

## **Examination questions on Emergency cardiology and other Emergency conditions for the 6<sup>th</sup> year students of the Faculty of International Students**

1. Sudden cardiac death, aetiology, pathogenesis of cardiac arrest, risk factors.
2. Clinical, biological, and brain death.
3. Ventricular tachycardia, asystole, ventricular fibrillation. Clinical presentation, diagnostic work up.
4. Emergency care in ventricular tachycardia, asystole, ventricular fibrillation.
5. Sequence and techniques of cardiopulmonary resuscitation in cardiac arrest. Common mistakes during cardiopulmonary resuscitation
6. Cardiopulmonary resuscitation-related cardiovascular complications.
7. Primary and secondary prevention of sudden cardiac death.
8. Differential approach to use electrocardiography, cardiac imaging, interventional studies and cardiac surgery in acute cardiac care (Holter monitoring, stress tests, echocardiography, cardiac CT, MRI, SPECT, PET).
9. Indications for coronary angiography, percutaneous coronary interventions and cardiac surgery in patients with cardiovascular diseases.
10. Hypertension urgencies and emergencies. Classification, mechanisms, clinical presentation, diagnostic criteria, indications for hospitalisation.
11. Hypertensive emergencies in patients presenting with acute coronary syndrome. Acute management.
12. Hypertensive emergencies in patients presenting with acute left ventricular failure. Acute management.
13. Hypertensive emergencies in patients presenting with aortic dissection. Acute management.
14. Hypertensive emergencies in patients presenting with intracranial haemorrhage. Acute management.
15. Primary and secondary prevention of stroke.
16. Principles of cardiovascular risk stratification.
17. Primary prevention of cardiovascular disease. Non-pharmacological interventions to prevent cardiovascular disease. Dietary approach, role of sodium reduction. Recommendations for physical activity and exercises.
18. Secondary prevention of cardiovascular events. Adherence to pharmacological therapy.
19. Evidence-based pharmacological treatment to reduce mortality in post-myocardial infarction patients.
20. Ways to reduce cardiovascular mortality. International experience. Pitfalls in cardiovascular prevention in national healthcare service.
21. Aetiology and pathogenesis of acute heart failure
22. Classification and diagnostic criteria for acute heart failure.
23. Differential approach to management of patients with acute heart failure based on clinical profile.
24. Clinical presentation and diagnostic work up in acute pulmonary oedema. Differential diagnostics.

25. Management of acute pulmonary oedema: reduction in preload and afterload, maintenance of blood pressure, control of plasma volume.
26. Organizational tactics in acute coronary syndrome with and without ST segment elevation in comorbid patients at the prehospital stage and in the hospital.
27. Emergency care in acute coronary syndrome with ST segment elevation
28. Emergency care in acute coronary syndrome without ST segment elevation. Stratification of risk on the GRACE scale.
29. Methods of reperfusion therapy in acute coronary syndrome with elevation and without ST segment elevation.
30. Drug therapy, depending on the method of reperfusion of the infarct-related artery. Thrombolytic, antiplatelet and anticoagulant therapy.
31. Indications for percutaneous coronary intervention and cardiac surgery.
32. Syncope. Algorithm for diagnosis and treatment of syncope.
33. Stratification of the risk of sudden death with syncope. The most common causes of short-term loss of consciousness.
34. Pathogenesis and classification of syncope. Critical ischemia of brain structures.
35. Causes of neuroreflex syncopal syndrome.
36. Syncope of cardiovascular genesis. Special syncope.
37. The examination program for differential diagnosis in syncope. Scheme of diagnostic search in a patient with a prolonged loss of consciousness.
38. Emergency care in syncope
39. Stratification criteria for the severity of arrhythmia. The main aetiological and pathogenetic aspects of rhythm and conduction disorders.
40. Pacemakers, cardioverter-defibrillators, resynchronizing devices: principles of operation, indications and contraindications to the installation.
41. Acute respiratory failure. Aetiology, treatment and diagnostic tactics.
42. Acute ischemic encephalopathy. Aetiology, pathogenesis and treatment tactics.
43. Acute hepatic failure. Aetiology, pathogenesis and treatment tactics.
44. Acute renal failure, peculiarities of diagnosis and treatment.
45. The conception of multiple organ failure.
46. Diagnosis and emergency medical care for bleeding from various sources.
47. The conception of shock, classification, diagnostic criteria. Symptoms of shock conditions of different genesis. Stages, manifestations and basic mechanisms of shock development.
48. Cardiogenic shock. Aetiology, pathogenesis, clinical manifestations, emergency care.
49. Anaphylactic shock. Aetiology, pathogenesis, clinical manifestations, emergency care.
50. Hypovolemic, septic shock. Emergency care