

QUESTIONS FOR THE COURSE EXAMINATION
ON INTERNAL DISEASES
FOR 4th YEAR STUDENTS
OF MEDICAL FACULTY FOR INTERNATIONAL STUDENTS

1. Acute and chronic bronchitis: definition, prevalence, etiology, pathogenesis, clinical manifestations, diagnosis and differential diagnosis, treatment and prevention.
2. Chronic obstructive pulmonary disease (COPD): definition, epidemiology, risk factors, pathogenesis, classification, clinical manifestations. Extrapulmonary manifestations of COPD. Instrumental methods of research in COPD, differential diagnosis. Complications of COPD.
3. Principles of patient management in stable course and in COPD exacerbation: bronchodilator treatment, oxygen therapy, use of antibacterial treatment, use of glucocorticoid drugs, respiratory support.
4. Bronchial asthma: definition, etiology, risk factors, pathogenesis, classification, clinical manifestations, diagnosis. Identification of allergies.
5. Global strategy for the treatment and prevention of bronchial asthma developed by WHO (GINA). Tactics of treatment of patients depending on the severity of asthma at the beginning of the disease and on the degree of control over the disease during its development and course.
6. Clinical presentation and management an asthma attack. Asthmatic status: diagnostic criteria, treatment.
7. Pneumonias: definition, etiology, pathogenesis, classification, pathways of entry of the pathogen. Health care-associated pneumonias.
8. Clinical manifestations of pneumonia, criteria of severity. Verification of the causative agent of pneumonia. Laboratory, instrumental, radiologic methods of examination in pneumonia. Differential diagnosis of pneumonia. Complications of pneumonia.
9. Treatment of pneumonia: indications for hospitalization, treatment, criteria for the effectiveness of antibacterial treatment. Criteria for recovery and discharge from the hospital organization. Prognosis, outcomes of pneumonia. Prevention of pneumonia.
10. Pleural effusion: etiology and pathogenesis. Clinical and laboratory signs of exudate and transudate. Indications and technique of pleural cavity puncture.
11. Pleurisy: etiology, pathogenesis, classification, clinical manifestations, diagnosis, treatment. Laboratory evaluation of pleural effusion, differential diagnosis. Complications and outcomes in pleural effusion, indications for surgical treatment. Prevention of pleural effusion.
12. Suppurative lung diseases: etiology, risk factors, pathogenesis, classification, clinical manifestations, diagnosis, treatment. Indications for surgical treatment. Complications of suppurative lung diseases.
13. Clinical manifestations and diagnosis of acute and chronic lung abscess, lung gangrene, differential diagnosis, principles of treatment, prognosis, prevention.

14. Bronchiectasis: definition, etiology and pathogenesis, predisposing factors, clinical manifestations, diagnostics. Complications of bronchiectasis: pulmonary and extrapulmonary. Treatment of bronchiectasis. Indications for surgical treatment in bronchiectasis. Prognosis in bronchiectasis.

15. Pulmonary embolism: predisposing factors for venous thromboembolism, causes and mechanisms of development, classification, clinical presentation, diagnosis, differential diagnosis, emergency medical care.

16. Assessment of clinical (pre-test) probability, severity and the risk of early death in pulmonary embolism. Treatment of pulmonary embolism. Primary and secondary prevention of pulmonary embolism.

17. Pulmonary hypertension: definition, mechanisms of development, risk factors, classification, diagnosis. Complications of pulmonary hypertension. Principles of treatment of pulmonary hypertension. Outcomes and prognosis of pulmonary hypertension.

18. Core pulmonale: definition, causes and mechanisms of development of acute and chronic core pulmonale, classification, clinical signs, laboratory and instrumental methods of diagnostics, principles of treatment, outcomes, prognosis, prevention.

19. Arterial hypertension, definition, classification, diagnostics. Primary hypertension pathophysiology. Hypertension and total CV risk assessment. The work-up in patients with suspected or established hypertension.

20. Treatment of arterial hypertension: lifestyle interventions and antihypertensive drug treatment. Drug classes for BP-lowering therapy. Antihypertensive drug combinations. The polypill concept. Target blood pressure levels in patients with hypertension. Complications of hypertension. Prognosis for hypertension.

21. Hypertensive urgencies and emergencies (hypertensive crisis): definitions, classification, clinical manifestations of various options, basic principles of treatment.

22. Secondary hypertension: causes, pathogenesis of increased blood pressure in various types of secondary hypertension. Features of clinical manifestations, diagnosis and differential diagnosis of symptomatic hypertension. Therapeutic tactics for symptomatic hypertension.

23. Atherosclerosis: etiology and pathogenesis. Formation of atherosclerotic plaque. Risk factors of atherosclerotic cardiovascular disease. Clinical manifestations and diagnosis of atherosclerosis depending on its predominant localization (aorta, heart vessels, brain, limbs, kidneys, intestines). Methods for visualizing atherosclerotic lesions.

24. Principles of treatment of atherosclerosis: non-pharmacological and pharmacological treatment. Primary and secondary prevention of atherosclerosis. Assessment of general cardiovascular risk and a differentiated approach to the prescription of lipid-lowering treatment. Indications for surgical treatment of atherosclerosis.

25. Coronary artery disease (CAD): etiology and pathogenesis, classification. The concept of chronic coronary syndromes. Instrumental methods for diagnosing coronary heart disease.

26. Angina pectoris: classification, pathogenesis and the characteristics of discomfort related to myocardial ischaemia (angina pectoris). Grading of effort angina severity according to the Canadian Cardiovascular Society.

27. Silent myocardial ischemia. Vasospastic angina. Microvascular angina. Diagnostics. Differential diagnosis of angina pectoris.

28. Principles of treatment of angina pectoris. Anti-ischaemic drugs in patients with chronic coronary syndromes. Immediate relief of effort angina. Indications for coronary angiography for angina pectoris, indications for interventional and surgical treatment methods for chronic coronary syndromes.

29. Acute coronary syndrome (ACS): definition, clinical manifestations, diagnosis, classification. Acute pharmacotherapy in ACS.

30. Treatment tactics for ACS with ST segment elevation. Acute pharmacotherapy in ACS. Selection of reperfusion strategy (invasive strategy, fibrinolysis and pharmaco-invasive strategy). Indications and contraindications of fibrinolysis in ACS, signs of successful reperfusion.

31. Treatment tactics for ACS without ST segment elevation. Acute pharmacotherapy in ACS. Indications for coronary angiography.

32. Myocardial infarction (MI): definition, etiology and pathogenesis, classification, diagnostic criteria. Typical and atypical clinical variants of MI, periods of MI. Electrocardiographic signs of MI. Biomarker of cardiomyocyte injury. Instrumental diagnostics of MI. Differential diagnosis of MI.

33. Principles of treatment of myocardial infarction (MI): pain relief, reperfusion of the infarct-related artery, antithrombotic treatment, limiting the area of ischemic damage, prevention of complications. Prognosis for MI, primary and secondary prevention of MI.

34. Complications of myocardial infarction (MI), types. Classification of acute heart failure according to Killip.

35. Acute left ventricular failure: clinical picture, treatment and diagnostic tactics.

36. Cardiogenic shock: diagnostic criteria, classification, treatment and diagnostic tactics.

37. Left ventricular aneurysm and pseudoaneurysm: diagnosis, treatment tactics. Left ventricular thrombus, thromboembolic complications.

38. Mechanical complications of MI: clinical signs, diagnostic and treatment tactics.

39. Post-MI pericarditis (early infarct-associated pericarditis, late pericarditis or post-cardiac injury (Dressler) syndrome and pericardial effusion): diagnostics, treatment tactics.

40. Arrhythmias: risk factors, electrophysiological mechanisms of development. Classification of arrhythmias. Basic methods for diagnosing arrhythmias and heart blocks. Classification of antiarrhythmic drugs.

41. Extrasystole (premature contraction): etiology, classification, clinical manifestations, ECG criteria, diagnostic algorithm, antiarrhythmic treatment, prevention.

42. Atrial fibrillation and flutter: etiology, pathogenesis, classification, clinical symptoms. ECG criteria for atrial fibrillation and flutter.

43. Strategies for the treatment of atrial fibrillation. Rhythm/rate control strategy. Prevention of paroxysms of atrial fibrillation. Prognosis for atrial fibrillation. Indications for catheter ablation.

44. Assessment of the risk of thromboembolic events in patients with atrial fibrillation/flutter (CHA₂DS₂-VASc score). Determination of indications and duration of anticoagulant use.

45. Indications and contraindications for cardioversion in atrial fibrillation/flutter, methods of cardioversion. Prevention of paroxysms of atrial fibrillation/flutter. Prognosis for atrial fibrillation and flutter. Indications for catheter ablation.

46. Paroxysmal tachycardia: etiology, pathogenesis, classification, clinical signs, ECG diagnosis, diagnostic and treatment tactics. Algorithms for acute management of paroxysmal tachycardia. Indications for catheter ablation of the source of arrhythmia. Prevention and prognosis for paroxysmal cardiac arrhythmias.

47. Ventricular fibrillation: etiology, clinical manifestations, ECG diagnosis, cardiopulmonary resuscitation algorithm.

48. Ventricular preexcitation syndromes. Wolf-Parkinson-White syndrome (WPW syndrome): pathogenesis, classification, clinical manifestations, treatment and diagnostic tactics. Restrictions in prescribing antiarrhythmic drugs in patients with WPW syndrome.

49. Heart blocks (sinoauricular, atrioventricular and intraventricular): etiology, pathogenesis, clinical manifestations, ECG diagnosis. Morgagni-Adams-Stokes syndrome. Treatment of heart blocks. Prognosis for heart block.

50. Sick sinus syndrome: classification, diagnostics, management. Indications for implantation of pacemaker.

51. Esophagitis: definition, etiology, pathogenesis, classification, clinical manifestations, diagnostics, differential diagnosis, treatment. Complications of esophagitis. Indications for surgical treatment. Prevention of esophagitis.

52. Gastroesophageal reflux disease (GERD): definition, epidemiology, major risk factors, pathogenesis, classification, clinical manifestations, differential diagnosis. Extraesophageal manifestations of GERD. Instrumental diagnosis of GERD. Complications of GERD. Treatment of GERD.

53. Functional dyspepsia: definition, epidemiology, causes of development, pathogenesis, classification, clinical manifestations, diagnostic criteria, differential diagnosis, treatment.

54. Chronic gastritis: definition, pathogenesis, classification, clinical manifestation, diagnostics. Methods of detection of *Helicobacter pylori* infection. Treatment of gastritis.

55. Gastroduodenal ulcers: definition, etiology and pathogenesis, factors of aggression and protection of the gastric mucosa, classification, clinical manifestations depending on the ulcer localization, diagnosis, differential diagnosis.

56. Complications of gastroduodenal ulcers: bleeding, perforation, penetration, periviscitis, gatekeeper stenosis, malignization. Tactics of a general practitioner in the detection of complications of gastroduodenal ulcers.

57. Treatment of uncomplicated ulcers: diet, eradication of *Helicobacter pylori*, antisecretory treatment, symptomatic drugs, gastroprotectors. Duration of basic treatment. Methods of secondary prevention of gastroduodenal ulcers. Indications for surgical treatment of gastroduodenal ulcers.

58. Enteropathies: definition, etiology, pathogenesis, classification. The main syndromes in enteropathy: digestive failure, absorption failure, exudative enteropathy. Methods of diagnosis of enteropathy, changes in laboratory parameters, differential diagnosis. Treatment of enteropathy.

59. Celiac disease: etiology, pathogenesis, clinical manifestations, diagnosis, treatment, prevention, prognosis.

60. Crohn's disease: definition, etiology and pathogenesis, classification, clinical manifestations, extraintestinal manifestations. Instrumental methods of diagnosis of Crohn's disease. Criteria of activity of Crohn's disease, complications. Treatment of Crohn's disease, indications for surgical treatment.

61. Ulcerative colitis: definition, etiology and pathogenesis, classification, clinical manifestations, extraintestinal manifestations, diagnosis, complications. Treatment of ulcerative colitis, indications for surgical treatment.

62. Colitis with known etiology: ischemic, radiation, antibiotic-associated (pseudomembranous): pathogenesis, classification, clinical manifestations, management.

63. Irritable bowel syndrome: definition, etiology and pathogenesis, pathophysiology, classification, clinical manifestations and diagnostic criteria. Treatment of irritable bowel syndrome.

64. Functional biliary disorders: definition, causes of development, pathogenesis, classification, clinical manifestations, diagnostic criteria, diagnosis and treatment.

65. Chronic pancreatitis: definition, etiologic factors, pathogenesis, classification, clinical manifestations. Laboratory and instrumental methods of diagnosis of chronic pancreatitis. Complications of chronic pancreatitis. Treatment of chronic pancreatitis, indications for surgical treatment.

66. Chronic hepatitis: definition, etiology, pathogenesis, classification. Biochemical markers of cytolytic syndrome, cholestasis, hepatocellular insufficiency, mesenchymal-inflammatory syndrome. Criteria of chronic hepatitis activity: clinical, biochemical, morphological. Principles of treatment.

67. Autoimmune hepatitis: definition, prevalence, etiology, pathogenesis, main clinical symptoms (hepatic and extrahepatic), diagnosis, management, prognosis.

68. Drug-induced hepatitis: drugs causing hepatitis, mechanisms of direct cytotoxic action of drug metabolites on the liver, clinical, biochemical, serologic, morphologic manifestations, treatment, prognosis.

69. Gilbert's syndrome: clinical manifestations, diagnosis, treatment, prognosis.

70. Liver cirrhosis: definition, etiology and pathogenesis, classification, severity classes. Diagnosis of liver cirrhosis.

71. Complications of liver cirrhosis: bleeding from esophageal and gastric varices, ascites, hepatic encephalopathy, hepatopulmonary syndrome, hepatorenal syndrome, portal hypertensive gastropathy and colopathy, spontaneous bacterial peritonitis.

72. Principles of treatment of liver cirrhosis: general measures, pharmacologic treatment. Treatment of complications of liver cirrhosis. Indications for liver transplantation. Prognosis in liver cirrhosis.

73. Primary biliary cirrhosis of the liver: etiology, pathogenesis, clinical manifestations, diagnosis, treatment.

74. Hemochromatosis: primary and secondary iron overload syndrome, etiology, pathogenesis, clinical manifestations, diagnosis, treatment, prevention, prognosis.

75. Wilson-Conovalov disease: etiology, pathogenesis, clinical manifestations, diagnosis, treatment, prevention, prognosis.

76. Acute glomerulonephritis: etiology, pathogenesis, clinical manifestations. Methods of diagnosis of acute glomerulonephritis, principles of treatment, outcomes, prognosis. Prevention of post-streptococcal glomerulonephritis.

77. Chronic glomerulonephritis: pathogenesis of various forms, classification (clinical and morphological), diagnostics. Differentiated approach to the treatment of chronic glomerulonephritis.

78. Urinary tract infection: clinical manifestations, diagnosis, treatment. Features of management of pregnant women with urinary tract infection.

79. Chronic pyelonephritis: etiology, pathogenesis, classification, clinical manifestations, diagnosis, treatment, peculiarities of antibacterial treatment, prevention of exacerbations.

80. Tubulointerstitial nephritis: causes of development, diagnosis, differential diagnosis with glomerulonephritis, treatment. Features of drug interstitial nephritis.

81. Nephrotic syndrome: etiology, pathogenesis, clinical manifestations, diagnosis, complications, therapeutic tactics.

82. Renal amyloidosis: modern ideas about etiology and pathogenesis, classification. The most frequent diseases accompanied by the development of amyloidosis. Clinical stages of renal amyloidosis, diagnosis, the role of morphologic examination, therapeutic tactics, preventive measures.

83. Chronic kidney disease (CKD): classification of stages. The main diseases leading to the development of CKD. Factors of progression of CKD. Control of the functional state of the kidneys. Clinical manifestations, diagnostic methods, conservative treatment of CKD. Indications for renal replacement therapy, kidney transplantation.

84. Hemorrhagic diathesis: definition, causes of development, classification, common signs, types of bleeding, methods of diagnosis.

85. Idiopathic thrombocytopenic purpura: main etiologic factors, pathogenesis of bleeding, clinical manifestations, diagnosis, differential diagnosis with symptomatic thrombocytopenias, course, treatment.

86. Hemophilia: etiology, forms, pathogenesis of bleeding, clinical manifestations, course, diagnosis, treatment, prevention, prognosis.

87. Hemorrhagic telangiectasia (Randu-Osler disease): pathogenesis of bleeding, role of hereditary factor, clinical manifestations, diagnosis, treatment.

The list of questions was approved at the Department meeting No. 14 dated 04/17/2026.