

SUBJECTS FOR THE COMPETITION EXAM
FOR THE POSITION OF ASSOCIATE PROFESSOR

position 19 from The State of Functions of

The Department of Surgical Discipline from the academic year 2023-2024

1. Physiopathology of acute and chronic pain.
2. Analgesic techniques used in the therapy of acute and chronic pain.
3. Central analgesics (opioids).
4. Non-steroidal analgesics/anti-inflammatories.
5. Sleep and anesthesia.
6. Sedative, amnestic, and hypnotic substances.
7. Mechanism of action of inhalation anesthetics.
8. Absorption and distribution of inhalation anesthetics.
9. Respiratory and circulatory effects of inhalation anesthetics.
10. Metabolism and toxicity of inhalation anesthetics.
11. Pharmacology of nitrous oxide.
12. Halogenated volatile anesthetics (halothane, enflurane, isoflurane, sevoflurane, desflurane).
13. Physics of gases and vapors applied to inhalation anesthesia.
14. Physiology of the neuromuscular junction.
15. Substances with relaxing action used in anesthesia (depolarizing and non-depolarizing neuromuscular blockers).
16. Antagonists of neuromuscular blockers.
17. Monitoring of neuromuscular function.
18. Drugs and diseases that interfere with the action of muscle relaxants.
19. Autonomic nervous system (anatomy, physiology). Pharmacology of drugs with autonomic action (cholinergics, parasympatholytics, catecholamines, α -stimulants, α -blockers, α 2-antagonists, β -stimulants, β -blockers).
20. Routine pre-anesthetic consultation (clinical, paraclinical, medicolegal implications).
21. Anesthetic implications of concurrent diseases (cardiovascular, pulmonary, renal, gastrointestinal, hepatic, CNS, endocrine, hematological).
22. Anesthetic implications of chronic drug therapy.

23. Assessment of operative and anesthetic risk.
24. Premedication (type, substances, routes of administration).
25. Maintenance of airway patency, laryngeal mask, intubation, tracheal intubation, tracheostomy. Humidification and mucolysis systems.
26. Monitoring and surveillance of the patient during anesthesia.
27. Intravenous anesthesia techniques (induction, maintenance, awakening, combinations of anesthetic substances, and modes of administration).
28. Inhalation anesthesia techniques.
29. Anesthesia machine (gas machine, anesthetic systems, vaporizers).
30. Intra-anesthetic mechanical ventilation.
31. Ensuring patient homeostasis during anesthesia.
32. Incidents and accidents of general anesthesia.
33. Immediate post-anesthetic period. Recovery room.
34. Pharmacology of anesthetics.
35. Antibiotic therapy.
36. Peripheral and neuraxial regional anesthesia techniques.
37. Blood volume replacement solutions. Transfusion.
38. Parenteral and enteral nutrition.
39. Local, focal, regional, and systemic complications of regional anesthesia techniques.
40. Anesthesia in patients with cardiac disorders (coronary, valvular, rhythm and conduction disorders, heart failure, etc.).
41. Anesthesia in general surgery, ENT, orthopedics, neurosurgery.
42. Anesthesia in pediatric surgery.
43. Anesthesia in emergency surgery (full stomach shock, hemorrhage, etc.).
44. Analgesia and anesthesia in obstetrics. Intensive therapy of obstetric pathology.
45. Management of critically ill patients in intensive care.
46. General organization of emergency medical systems.
47. Acute respiratory failure.
48. Shock management (cardiogenic, hypovolemic, septic, traumatic, neurogenic, distributive, dissociative).
49. Advanced life support for adult patients – Cardiorespiratory resuscitation.
50. Advanced life support for pediatric and neonatal patients – Cardiorespiratory resuscitation.

BIBLIOGRAPHY

1. P.G. Barash, B.F. Cullen, R.K. Stoeling - Handbook of Clinical Anesthesia, Lippincott Williams & Wilkins, 2000.
2. G. Edward, E. Morgan, M.S. Mikhail, M.J. Murray - Clinical Anesthesiology, Appleton & Lange, 2001.
3. W.E. Hurford, M.T. Ballin, J.K. Davidson, K. Haspel, C.E. Rosow - Clinical Anesthesia Procedures of the Massachusetts General Hospital.
4. E. Proca, G. Litarczec - Terapia pre- și postoperatorie a bolnavului chirurgical, Tratatul de patologie chirurgicală, Ed. Med., Buc., 1999.
5. R.S. Irwin, J.M. Rippe - Irwin and Rippe's Intensive Care Medicine, Lippincott Williams & Wilkins, 2002.