope of the operation and its duration.

Choose the correct answer. A - 1, 2, 3; B - 1, 3, 4, 5; B - 2, 3, 4, 5; G - 1, 2, 3, 4; D - all answers are correct.

4. What is used to cleanse the intestines in preparation for planned surgery?

- A) Laxatives only
- B) Cleansing enemas the night before and the morning of surgery
- C) Siphon enema in the evening and morning on the day of surgery
- D) Laxatives (if indicated) and cleansing enemas the evening before and the morning before surgery

5. In what case is it necessary to obtain the patient's consent for surgery?

- A) Always
- B) Always, except when the patient is unconscious and emergency surgery is necessary
- IN) For high-risk operations
- G) Not necessary, consent of relatives is sufficient
- D) Not necessary

6. Assess the accuracy of clinical performance indicatorsorganisms, which are used to determine the cause of critical deterioration of the patient's condition:
- 1) pulse more than 120 per minute,
 - 2) decrease in blood pressure to80 mmHg
 - 3) number of respirations 20 per minute;
 - 4) cold clammy sweat;
 - 5) bloating and inability to pass gas during the day.
- Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 3, 4; G - 1, 3, 5; D - 1, 2, 4.

7. Indicate an incorrect assessment of the patient's general condition:

- A. satisfactory;
- B. relatively satisfactory;
- V. moderate severity;
- G. heavy;
- D. extremely severe;

8. What does the preliminary preparation of the surgical field for emergency surgery include?

- A) Dry shaving of the hair and, if necessary, partial sanitization
- B) Change of bed linen and underwear
- IN) Full sanitary treatment
- G) Dry shaving and showering

9. What diseases require emergency surgery?

- 1) stomach cancer.
- 2) perforated gastric ulcer.
- 3) acute appendicitis.
- 4) malignant lung tumor.
- 5) strangulated inguinal hernia.
- 6) lipoma of the shoulder.

Choose the correct combination of answers: A - 2, 3, 5; B - 1, 3, 5; B - 2, 4, 6; G - 2, 3;D - 1, 4.

10. When do preoperative preparations for elective surgery begin?

- A) 1 week before surgery
- B) From the moment the patient is admitted to the hospital
- IN) 2 days before surgery
- G) 1 day before surgery

TASK

A 76-year-old man came to you with complaints of blood in his stool, frequent constipation, and weight loss. What research methods do you think will help in making a diagnosis?

"CLINICAL RESEARCH METHODS"

OPTION #7

1. A separate description in the medical history of the local pathologicalRussian status (st. localis) is mandatory for the following diseases: a) obliterating atherosclerosis of the vessels of the lower extremities; b) post-injection abscess of the gluteal region; c) varicose veins of the lower extremities; d) strangulated inguinal hernia; e) peptic ulcer of the stomach and duodenum; f) acute calculous cholecystitis; g) acute appendicitis; h) purulent pleurisy; i) breast tumors. Choose the correct combination of answers:

- 1. a, b, c, d, i.
- 2. a, b, d, f, h.
- 3. c, d, h, i.
- 4. d, f, h, i.

5. Everything is correct.

2. What diseases require emergency surgery?

- 1) stomach cancer.
- 2) perforated gastric ulcer
- 3) acute appendicitis
- 4) malignant lung tumor
- 5) strangulated inguinal hernia
- 6) shoulder lipoma

Choose the correct combination of answers: A - 2, 3, 5; B - 1, 3, 5; B - 2, 4, 6; G - 2, 3; D - 1, 4.

3. What diseases require emergency surgery? a) stomach cancer; b) perforated gastric ulcer; c) acute appendicitis; d) malignant tumor of the lung; e) strangulated inguinal hernia; e) lipoma of the shoulder. Choose the correct combination of answers:

- 1) b, c, d.
- 2) a, c, d.
- 3) b, d, f.
- 4) b, c.
- 5) a, g.

4. To detect metastatic spread of the tumor, the following is used: a) ultrasound examination; b) laparoscopiya; c) sigmoidoscopy; d) X-ray examination; e) isotope scintigraphy; f) computed tomography; g) gastroduodenoscopy; h) diaphanoscopy. Choose the correct combination of answers:

1. d, f.
2. a, c.
3. f, h, i.
4. a, c.
5. a, b, d, d, f.

5. Specify the stages of the surgical operation:

- 1) surgical approach;
- 2) placing the patient on the operating table;
- 3) surgical reception;
- 4) stopping bleeding;
- 5) suturing the wound.

Choose the correct combination of answers: A - all answers are correct; B - 1, 2, 3; B - 1, 3, 5; G - 1, 3, 4, 5.

6. The tasks of the preoperative period include: a) assessment of surgical and anesthetic risk; b) determining the urgency of the operation; c) establishing a diagnosis; d) determination of indications for surgery; e) identifying the condition of vital organs and systems; f) determining the nature of the operation; g) preparing the patient for surgery. Choose the correct combination of answers:

- 1) b, d, d.
- 2) e, g.
- 3) a, h.
- 4) in, g.
- 5) everything is true.

7. What methods of preventing wound infection should be used before elective surgery? a) breathing exercises; b) activation of the patient; c) desensitization of the body; d) sanitation of the oral cavity; e) changing the patient's linen; f) hygienic shower; g) stimulation of diuresis; h) treatment of the surgical field. Choose the correct combination of answers:

- 1) a, d, d.
- 2) e, g.
- 3) a, b, g.
- 4) in, g.
- 5) d, d, f, h.

8. Prescribe treatment for bedsores in the stage of purulent melting.

- A) Bandages with Vishnevsky ointment
- B) Treatment with 5% potassium permanganate solution
- C) Treatment of a purulent wound
- D) Dressings with ointment containing sodium heparin

D) Injection with antibiotics.

9. The use of a load pressing on the wound in the postoperative period serves the following purposes:

- A) prevention of divergence of wound edges;
 - B) pain reduction;
 - IN) preventing the development of infection;
 - G) prevention of thrombosis and embolism;
 - D) prevention of bleeding.
- Choose the correct answer.

10. Which of the following include the general principles of direct preparation of a patient for surgery?

Select all correct answers

- A) Preliminary preparation of the surgical field
- B) Lack of contents in the stomach
- IN) Carrying out anti-inflammatory therapy
- G) Bowel movement
- D) Emptying the Bladder
- E) Premedication

TASK

Patient M., 52 years old, complains of a feeling of fullness in the chest, periodic heartburn, belching with an unpleasant odor, and weight loss. What research methods will help in making a diagnosis?

"CLINICAL RESEARCH METHODS"

OPTION #8

1. To detect metastatic spread of a tumor, the following is used: a) ultrasound examination; b) laparoscopiya; c) sigmoidoscopy; d) X-ray examination; e) isotope scintigraphy; f) computed tomography; g) gastroduodenoscopy; h) diaphanoscopy. Choose the correct combination of answers:

- 1. d, f.
- 2. a, c.
- 3. f, h, i.
- 4. a, c.
- 5. a, b, d, d, f.

2. Specify the stages of the surgical operation:

- 6) surgical approach;
- 7) placing the patient on the operating table;
- 8) surgical reception;
- 9) stopping bleeding;
- 10) suturing the wound.

Choose the correct combination of answers: A - all answers are correct; B - 1, 2, 3; B - 1, 3, 5; G - 1, 3, 4, 5.

3. The tasks of the preoperative period include: a) assessment of surgical and anesthetic risk; b) determining the urgency of the operation; c) establishing a diagnosis; d) determination of indications for surgery; e) identifying the condition of vital organs and systems; f) determining the nature of the operation; g) preparing the patient for surgery. Choose the correct combination of answers:

- 1) b, d, d.
- 2) e, g.
- 3) a, h.
- 4) in, g.
- 5) everything is true.

4. What is included in premedication before emergency surgery?

- A) Sedatives and hypnotics along with narcotic analgesics 1.5-2 hours before surgery
- B) Narcotic analgesics and antispasmodics in 30-40 minutes. before surgery
- IN) Narcotic analgesics and atropine in 30-40 minutes. before surgery
- G) Narcotic analgesics and atropine 1.5-2 hours before surgery
- D) All of the above are incorrect

5. What is the prevention of wound infection in the preoperative period?
- 5) sanitation of the oral cavity.
 - 6) hygienic bath.
 - 7) processing of the surgical field.
 - 8) change of linen.
 - 5) treatment of pyoderma.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4, 5; B - 1, 2, 4, 5; G - 1, 4, 5; D - all answers are correct.

6. Nonspecific prevention of thromboembolic complications after surgery includes:
- 1) strict bed rest;
 - 2) applying elastic bandages to the lower limbs;
 - 3) active behavior of the patient in bed;
 - 4) getting up early;
 - 5) use of anticoagulants.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4, 5; B - 2, 3, 4; G - 3, 4, 5; D - 1, 2, 5.

7. What is the preparation of a patient for elective surgery? directly on the day of surgery?

- 1) general hygienic bath.
- 2) shaving the hair in the area of the surgical field.
- 3) premedication.
- 4) blood transfusion.
- 5) gastric lavage.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3; B - 3, 4; G - 2, 3, 5; D - 1, 3.

8. Specify the stages of the surgical operation:

- 1) surgical approach;
- 2) placing the patient on the operating table;
- 3) surgical procedure;
- 4) stop bleeding;
- 5) suturing the wound.

Choose the correct combination of answers: A - all answers are correct; B - 1, 2, 3; B - 1, 3, 5; G - 1, 3, 4, 5.

9. Which of the following provisions are reflected in the patient's life history (anamnesis vitae)?:

Select all correct answers

- A. past illnesses and injuries
- B. How the patient was examined and treated for the underlying disease
- B. Bad habits
- D. What prompted you to see a doctor at this time?
- D. Factors contributing to the occurrence of the disease
- E. Allergy history
- G. Epidemiological history

10. What does the preliminary preparation of the surgical field for emergency surgery include?

- A) Dry shaving of the hair and, if necessary, partial sanitization
- B) Change of bed linen and underwear
- IN) Full sanitary treatment
- G) Dry shaving and showering

TASK

A 20-year-old patient was admitted with a stab wound to the abdomen, two hours after receiving the injury. On examination: the skin is of normal color, the smell of alcohol from the mouth. Blood pressure 110/70 mm Hg. Art., pulse – 78 beats. There is a stab wound on the anterior abdominal wall above the navel 1 x 0.5 cm no bleeding. The surgeon did a survey X-ray, which revealed no pathology in the abdominal cavity. During revision, the end of a vascular clamp was inserted into the wound, which rested against the aponeurosis of the anterior abdominal wall. The wound was sutured tightly, and the patient was sent home with a recommendation to go to the local clinic for further treatment. Mistakes and consequences of the surgeon's actions?

1. Indicate an incorrect assessment of the patient's general condition:

- A. satisfactory;
- B. relatively satisfactory;
- V. moderate severity;
- G. heavy;
- D. extremely severe;

2. Which of the following operations should be planned first when scheduling an operating room?

- A) flebectomy.
 - B) pneumonectomy.
 - B) Rresection of the colon.
 - G) resection of the small intestine.
 - D) application of secondary sutures.
- Choose the correct answer.

3. What methods of preventing wound infection should be used before elective surgery? a) breathing exercises; b) activation of the patient; c) desensitization of the body; d) sanitation of the oral cavity; e) changing the patient's linen; f) hygienic shower; g) stimulation of diuresis; h) treatment of the surgical field. Choose the correct combination of answers:

- 1) a, d, d.
- 2) e, g.
- 3) a, b, g.
- 4) in, g.
- 5) d, d, f, h.

4. Prescribe treatment for bedsores in the stage of purulent melting.

- A) Bandages with Vishnevsky ointment
- B) Treatment with 5% potassium permanganate solution
- C) Treatment of a purulent wound
- D) Dressings with ointment containing sodium heparin
- D) Injection with antibiotics.

5. Select the main types of diagnoses

Select all correct answers:

- A) Preliminary
- B) Intermediate
- IN) Clinical
- G) Differential

6. For urinary retention in the postoperative period, the following are indicated:

- 6) warming the bladder area;
- 7) hypertensive enema;
- 8) intravenous administration of 10 ml of 40% methenamine solution;
- 9) use of diuretics;
- 10) bladder catheterization.

Choose the correct combination of answers: A - 1, 2, 3; B - 1, 3, 4, 5; B - 1, 2, 3, 5; G - 1, 3, 5; D - all answers are correct.

7. How often does the attending physician prepare observation diaries for patients in satisfactory condition?

- A. twice a day
- B. daily
- V. every other day
- D. Once every three days
- D. only when the patient's condition worsens

8. Prescribe treatment for bedsores in the ischemic stage.

- A) Treatment with 70% ethyl alcohol
- B) Treatment with Vaseline oil
- B) Treatment with camphor alcohol
- D) Treatment with a 5% solution of potassium permanganate.

9. Prescribe treatment for bedsores in the necrosis stage.
- A) Treatment with 70% ethyl alcohol
 - B) Treatment with 5% potassium permanganate solution
 - B) Bandages with Vishnevsky ointment
 - D) Treatment with camphor alcohol.

10. What does the preliminary preparation of the surgical field for a planned operation include?

Select all correct answers

- A) Dry shaving
- B) Putting on sterile linen
- IN) Full sanitary treatment
- G) Treating the surgical field with antiseptics

TASK

After being beaten on the head, the patient lost consciousness. When he woke up, he stood up and with difficulty came to the hospital emergency room. There are numerous abrasions and bruises on the body from bruises. 8 hours after the injury, he lost consciousness again and became covered in cold, sticky sweat. Blood pressure decreased and skin pallor increased. Your actions? What research methods can help you make a diagnosis?

"CLINICAL RESEARCH METHODS"

OPTION No. 10

1. What sections are not included in the academic medical history of a surgical patient?

Select all correct answers

- A. Preliminary diagnosis;
- B. Etiology and pathogenesis;
- B. Preoperative epicrisis;
- D. Data from additional research methods;
- D. Observation diary;
- E. Differential diagnosis;

2. The patient was taken to the surgical department with a diagnosis of intestinal obstruction on the 3rd day from the onset of the disease. Complaints of repeated vomiting, general weakness, increased heart rate. Indicate the leading disturbances in homeostasis that require mandatory correction in the preoperative period.

- 1) hypokalemia, hypochloremia.
- 2) hyponatremia, hypocalcemia.
- 3) hypoproteinemia.
- 4) hypovolemia.
- 5) anemia.

Choose the correct combination of answers: A - 2, 3; B - 1, 2, 3; B - 4, 5; G - 1, 4; D - all answers are correct.

3. When should you shave your skin before elective surgery?

- 1) before admission to the hospital;
- 2) one day before surgery;
- 3) the evening before the operation;
- 4) in the morning on the day of surgery;
- 5) immediately before the start of the operation on the operating table.

4. What are pressure sores called?

- A) Ulceration
- B) Necrosis of the skin only due to impaired microcirculation from prolonged compression
- B) Inflammation and necrosis of the skin under the influence of fungal flora
- D) Aseptic necrosis of the skin and underlying tissues due to impaired microcirculation from prolonged compression
- D) Any types of necrosis due to prolonged compression.

5. Select the main locations of pressure ulcers.

Select all correct answers:

- A) Buttocks and sacrum

- B) Anterior chest wall
- B) Knee joint area
- D) Shoulders
- D) Heels
- E) Back of the head.

6. To prevent postoperative pneumonia, use:

- 1) breathing exercises;
- 2) painkillers;
- 3) infusion of a large amount of liquid;
- 4) neostigmine methyl sulfate;
- 5) jars and mustard plasters on the chest.

Choose the correct combination of answers: A - 1, 2, 5; B - 1, 2, 4; B - 1, 2, 5; G - 1, 3, 5; D - 2, 3, 4.

7. What is necessary to empty the bladder in preparation for any type of surgery?

Select all correct answers

- A) Bladder catheterization for all patients
- B) Bladder catheterization according to indications
- IN) Spontaneous urination before surgery
- G) During emergency surgery, bowel movements are not necessary

8. Name the complications that occur from the wound in the early postoperative period.

Select all correct answers

- A) Bleeding
- B) Inflammation
- B) Ulceration
- D) Eventration

9. Select the most common types of bleeding in the early postoperative period.

Select all correct answers:

- A) Bleeding from the rectum
- B) External bleeding from the wound
- B) Bleeding through the drainage
- D) Bleeding from acute gastric ulcers

10. When is hair shaving done in preparation for a planned operation?

- A) 1 day before surgery
- B) 12 hours before surgery
- IN) On the day of surgery in the morning
- G) On the operating table

TASK

Patient S., 75 years old, suffers from coronary artery disease, post-infarction cardiosclerosis, atrial fibrillation, and circulatory failure. He was admitted as planned for surgical treatment of a hernia of the white line of the abdomen.

What preoperative preparation is necessary for successful treatment of the patient?

"CLINICAL RESEARCH METHODS" OPTION No. 11

1. The complex of infusion preparation before surgery includes: a) correction of water and electrolyte balance; b) vveadministration of narcotic analgesics; c) tube enteral nutrition; d) correction of BCC deficiency; e) intramuscular administration of antibiotics; f) administration of specific immunostimulating drugs. Choose the correct combination of answers:

- 1) a, b.
- 2) in, s.
- 3) a, g.
- 4) g, d.

5) g, e.

2. The use of local hypothermia in the postoperative period contributes to:

- 1) cryodestruction of microbial bodies;
- 2) stopping capillary bleeding;
- 3) rapid adhesion of wound edges;
- 4) prevention of divergence of wound edges;
- 5) prevention of thrombosis and embolism.

3. Determine the sequence of examination of a patient with acute pathology of the abdominal organs: a) clarifying the patient's complaints and medical history; b) plain radiography of the abdominal organs; c) emergency laboratory testing of blood and urine; d) assessment of the patient's condition and physical examination of organs and systems; e) Ultrasound of the abdominal organs; e) emergency laparoscopy. Choose the correct combination of answers:

1. a, b, c, d, e, f.
2. d, a, d, c, b, f.
3. g, d, f, a, b, c.
4. b, d, f, a, c, d.
5. a, d, c, b, d, f.

4. Which of the following complications is most common after long-term and traumatic interventions on the abdominal organs?

- A) paresis of the gastrointestinal tract.
- B) peritonitis.
- IN) pneumonia.
- G) anuria.
- D) thromboembolism.

Choose the correct answer.

5. Highlight the main factors that determine the duration of the preoperative period.

- 1) nature of the disease.
- 2) the volume of the upcoming operation.
- 3) the patient's condition.
- 4) type of anesthesia.
- 5) urgency of the operation.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 3, 5; D - 2, 4, 5; D - 2, 3, 5.

6. For paresis of the gastrointestinal tract, all of the following measures are appropriate, except:

- A) perinephric block;
- B) intravenous administration of hypertonic chloride solutionsodium;
- B) use of neostigmine methyl sulfate;
- G) hypertensive enema;
- D) massive antibiotic therapy.

Choose the correct answer.

7. Highlight the main factors that determine the duration of the preoperative period.

- 6) nature of the disease.
- 7) the volume of the upcoming operation.
- 8) patient status.
- 9) type of pain relief.
- 10) urgency of the operation.

Choose the correct combination of answers: A - 1, 2, 3; B - 2, 3, 4; B - 1, 3, 5; D - 2, 4, 5; D - 2, 3, 5.

8. What sections make up the subjective part of the medical history?

Select all correct answers

- A. Passport part;
- B. Complaints;
- B. Medical history;
- G. Life history;
- D. Objective research;
- E. Data from additional research methods;

9. For the prevention of postoperative venous thrombosis used: a) early activation of the patient; b) prolonged bed

rest; c) elastic compression of the lower extremities; d) intermittent pneumatic compression; e) heparin ointment. Choose the correct combination of answers:

- 1) a, c, d.
- 2) b, c, d.
- 3) b, c, d.
- 4) a, c, d.
- 5) a, d, d.

10. In what case, when preparing for an emergency operation, is gastric lavage performed?

Select all correct answers

- A) Always
- B) If the patient ate food less than 2 hours ago
- IN) If the patient ate food less than 6 hours ago
- G) For diseases such as peritonitis, intestinal obstruction, etc.
- D) Never

TASK

A young man, during intense physical exercise, suddenly felt pain in the right side of his chest and shortness of breath. The patient has a history of bullous disease. What research methods will help in making a diagnosis?

"CLINICAL RESEARCH METHODS"

OPTION No. 12

1. Preoperative preparation for emergency surgery includes: a) hygienic treatment of the skin in the operation area; b) shaving the surgical field; c) sanitation of the oral cavity; d) carrying out infusion therapy; e) cleansing enema; f) spirometry; g) performing an ECG. Choose the correct combination of answers:

- 1) a B C.
- 2) g, d, g.
- 3) a, b, d, d.
- 4) a, b, c, e.
- 5) c, d, g.

2. On the first day after surgery, the following complications are possible: a) external bleeding; b) eventration; c) formation of a hematoma in the wound; d) rhythm disturbance and cardiac arrest; e) suppuration of the wound. Choose the correct combination of answers:

- 1) a B C.
- 2) a, d, d.
- 3) a, c, d.
- 4) b, c, d.
- 5) everything is true.

3. Select the main types of diagnoses:

Select all correct answers

- A. preliminary;
- B. intermediate;
- B. clinical;
- G. differential;

4. What is the duration of the early postoperative period from the moment of the operation?

- A) 7-9 days.
- B) 1-3 days.
- B) 3-5 days.
- D) 2 weeks.

5. Determine the main tasks of the preoperative period.

- 1) clarification of the diagnosis.
- 2) determination of indications for surgery.
- 3) preparing the patient for surgery.
- 4) determination of the timing and nature of the operation.
- 5) determination of the scope of the operation and its duration.

Choose the correct answer. A - 1, 2, 3; B - 1, 3, 4, 5; B - 2, 3, 4, 5; G - 1, 2, 3, 4; D - all answers are correct.

6. What is the duration of the long-term postoperative period from the moment of the operation?

- A) From 3 weeks to 2-3 months
- B) From 2 to 4 weeks
- B) From 10 days to 1 month
- D) 14-21 days

7. What is included in premedication before emergency surgery?

- A) Sedatives and hypnotics along with narcotic analgesics 1.5-2 hours before surgery
- B) Narcotic analgesics and antispasmodics in 30-40 minutes. before surgery
- IN) Narcotic analgesics and atropine in 30-40 minutes. before surgery
- G) Narcotic analgesics and atropine 1.5-2 hours before surgery
- D) All of the above are incorrect

8. Which of the following is not included in endoscopic research methods?

- A. Bronchoscopy;
- B. Irrigoscopy;
- B. Esophagogastrosocopy;
- G. Colonoscopy;
- D. Sigmoidoscopy;

9. The catabolic phase of the patient's postoperative condition is characterized by: a) activation of the sympathetic-adrenal system; b) an increase in blood glucose levels; c) increased breakdown of adipose tissue; d) increasing the vital capacity of the lungs; e) decreased diuresis. Choose the correct combination of answers:

- 1) a B C.
- 2) c, d.
- 3) a, c, d.
- 4) a, b, c, d.
- 5) everything is true.

10. What is necessary when preparing for a planned operation to prevent asphyxia with stomach contents during anesthesia?

- A) Gastric lavage
- B) Last meal on the eve of surgery at 5-6 p.m.
- IN) Hunger on the morning of surgery
- G) You don't need to do any of the above

TASK

Patient R. was admitted with complaints of vomiting coffee grounds and melena. The patient's stomach was washed and an emergency gastroduodenoscopy was performed, which revealed an ulcer of the lesser curvature of the stomach with a high risk of recurrent bleeding. To stop the bleeding, the patient was prescribed hemostatic and antiulcer therapy. Dynamic observation with control study of the stomach in dynamics. What should be done to better control recurrent bleeding?

"CLINICAL RESEARCH METHODS"

OPTION No. 13

1. The development of pneumonia in the postoperative period is facilitated by: a) old age; b) hypoventilation of the lungs during surgery; c) diet features; d) inadequate pain relief after surgery; e) long horizontal position; f) oxygen inhalation; g) intravenous administration of antibiotics; h) breathing exercises; i) chronic heart failure. Choose the correct combination of answers:

- 1) a, b, c, d, e.
- 2) b, d, f, g.
- 3) b, h, h, i.
- 4) a, b, d, d, i.
- 5) a, b, d, f, i.

2. Ultrasound examination is indicated for patients with the following diseases: a) stomach cancer; b) acute cholecystitis; c) duodenal ulcer; d) urolithiasis; e) hemorrhoids; e) phimosis; g) nodular goiter; h) duodenitis. Choose the correct combination of answers:

1. b, d, d.
2. a, b, d, g.
3. f, h.
4. in, g.
5. a, d, g.

3. In what case is it necessary to obtain the patient's consent for surgery?

- A) Always
- B) Always, except when the patient is unconscious and emergency surgery is necessary
- IN) For high-risk operations
- G) Not necessary, consent of relatives is sufficient
- D) Not necessary

4. In what case is the operation called combined?

- A) Intervention is performed on two or more organs for various diseases
- B) The intervention is carried out on several organs to treat one disease
- C) The intervention is divided in time into separate stages.

5. What is characteristic of an uncomplicated early postoperative period?

Select all correct answers

- A) Pain in the area of the surgical wound
- B) High fever in the first week
- B) Transient changes in blood and urine tests
- D) Chills, shortness of breath.

6. What is used to cleanse the intestines in preparation for a planned operation?

- A) Laxatives only
- B) Cleansing enemas the night before and the morning of surgery
- IN) Siphon enema in the evening and morning on the day of surgery
- G) Laxatives (if indicated) and cleansing enemas the evening before and the morning before surgery

7. Select the main stages of surgical treatment of patients.

Select all correct answers

- A) Preoperative preparation
- B) Dispensary observation
- IN) Postoperative period
- G) Surgery

8. A separate description in the medical history of local pathological Russian status (st. localis) is mandatory for the following diseases: a) obliterating atherosclerosis of the vessels of the lower extremities; b) post-injection abscess of the gluteal region; c) varicose veins of the lower extremities; d) strangulated inguinal hernia; e) peptic ulcer of the stomach and duodenum; f) acute calculous cholecystitis; g) acute appendicitis; h) purulent pleurisy; i) breast tumors. Choose the correct combination of answers:

1. a, b, c, d, i.
2. a, b, d, f, h.
3. c, d, h, i.
4. d, f, h, i.
5. Everything is correct.

9. Prevention of deep vein thrombosis after surgery includes: a) antibiotic therapy; b) bandaging a limb; c) prolonged bed rest after surgery; d) early activation of patients after surgery; e) use of anticoagulants. Choose the correct combination of answers:

- 1) a, b.
- 2) g, d.
- 3) b, c, d.
- 4) b, d, d.
- 5) a, c, d.

10. What is used to cleanse the intestines in preparation for emergency surgery?

- A) Cleansing enemas 0.5-1 hour before surgery

- B) Taking laxatives
- IN) Cleansing enema immediately before surgery
- G) You don't need to do anything

TASK

A woman with a large umbilical hernia, suffering from stage IV obesity, will undergo a herniotomy operation as planned. The patient was examined, an ECG, a general blood test, a general urinalysis, a biochemical blood test, and a plain chest x-ray were performed in the clinic.

What preoperative preparation is necessary for the patient? What additional research methods need to be performed?

"CLINICAL RESEARCH METHODS"

OPTION No. 14

1. The anabolic phase of the postoperative illness is characterized by: a) restoration of muscle mass; b) lysis of proteins and accumulation of their breakdown products; c) activation of the hormonal system; d) restoration of nitrogen balance; e) the supply of exogenous energy that exceeds the body's needs. Choose the correct combination of answers:
 - 1) a, d, d.
 - 2) a, b, d.
 - 3) b, c, d.
 - 4) b, c, d.
 - 5) a B C.

2. Which of the listed provisions are reflected in the history of the development of the disease (anamnesis morbi)?

Select all correct answers

- A. Biographical information;
- B. Date and hour of onset of the disease;
- B. First manifestations of the disease;
- D. Factors contributing to the occurrence of the disease;
- D. Heredity;
- E. Housing conditions and hygiene regime;

3. What is the prevention of wound infection in the preoperative period?
 - 9) sanitation of the oral cavity.
 - 10) hygienic bath.
 - 11) processing of the surgical field.
 - 12) change of linen.
 - 6) treatment of pyoderma.

Choose the correct combination of answers: A - 1, 2, 3, 4; B - 2, 3, 4, 5; B - 1, 2, 4, 5; G - 1, 4, 5; D - all answers are correct.

4. What does toileting an uncomplicated postoperative wound include?

- A) Changing the dressing and treating the edges of the wound with antiseptics
- B) Easy separation of edges for revision purposes
- C) Injection of the wound with antibiotics
- D) Washing the wound with a solution of hydrogen peroxide

5. Select the main stages of surgical treatment of patients.

Select all correct answers

- A) Preoperative preparation
- B) Dispensary observation
- IN) Postoperative period
- G) Surgery

6. Indicate the factors influencing the development of complications in the postoperative period.

Select all correct answers

- A) Presence of a postoperative wound
- B) Insufficient nutrition.
- B) Forced position
- D) Effect of anesthesia.

7. Choose activities that help reduce pain.

Select all correct answers

- A) Use of analgesics
- B) Use of diuretics
- B) Exposure to cold
- D) Using various techniques to facilitate movement when turning, getting out of bed, walking
- D) Use of prolonged epidural anesthesia.

8. Prevention of deep vein thrombosis after surgery includes: a) antibiotic therapy; b) bandaging a limb; c) prolonged bed rest after surgery; d) early activation of patients after surgery; e) use of anticoagulants. Choose the correct combination of answers:

- 1) a, b.
- 2) g, d.
- 3) b, c, d.
- 4) b, d, d.
- 5) a, c, d.

9. The early postoperative period ends:

- A) after eliminating early postoperative complications;
 - B) after removing the sutures from the surgical wound;
 - IN) after healing of the surgical wound;
 - G) after the patient is discharged from the hospital;
 - D) after the patient has been restored to work.
- Choose the correct answer.

10. What is used to cleanse the intestines in preparation for a planned operation?

- A) Laxatives only
- B) Cleansing enemas the night before and the morning of surgery
- IN) Siphon enema in the evening and morning on the day of surgery
- G) Laxatives (if indicated) and cleansing enemas the evening before and the morning before surgery

TASK

A 23-year-old patient was admitted with complaints of undetermined pain in the lower abdomen. There are no symptoms of peritoneal irritation. What research methods and in what sequence will help in making a diagnosis?

ANSWERS "CLINICAL RESEARCH METHODS"

<p>OPTION 1</p> <p>12 2 - 1 3 - B 4 - B 5 B 6 - D 7 - B 8 - E 9 - 4 10 - D</p>	<p>OPTION 8</p> <p>1 - B 2 - B 3 - 5 4 - B 5 - D 6 - B 7-B 8 - B 9 - AVEZH 10 - A</p>
<p>OPTION 2</p> <p>14 2 - 2 3 - B 4 - 4 5 - 5 6 - B 7 - D 8 - A 9 - A 10 - AVG</p>	<p>OPTION 9</p> <p>1 - B 2 - A 3 - 5 4 - B 5 - AVG 6 - B 7 - B 8 - B 9 - B 10 - A</p>

OPTION 3

1 - AED
 2 - 1
 3-D
 4 - A
 5 - 4
 6 - 5
 7 - 4
 8 - B
 9 - B
 10 - ABCD

OPTION 4

1 - B
 2-3
 3 - B
 4 - 1
 5 - 3
 6 - B
 7 - B
 8 - B
 9 - B
 10 - V

OPTION 5

1 - BVG
 2 - 1
 3 - B
 4 - G
 5 - 3
 6 - A
 7 - D
 8 - D
 9 - A
 10 - 2

OPTION 6

12
 2 - A
 3-G
 4 - B
 5 B
 6 - D
 7 - B
 8 - A
 9 - A
 10 - B

OPTION 7

eleven
 2 - A
 3 - 1
 4 - 5
 5 - B
 6 - 5
 7 - 5
 8 - B
 9 - 2
 10 - WHERE

OPTION 10

1 - VD
 2 - G
 3 - 4
 4 - G
 5 - AGDE
 6 - B
 7 - B
 8 - AG
 9 - BV
 10 - V

OPTION 11

13
 2 - 2
 3 - 5
 4 - A
 5 - B
 6 - D
 7 - B
 8 - BVG
 9 - 4
 10 - BVG

OPTION 12

13
 2 - 3
 3 - AVG
 4 - B
 5 - G
 6 - A
 7 - B
 8 - B
 9 - 4
 10 - B

OPTION 13

14
 2 - 2
 3 - B
 4 - B
 5 - AB
 6 - B
 7 - AVG
 8 - 1
 9 - 4
 10 - G

OPTION 14

eleven
 2 - BVG
 3 - D
 4 - A
 5 - AVG
 6 - A
 7 - AVGD
 8 - 4
 9 - G
 10 - V

Table of contents

No.	Name of the controlled section (topic) of the discipline/module	Code of competence (stage) being formed	Number of tests (total)	p. from ___ to ___
1	2	3	4	5
View control	Ongoing progress monitoring/interim assessment			
1.	Asepsis. Antiseptic.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	8/14	
2.	Bleeding and stopping bleeding. Blood transfusion. Donation.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	8/14	
3.	Wounds, wound treatment.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	8/14	
4.	Teaching about pain. Anesthesia. Inhalation anesthesia. Non-inhalational anesthesia.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	8/14	
5.	Desmurgy. Fractures, dislocations	PK-1, PK-2, OPK-4, OPK-5, OPK-6	8/14	
6.	Thermal damage. Burns and frostbite. Emergency conditions.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	8/14	

7.	Surgical infection. Sepsis.	PK-1, PK-2, OPK-4, OPK-5, OPK-6	8/14	
8.	Surgery. Pre- and postoperative period.	PK-1, PK-2, OPK-4, OPK-5, OPK-6		