

**EXAM QUESTIONS
FOR DISCIPLINE «GENERAL SURGERY»
GENERAL MEDICINE**

BLOCK 1

1. Definition of surgery. The meaning, purpose, objectives and content of the academic discipline “General Surgery”.
2. History of surgery. Representatives of surgical schools and their role in the formation of the main periods of surgery (empirical, anatomical-morphological, great discoveries, physiological, high-tech).
3. Ethics and deontology in surgery. Legislative legal acts regulating surgical activities.
4. The concept of medical confidentiality, iatrogenicity in the provision of surgical care. Rights and responsibilities of surgical patients.
5. Stages of training a surgeon in the Republic of Belarus. Relationship between surgery and other medical disciplines. Development of surgery in the Republic of Belarus.
6. Asepsis. Ways and sources of spread of infection.
7. Organization of a surgical hospital, and operating unit. Sterility zones. Types of cleaning in the operating room.
8. Prevention of endogenous infection, airborne infection. Prevention of nosocomial infections.
9. Prevention of exogenous airborne infection. Features of organizational measures aimed at preventing exogenous airborne infection.
10. Prevention of contact infection. Characteristics and features of the main high-temperature and low-temperature sterilization methods.
11. Surgical scrubbing and surgical field processing.
12. Features of sterilization of surgical instruments, dressings and surgical linen.
13. Prevention of implantation infection. Monitoring the effectiveness of sterility: physical, chemical and biological methods of sterility control.
14. Prevention of exogenous implantation infection. Characteristics of suture material: structure, biodegradability, source of production, thickness. Metric system for measuring surgical threads.
15. Prevention of endogenous infection. Features of intrahospital (nosocomial, healthcare-associated) infection. Prevention of nosocomial and HIV infection.
16. Mechanical antiseptics. Components of mechanical antiseptics (Primary surgical wound treatment, secondary surgical wound treatment, wound cleansing).
17. Physical antiseptics. Types of drainages. Technical means of physical influence. Environmental factors.
18. Chemical antiseptic. Classification and representatives of chemical antiseptics. Concept and types of chemotherapy drugs.
19. Biological antiseptics. Classification and representatives of biological antiseptics.
20. Classes of immunocorrectors and bacteriophages. Methods for correcting immunoresistance.
21. Classes and representatives of antibiotics. The concept of antibiotic prophylaxis.
22. Hemostasis system. Methods and mechanisms of physiological hemostasis.
23. The concept of physiological anticoagulants and the fibrinolysis system. Hypocoagulation syndrome (DIC-syndrome) and hypercoagulability. Causes, treatment tactics.
24. Bleeding: types, classification, severity, outcomes and complications.

25. Blood loss: Assessment of loss of circulating blood volume. Moore's formula. Types of therapeutic hemostasis.
26. Reconstructive and endovascular interventions, special devices for final hemostasis (Blackmore tube, Cook rings, Danis stent).
27. The concept of transhepatic portosystemic shunting (TIPS). Types of coagulation. Types of local and general hemostatic agents. Types of local biological hemostatics.
28. Blood groups. Basic immunological aspects. Characteristics of ABO groups and its anomalies. Rh factor system. Concept of hematopoietic stem cells.
29. Indications, contraindications, methods of transfusion of blood components. Routes of administration, preservatives.
30. Methods for determining blood group and Rh factor. Compatibility tests, conducting a biological test (bioassay).
31. Post-transfusion reactions and complications. Types, manifestations, treatment tactics.
32. Blood products: classification, components, indications for use, shelf life.
33. Blood substitutes. Classification, mechanism of action, indications for use, administration specificity.
34. Volume replacement in acute blood loss with varying severity of circulating blood volume deficit.
35. Water-electrolyte disorders and acid-base disorders in surgical practice.
36. Types of toxins. Types of endotoxemia. Diagnostic principles. Therapeutic scopes.
37. Types of extracorporeal detoxification. Types of water spaces. Types of electrolyte imbalances. Main blood buffer systems.
38. Types of acid-base balance violations. Principles of their treatment. Groups of blood substitutes for correction.
39. Nutrition of a patient with surgical pathology. Nutritional status. Assessing nutritional status.
40. Parenteral nutrition: indications, concept of implementation, types of blood substitutes used and the mode of their administration, indications.
41. Types of standard diets in surgery. The concept of sipping.
42. Types of artificial parenteral nutrition. Routes and modes of administration of endopytes. Types of main endopytes. Indications for their administration.
43. Features of pain syndrome. The concept of transduction, transmission, modulation, perception. Types of algogens.
44. Classification of pain. Diagnostic criteria for pain syndrome (VAS-visual analog scale, SVA - scale of verbal assessment). Principles of treatment.
45. Methods of pain control. Groups of analgesics and their representatives. Treatment of chronic pain syndrome. Routes of administration of anesthetics.
46. Local anesthesia: indications and contraindications. Classification of local anesthetics. Types of local anesthesia.
47. Types of anesthesia: intravenous, intraosseous, infiltration, conduction anesthesia.
48. Novocaine blocks. Technique, indications for individual types.
49. Critical vital disorders. Types of shock, their clinical manifestations, principles of preclinical diagnosis and treatment.
50. Pre-agony, agony, clinical death, signs.
51. Steps of basic cardiopulmonary resuscitation. Criteria for its effectiveness.
52. Tactics for cardiac arrest. Electrical defibrillation. Inotropic support.
53. Surgical operation: definition, indications and contraindications.
54. Severity of operational risk. Classification of main types. Concept of robotic operations. VR-, 3D-, NOTES.

55. Stages of the operation. Types of completion of operations. Postoperative complications prevention.
56. Preoperative period: definition, tasks, varieties, features of stages and their components.
57. Preoperative preparation. Treatment of the surgical field.
58. Operational risk assessment (ASA scale). Premedication. Antibacterial prophylaxis. Thromboembolism prevention.
59. Postoperative period: definition, goal, objectives. Characteristics of the phases of the uncomplicated period.
60. The concept of the program and method of accelerated recovery (Fast Track Surgery; ERAS). Complicated postoperative period. Main types of complications, their prevention. Rating scales: Claven-Dindo, Satave.

BLOCK 2

1. Types and characteristics of dressings. Soft bandages. Classification, bandaging rules.
2. Soft bandages for the head, neck, chest and shoulder girdle, abdomen, pelvis, upper limb, lower limb.
3. Features of the use of bandages using elastic bandages of various compression classes, sports taping, adhesive and contour bandages, scarves, elastic corsets and bandages.
4. Hardening dressings. Plaster casts: types, features and characteristics, indications and contraindications for application, application rules, care and removal.
5. Transport immobilization: definition, indications, rules of immobilization. Standard splints. Indications for use.
6. Trauma and traumatism: definition. Classification of damage: by type of agent, nature of damage.
7. Types of damage: concussion, bruise, sprain, rupture, compression.
8. Closed injuries of the skull and brain: clinical manifestations, diagnosis, treatment.
9. Closed chest injuries: clinical manifestations, diagnosis, treatment.
10. Hemothorax, pneumothorax: clinical manifestations, diagnosis, treatment.
11. Closed injuries of the abdomen and retroperitoneum: mechanisms of injury, clinical manifestations, diagnosis, treatment.
12. Dislocations: definition, classification, reliable and probable signs, diagnosis. Reduction of shoulder dislocation. Indications for surgical treatment.
13. 13. Fractures: definition, classification, reliable and probable signs, instrumental diagnostics.
14. First aid for fractures of tubular bones, pelvic bones, and spine. Features of transport immobilization for fractures.
15. Indications for surgical treatment of fractures. Osteosynthesis: types, indications, contraindications.
16. Skeletal traction: indications, contraindications, application rules.
17. Bone tissue regeneration: morphogenesis, timing, types of callus.
18. Traumatic shock: definition, etiology, pathogenesis, classification, clinical symptoms, diagnosis.
19. Monitoring of the patient's condition during traumatic shock. Basic treatment measures.
20. Crush syndrome: definition, etiopathogenesis, clinical symptoms and diagnosis depending on the periods of the pathological process.
21. First aid in crush syndrome. Approaches to treating patients in hospital settings.

22. Wounds. Classification of wounds. Wound components: mandatory, possible.
23. Pathogenesis of the wound process. Specificity of gunshot wound: zones. Clinical symptoms.
24. Types of wound healing. Treatment of wounds (operative, conservative). Suturing the wound, types of sutures. Indications for removing primary sutures and applying secondary sutures.
25. Wound infection. Causes of wound infection. Complications of wound infection.
26. Local treatment of infected wounds involving the phases of the wound process: features and basic medications. Active and passive drainage of septic wounds.
27. Types of wound dressings and their representatives used in case of wound infection.
28. Sepsis: definition, pathogenesis, classification. Clinical symptoms. Diagnostic markers of sepsis. Treatment of sepsis.
29. Burn injury: definition, pathomorphological changes in tissues and classification. Prognosis.
30. Thermal burns: classification and clinical symptoms.
31. Determination of the depth and area of the burn. Formulating a diagnosis for burn injury.
32. First aid in burn injury. Principles of specialized care.
33. Burn disease and its periods. Prognosis.
34. Chemical burns: classification and clinical symptoms.
35. Assessing the severity of chemical burns. First aid. Principles of providing specialized care. Prognosis.
36. Radiation burns: causes, pathogenesis, clinical symptoms.
37. First aid for radiation burns. Principles of specialized care. Prognosis. The concept of radiation disease.
38. Electrical injury. Features of direct and indirect effects of current (thermal, electrochemical, biological).
39. General and local disorders that occur in the body as a result of electrical trauma. Severity of electrical injury. First aid. Principles of specialized care. Prognosis.
40. Cold injury: definition, types. Factors that increase the risk of cold injury.
41. General cooling (freezing): clinical presentation, degrees of cooling. First aid. Principles of specialized care. Prognosis
42. Frostbite: definition, pathogenesis, classification, clinical symptoms in pre-reactive and reactive (early and late) periods.
43. Methods for determining tissue viability in the late reactive period of frostbite. First aid and principles of treatment of frostbite.
44. Complications of frostbite in the early and late distant periods. Concept of trench foot.
45. Organization of outpatient surgical care in the Republic of Belarus. Continuity between outpatient and inpatient levels of surgical care.
46. Indications and contraindications for outpatient surgery. Organization of observation of an outpatient surgical patient. Indications for elective and emergency hospitalization.
47. Skin lesions (dermoid cyst, atheroma), ligature fistula: clinical symptoms, surgical treatment. Ingrown toenail: causes, modern treatment methods.
48. Pilonidal cyst: causes, diagnosis, treatment.
49. Organization of cancer care in the Republic of Belarus. Precancerous conditions (facultative and obligate precancers).
50. Tumor: definition, etiopathogenesis, international classification (TNM).
51. Clinical symptoms and diagnosis of the tumor process. Biopsy, its types.
52. Types of metastasis in tumor process. Radical, palliative and symptomatic treatment. Clinical stages.

53. Plastic surgery: definition, tasks and directions of plastic surgery. Classification by type of transplanted tissue.
54. Skin grafting: indications, types. Modern types of skin allografts.
55. Reconstructive surgery of organs and tissues. Plastic surgery of tendons, cartilage and bone tissue, nerves, blood vessels.
56. Plastic surgery of the hollow organs of the thoracic and abdominal cavities.
57. Endoprosthetics: concept, types, indications. Replantation: indications, requirements.
58. Transplantology: definition, tasks, classification. Concepts: donor and recipient.
59. Organization of transplantology service in the Republic of Belarus. Moral, ethical and legal aspects.
60. Principles of ensuring the viability of a donor organ. Tissue incompatibility and ways to overcome it.

BLOCK 3

1. Examination of a patient with surgical pathology, examination, collection of complaints and anamnesis of the disease, during a physical examination. Formulating a preliminary diagnosis. Laboratory and instrumental diagnostic methods.
2. Preliminary and clinical diagnosis. Components of the diagnosis. Medical documentation: inpatient medical record, storage and use rules. Distinctive components of the academic medical record of an inpatient with surgical pathology.
3. Surgical infection: definition, epidemiology, pathogenesis factors, classification of surgical infectious processes.
4. Clinical symptoms of surgical infection: local and general reaction to septic infection. Methods of sanitation of a septic locus: physical, enzymatic, mechanical and autolytic.
5. Surgical infection of the skin and subcutaneous tissue: types, classification according to the level of damage and localization of the septic process.
6. Boil (furuncle): definition, etiopathogenesis, clinical symptoms, treatment. Multiple boils (furuncles), furunculosis: clinical symptoms, treatment features.
7. Carbuncle: definition, etiopathogenesis, clinical symptoms, treatment.
8. Hydradenitis: definition, etiopathogenesis, clinical symptoms, treatment.
9. Abscess: definition, clinical presentation, diagnosis, treatment.
10. Phlegmone (purulent cellulitis): definition, classification, clinical presentation, diagnosis, treatment. Phlegmone complications.
11. Erysipelas: definition, etiopathogenesis, classification, clinical symptoms, diagnosis, treatment. Recurrences prevention.
12. Lymphadenitis: definition, etiopathogenesis, classification, clinical symptoms, diagnosis, treatment.
13. Acute lymphangitis: definition, pathogenesis, classification, clinical presentation, diagnosis, treatment.
14. Acute thrombophlebitis: definition, etiopathogenesis, classification, clinical symptoms, diagnosis, treatment.
15. Adenophlegmone (purulent cellulitis): definition, etiopathogenesis, clinical presentation, diagnosis, treatment.
16. Acute mastitis: definition, etiopathogenesis, classification, clinical symptoms, diagnosis, treatment.
17. Acute parotitis: definition, etiopathogenesis, classification, clinical symptoms, diagnosis, treatment.

18. Acute paraproctitis: definition, etiopathogenesis, classification, clinical symptoms, diagnosis, treatment. Fistula in ano.
19. Panaritium (felon): definition, etiopathogenesis, classification, clinical symptoms, diagnosis, treatment.
20. Hand infection: definition, etiopathogenesis, classification, clinical symptoms, diagnosis, treatment.
21. Osteomyelitis: definition, classification.
22. Acute hematogenous osteomyelitis: etiopathogenesis, clinical symptoms, diagnosis, treatment.
23. Chronic non-hematogenous osteomyelitis: etiopathogenesis, clinical symptoms, diagnosis, treatment. Rare primary chronic forms of osteomyelitis (Broddy, Garre, Ollier).
24. Acute septic arthritis: definition, etiopathogenesis, clinical symptoms, diagnosis, treatment.
25. Acute septic bursitis: definition, etiopathogenesis, clinical symptoms, diagnosis, treatment.
26. Anaerobic infection: definition, classification.
27. Anaerobic clostridial infection: etiopathogenesis, clinical symptoms, diagnosis.
28. Gas gangrene. Principles of local and general treatment of anaerobic infection. Prevention (specific and nonspecific).
29. Anaerobic non-clostridial infection: etiopathogenesis, clinical symptoms, diagnosis, treatment.
30. Tetanus: definition, etiopathogenesis, classification, clinical symptoms. Early tetanus signs. treatment. Specific and nonspecific emergency prevention of Tetanus.
31. Anthrax: definition, etiology, pathogenesis, classification, clinical symptoms and diagnostics, treatment.
32. Rabies: definition, stages, specificity of anti-rabies care and local treatment of bite wounds.
33. Septic pericarditis: definition, etiopathogenesis, classification, clinical symptoms, diagnosis, treatment.
34. Septic pleuritis: definition, etiopathogenesis, classification, clinical symptoms, diagnosis, treatment. Methods (closed and open) of surgical treatment.
35. Septic peritonitis: definition, classification, stages of peritonitis and their clinical manifestations. Diagnostic criteria for peritonitis. Principles of treatment.
36. Actinomycosis: definition, etiology, pathogenesis (routes of infection), clinical symptoms and diagnostics of different forms (cervicofacial, abdominal (intestinal), pulmonary), treatment.
37. Bone tuberculosis: phases, clinical symptoms, diagnostics and treatment.
38. Acute arterial insufficiency of the main arteries of the lower extremities: definition, etiology, pathogenesis, classification.
39. Acute arterial insufficiency of the main arteries of the lower extremities: clinical symptoms, diagnosis of blood flow disorders.
40. Acute arterial insufficiency of the main arteries of the lower extremities: treatment methods (therapeutic and surgical). Complications. Prevention.
41. Chronic arterial insufficiency (CAI) of the main arteries of the lower extremities: etiology, pathogenesis, classification of stages
42. Chronic arterial insufficiency (CAI) of the main arteries of the lower extremities: clinical symptoms, diagnosis of blood flow disorders.

43. Chronic arterial insufficiency (CAI) of the main arteries of the lower extremities: methods of medical and surgical treatment of CAI (X-ray endovascular and reconstructive operations).
44. Acute venous insufficiency: definition, etiopathogenesis.
45. Thrombophlebitis: clinical symptoms, diagnosis, complications, treatment.
46. Phlebothrombosis: clinical symptoms depending on the level (subclavian-jugular, iliofemoral, tibial segments), diagnosis, complications, treatment.
47. Chronic venous insufficiency (CVI). Definition, etiology, pathogenesis, classification (CEAP).
48. Chronic venous insufficiency (CVI). Diagnostics (non-invasive and invasive), clinical symptoms.
49. Treatment of varicose veins and post-thrombotic syndrome of the lower extremities. Prevention of varicose veins of the lower extremities.
50. Chronic lymphatic drainage disorders: etiology, pathogenesis of primary and secondary lymphatic insufficiency,
51. Chronic lymphatic drainage disorders: clinical symptoms and diagnostics, methods of medicinal and surgical treatment.
52. Diabetic foot syndrome (DFS): definition, pathogenesis, classification (clinical forms).
53. Clinical signs of polyneuropathy, angiopathy and osteoarthropathy in DFS. Diagnostics (assessment of the state of peripheral blood flow, innervation, state of the bone structures of the foot, chronic wound (ulcer) of the foot).
54. Treatment of neuropathic and neuroischemic forms of DFS. Prevention of DFS.
55. Gangrene: definition, causes, pathogenesis, classification
56. Gangrene: clinical symptoms, differential diagnosis with necrosis, treatment.
57. Trophic ulcer: definition, causes of formation, clinical manifestations.
58. Trophic ulcer: diagnosis of the main types of trophic ulcers (arterial, venous, diabetic). Treatment (local and general).
59. Fistula/sinus tract: definition, pathogenesis, classification, clinical presentation, diagnostics of internal and external fistulae/sinus tracts, treatment.
60. Bed sore/ decubital ulcer: definition, causes. Stages of bedsore formation. Clinical symptoms, diagnostics and treatment based on stages. Treatment. Prevention of bedsores.

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