



MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION  
Federal state autonomous educational institution  
of higher education  
«Far Eastern Federal University»  
(FEFU)

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**SCHOOL OF BIOMEDICINE**

«AGREED»

Head of education program  
«General medicine»

  
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(signature) Khotimchenko Yu.S.  
(Full name)  
«09» of July 2019

«APPROVED»

Director of the Department of Clinical  
Medicine

  
\_\_\_\_\_  
(signature) Geltser B.I.  
(Full name)  
«09» of July 2019



**WORKING PROGRAM OF ACADEMIC DISCIPLINE (WPAD)**

**« Hospital therapy, endocrinology»**

Specialty

**31.05.01 «General medicine»**

**Form of study: full time**

Years 5, 6, semesters 9, A, B  
lectures 108 hours  
practical classes 162 hours  
total amount of i-classroom work: 270 hours  
independent self-work: 126 hours  
including preparation to exam 54 hours  
control works -  
credit - semester 9, A  
exam – B semester

The working program is drawn up in accordance with the requirements of the Federal state educational standard of higher education (level of training), approved by the order of the Ministry of education and science of the Russian Federation from 09.02.2016 № 95.

The working program of the discipline was discussed at the meeting of the Department of fundamental and clinical medicine. Protocol No. 8, 09 of July 2019

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## RESUME

Discipline " Hospital therapy, endocrinology" is purposed for students enrolled in the educational program 31.05.01 "General medicine" and included in the basic part of the curriculum.

The working program of the discipline is developed in accordance with the Federal state educational standard of higher education (2016) specialty medicine, taking into account the recommendations of the approximate (model) curriculum of the discipline.

Discipline refers to the basic part of the block 1 "Discipline (modules)". Discipline is one of the final training and logically linked to all of the above disciplines.

Discipline is realized on 5 and 6 years in 9, A and B semesters.

The total complexity of the discipline studying is 11 credits, 396 hours. The curriculum provides 108 hours of lectures, 162 hours of practical training, 126 hours of independent self-work of the student and 54 hours to prepare for the exam at the end of the Bth semester.

Discipline refers to the basic part of the block 1 "Discipline (modules)". Discipline is one of the final training and is logically connected with previously studied disciplines: Human anatomy, Histology, embryology, cell biology, Biological chemistry, Normal physiology, Pathological physiology, Pathological anatomy, Microbiology, Virology, immunology, Propaedeutics of internal diseases, Faculty therapy, Hygiene the Basics of human ecology, Surgical disease, Obstetrics and gynecology, Oncology, Radiation diagnosis and radiotherapy, Endocrinology, Neurology, Ophthalmology, Otorhinolaryngology, Psychiatry and narcology, Infectious diseases, Dermatology and venerology, Clinical pharmacology, Phthisiology.

The study of the discipline "Inpatient therapy, endocrinology" is based on formation of the following preliminary competence:

General cultural competences:

- ability to abstract thinking, analysis, synthesis (GC-1);

- readiness for self-development, self-realization, self-education, use of creative potential (GC-5);
- readiness to use the first aid techniques, methods of protection in emergency situations (GC-7);
- willingness to work in a team, tolerant of social, ethnic, religious and cultural differences (GC-8).

**General professional competence:**

- readiness to solve standard tasks in professional activity with the use of information, bibliographic resources, medical and biological terminology, information and communication technologies and taking into account the basic requirements of information security (GPC-1);
- willingness to conduct medical documentation (GPC-6);
- readiness for medical use of drugs and other substances and their combinations in solving professional problems (GPC-8);
- ability to evaluate morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems (GPC-9).

**professional competence:**

**medical activity:**

- commitment to collection and analysis of patient's complaints, data of anamnesis, physical examination, laboratory, instrumental, post-mortem and other studies in order to determine the state or of ascertaining the presence or absence of the disease (PC-5);
- ability to determine the patient's main pathological conditions, symptoms, disease syndromes, nosological forms in accordance with the International statistical classification of diseases and health-related problems, X revision (PC-6);
- ability to determine the tactics of management of patients with different nosological forms (PC-8);

- readiness to participate in the provision of emergency medical care in conditions that require urgent medical intervention (PC-11);

**research activities:**

- readiness for analysis and public presentation of medical information on the basis of evidence-based medicine (PC-20),
- ability to participate in scientific research (PC-21).

Teaching of this discipline is aimed at the formation of student knowledge, skills and basic skills for further study at the 5th and 6th years of the discipline "Inpatient therapy", and later after accreditation - to work as a physician in the primary health care.

**The purpose** of teaching the discipline "Inpatient therapy, endocrinology" is to teach the principles and methods of diagnosis and differential diagnostics of major syndromes and diseases of the internal organs, formation of students the necessary amount of knowledge and practical skills, the development of interdisciplinary thinking in order to form professional competencies required in the framework of professional activities of a physician for independent work in primary health care institutions.

**Objectives of the discipline:**

- formation of student knowledge and skills to conduct a full range of diagnostic and therapeutic measures in accordance with the clinical protocols of patients with various nosological forms of internal diseases;
- development of student skills of survey and clinical examination of patients with internal organs pathology, interpretation of the results of routine and special laboratory and instrumental methods of organs and systems research, morphological tissue research;
- formation of student skills of differential syndrome diagnostics, formulation, justification, formulation and categorization of nosological (according to ICD-10) and clinical diagnostics, drawing up a plan of examination of

patients, determining the tactics of their management in accordance with the current clinical guidelines (protocols);

- formation of student skills and abilities to carry out prevention, treatment and rehabilitation of patients with diseases of internal organs, prescribe and directly carry out treatment of patients with major diseases of internal organs;
- formation of skills of the medical history registration, clinical diagnostics, plan of examination and treatment, determining the ability to work and indications for hospitalization, keeping diaries and epicrisis design when working with therapeutic patients.

As a result of this discipline study, students form the following general cultural and general professional competence (elements of competence):

<b>Code and formulation of competence</b>	<b>Stages of competence formation</b>	
GC-1 Ability to abstract thinking, analysis, synthesis	Knows	Etiology, pathogenesis of diseases
	Able to	Determine cause-and-effect relationships
	Masters	The logic of diagnosis
GC-5 Readiness for self-development, self-realization, self-education, use of creative potential	Knows	Determine own level of training, highlight the purpose of training
	Able to	Readiness for self-development, self-realization, self-education, use of creative potential
	Masters	Ability to analyze the results of own activities and gain experience
GC-8 Willingness to work in a team, tolerant of social, ethnic, religious and cultural differences	Knows	Moral and ethical norms and principles of medical behavior, basics of deontology

	Able to	Build and maintain relationships in the team, tolerant to perceive the personal characteristics of the team members
	Masters	Practical application of the principles of deontology and medical ethics
GPC-1 readiness to solve standard tasks in professional activity with the use of information, bibliographic resources, medical and biological terminology, information and communication technologies and taking into account the basic requirements of information security	Knows	Etiology, pathogenesis, diagnosis criteria, modern classification, symptoms, features of the course, possible complications, methods of diagnosis and treatment of diseases
	Able to	Use educational, scientific literature, the internet with an assessment of levels of evidence and criteria of quality of the contents, remote forms of education
	Masters	Methods of general clinical study and interpretation of survey results, modern technologies of information retrieval
GPC-4 Ability and willingness to implement ethical and deontological principles in professional activity	Knows	Moral and ethical principles of doctor's behavior, duties of medical staff
	Able to	To build and maintain relationships with patients on the basis of humanism, in the team- on the basis of
	Masters	Principles and practical application of the basics of medical deontology and ethics
GPC-5 Ability and willingness to analyze the results of their own activities to prevent professional	Knows	Criteria for diagnosis, modern classification, symptoms, features of the course, possible complications, methods of treatment of major therapeutic diseases in accordance with clinical guidelines, approved Russian Ministry of Health

	Able to	To analyze compliance of own activity with available clinical recommendations of medical communities, to evaluate the effectiveness of the examination and treatment, the results of internal and external (insurance) examinations
	Masters	Skills of differential diagnostics, analysis of own professional actions, communication
GPC-6 Willingness to conduct medical documentation	Knows	The main forms of medical documentation in the hospital (medical history, discharging documents)
	Able to	Correctly fill out the basic forms (medical history, discharging documents)
	Masters	Skills of medical documentation formulation
GPC-8 Readiness for medical use of drugs and other substances and their combinations in solving professional problems	Knows	Classification and characteristics of basic drugs, their indications, contraindications, side effects
	Able to	Analyze the effects of drugs on the base of totality of their pharmacological properties and the possibility of their use, including the possibility of combinations
	Masters	Skills in the use of drugs in the treatment of common therapeutic diseases
GPC-9 Ability to evaluate morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems.	Knows	Concepts of etiology, pathogenesis, morphogenesis, pathomorphosis of diseases, structural and functional basis of pathological processes
	Able to	To carry out clinical and additional examination of patients with interpretation of results, with reflection of structural and functional disorders
	Masters	The skills to assess the morphological

		substrate and the performance of the individual pathogenesis of diseases of internal organs of a patient being examined
GPC-11  Readiness for use of medical devices provided by the procedures of medical care	Knows	Additional medical devices of diagnosis and treatment of therapeutic diseases
	Able to	Use sphygmomanometers, pekfluorometer, spirometer, pulse oximeter, glucometer, camera recording ECG for the diagnosis, a nebulizer for the treatment
	Masters	Interpretation of the outcomes of research and treatment
PC-1 Ability and readiness to implement a set of measures aimed at the preservation and promotion of health, including the formation of a healthy lifestyle, prevention of the occurrence and (or) spread of diseases, their early diagnosis, identification of the causes of their occurrence and development, as well as aimed at eliminating the harmful effects on human health factors of its habitat	Knows	The impact of the environment on health, the factors influencing human health, the basics of valeology, the basics of preventive measures purposed for health strengthening
	Able to	To participate in the provision of medical and preventive care to the population, to assess the factors affecting the health of a particular patient.
	Masters	Methods of sanitary and educational work, assessment of individual risk factors
PC-5 commitment to collection and analysis of patient's complaints, data of anamnesis, physical examination, laboratory, instrumental, post-mortem and other studies in order to determine the state or of ascertaining the presence or absence of the disease	Knows	Methods of collecting complaints, anamnesis, examination of patients, indications for the appointment of additional methods of examination and examinations of specialists in internal diseases
	Able to	Correctly draw up the identified changes in a disease history, to assess the severity of the condition, to formulate a diagnosis, to make a plan of examination.



	Masters	Skills of general clinical examination, writing medical history, diagnosis formulation
PC- 6 ability to determine the patient's main pathological conditions, symptoms, disease syndromes, nosological forms in accordance with the International statistical classification of diseases and health-related problems, X revision	Knows	Clinical picture, classification, features of the course diagnostic methods and criteria for the diagnosis of the studied internal diseases, the formulation in accordance with the ICD codes
	Able to	To determine the leading syndromes, to assess the severity of the underlying disease or a combination of diseases with mutual aggravation, to determine the ICD code in accordance with clinical diagnosis
	Masters	Criteria for assessing the patient's condition on the basis of clinical diagnostic methods
PC-7 Readiness to carry out expert examination of temporary disability	Knows	The main orders for evaluation of temporary disability
	Able to	To formulate criteria for temporary and permanent disability depending on the work performed
	Masters	Rules of examination of temporary disability
PC-8 Ability to determine the tactics of management of patients with different nosological forms	Knows	Criteria for diagnostics of main therapeutic diseases studied and rules for routing patients with acute conditions and complicated course
	Able to	To assess the patient's condition for making tactical decisions on planned and emergency care, to identify and carry out priority diagnostic and therapeutic measures
	Masters	The main therapeutic and assessment skills and the choice of the medical care level

PC-11 Readiness to participate in the provision of emergency medical care in conditions that require urgent medical intervention	Knows	Algorithms of emergency care in conditions requiring urgent intervention in the clinic of internal diseases
	Able to	Assess the severity of the patient's condition, make quick decisions
	Masters	Skills to provide urgent care in life-threatening conditions in the clinic of internal diseases
PC-17 Ability and willingness to identify the main symptoms and syndromes of diseases, to analyze the functioning patterns of various organs and systems in various diseases, using the algorithm of diagnosis, to perform basic diagnostic measures to identify negative and life-threatening conditions	Knows	etiology, pathogenesis and prevention of the most common diseases; modern classification of diseases; clinical picture, features of the course and possible complications of the most common diseases occurring in a typical form in different age groups; criteria for the diagnosis of various diseases.
	Able to	to make a preliminary diagnosis - to synthesize information about the patient in order to determine the pathology and the causes of it; to outline the scope of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result; to formulate a clinical diagnosis.
	Masters	the algorithm of preliminary diagnosis followed by the direction of the patient to the appropriate medical specialist; algorithm of detailed clinical diagnosis.
PC-19 Ability and willingness to perform basic therapeutic measures in the most common diseases and conditions in adults and adolescents, capable of causing severe complications and (or) death: diseases of the endocrine, cardiovascular, respiratory, digestive, genitourinary	Knows	methods of treatment and indications for their use: the mechanism of therapeutic action of physical therapy and physiotherapy, indications and contraindications to their appointment, especially their conduct; clinical and pharmacological characteristics of the main groups of drugs and the rational choice of specific drugs in the treatment of major

systems and blood, in a timely manner to identify life-threatening disorders (acute blood loss, respiratory disorders)		pathological syndromes of diseases and emergency conditions in patients, including the basics of anti-doping legislation.
	Able to	to develop a plan of therapeutic actions, taking into account the course of the disease and its treatment; to formulate indications for the chosen method of treatment, taking into account the etiologic and pathogenetic agents, to justify pharmacotherapy for the main pathological syndromes and emergency conditions, to determine the route of administration, mode and dose of drugs, to assess the effectiveness and safety of the treatment; to use different methods of drug administration; provide first aid in case of emergency conditions, first aid to victims of lesions in emergency situations (heart failure, coma, shock), use the methods of their immediate elimination, to carry out anti-shock measures (partially implemented).
	Masters	the main medical diagnostic and therapeutic measures to provide first aid in emergency and life-threatening conditions.
PC-20 Readiness to participate in the provision of emergency medical care in conditions that require urgent medical intervention	Knows	Basic principles of evidence-based medicine and forms of presentation and analysis of medical information
	Able to	Interpret the results of the available information, allocate qualitative information, and use clinical recommendations
	Masters	Access to evidence-based research, quality medical information, public speaking skills
PC-21 Ability to participate in research studies	Knows	Principles of scientific research and data analysis

	Able to	Use available sources of information in a particular scientific field
	Masters	Skills of interpretation, elementary statistical processing of research results
PC-22 Readiness to participate in implementation of the new methods and techniques based on evidence-based research purposed for protection of public health	Knows	Principles of implementation of new techniques in practice
	Able to	Assess the possibility of introducing new methods into the diagnostics and treatment of patients
	Masters	Skills to evaluate new methods of diagnostics and treatment

## **I. I. THE STRUCTURE AND CONTENT OF THE THEORETICAL PART OF THE COURSE 9 SEMESTER**

### **Section I. Diseases of respiratory system (10 hours.)**

#### **Theme 1. Differential diagnostics of bronchial patency disorders.**

Differential diagnostics of bronchial obstruction with diseases of the larynx, angioedema, diseases of the trachea, lungs, mediastinal tumors, hysteria, carcinoid syndrome, nodular periarteritis. Bronchial asthma. Diagnostics, classification. Treatment. Emergency therapy for asthmatic status.

COPD. Diagnosis, classification. Differential diagnostics of bronchial obstruction syndrome. Modern COPD treatment strategies.

#### **Theme 2. Differential diagnostics of fever of unknown origin**

The concept of "fever of unknown origin". Differential diagnostic algorithm for fever of unknown origin. Differential diagnostic signs of fever of unknown origin in General and focal infections, systemic connective tissue diseases, hematological and tumor diseases, gastroenterological and endocrinological diseases, and drug-induced disease. Principles of differentiated therapy of fever of unknown origin.

The algorithm of differential diagnostics and diagnostic signs of diseases accompanied by fever with rash, fever with erythema nodosum, fever with hemorrhagic syndrome, fever with lymphadenopathy.

### **Theme 3. Differential diagnostics of focal lung diseases.**

Differential diagnostics of focal diseases and pneumonia. Pneumonias. Classification. Clinical variants. The differential diagnostics of the lung cancer, pulmonary embolism, eosinophilic infiltrate. Treatment of pneumonia depending on the etiology. Urgent therapy of the severe course pneumonia.

### **Theme 4. Differential diagnostics of diffuse (disseminated) lung lesions.**

The algorithm of differential diagnostics of diseases accompanied by disseminated lung disease. Differential diagnostic signs of dissemination in sarcoidosis, idiopathic fibrosing alveolitis, toxic fibrosing alveolitis, exogenous allergic alveolitis.

Differential diagnostic signs of dissemination in tuberculosis, systemic connective tissue diseases, systemic vasculitis, tumors, pneumoconiosis, cardiogenic dissemination, drug pneumopathies (amiodarone, nitrofurans, etc.). Principles of differentiated treatment of diseases accompanied by disseminated lung disease.

### **Theme 5. Differential diagnostics and treatment of respiratory and pulmonary heart failure**

Differential diagnostic signs of acute and chronic respiratory failure, respiratory failure by restrictive and obstructive type. Concept, classification of the pulmonary heart. Pulmonary hypertension, diagnostics, treatment tactics, prognosis.

Differential diagnostic signs of acute and chronic pulmonary heart. Principles of differentiated therapy of respiratory and pulmonary heart failure. Emergency treatment of pulmonary embolism, spontaneous pneumothorax, respiratory distress syndrome.

## **Section 2. Diseases of the cardiovascular system.**

### **Theme 6. Differential diagnostics and treatment tactics for the heart pain**

Differential diagnostics and treatment tactics for pain in the heart area. Features coronarogenic and noncoronary origin pain (including noncardiac). Differential diagnostic signs of recurrent chest pain in cardiac pathology, pathology of respiratory organs, musculoskeletal system, gastrointestinal tract, nervous system. The ability of ECG and Echo-CG in differentiation of pain (pharmacological and load tests). Indications for the use of coronary angiography, atrial stimulation test. Features of treatment of the pain depending on its origin.

### **Theme 7. Differential diagnostics and treatment tactics for heart pain. Acute coronary syndrome. Myocardial infarction**

Acute coronary syndrome (ACS). Symptoms. Diagnostic criteria. Medical tactics in ACS. Diagnosis of myocardial infarction. Clinical variants. Tactics of management of patients with myocardial infarction. Routing of ACS patients. Revascularization methods. Indications and contraindications to thrombolytic therapy and percutaneous interventions on the coronary arteries. Complications of myocardial infarction. Diagnosis, differential diagnostics. Treatment algorithms.

### **Theme 8. Differential diagnostics and treatment of the heart rhythm disorders**

Differential diagnostics and treatment of cardiac arrhythmias. Diagnosis and treatment of extrasystolic arrhythmias. Features of clinical manifestations and the importance of ECG method in the diagnosis of arrhythmias. Temporary classification of antiarrhythmic drugs.

Etiological factors, diagnostics and treatment of supraventricular tachycardia. Atrial fibrillation and flutter. The importance of anticoagulant therapy in the treatment and prevention of complications, methods. Diagnosis and treatment of ventricular tachycardia. Sudden arrhythmic death. Emergency. Indications and contraindications to cardioversion and defibrillation, technique, accompanying therapy.

### **Theme 9. Differential diagnostics and treatment of conduction disorders**

Diagnosis, differential diagnostics and treatment of conduction disorders. The value of detection of "high" and "low" heart blockades, indications for implantation of artificial pacemaker (permanent and temporary). Resuscitation measures for ventricular asystole. Sinus node dysfunction, clinical significance. QT elongation syndrome. Ventricular pre-excitation syndrome.

#### **A semester**

### **Theme 10. Differential diagnostics of acquired heart defects characterized by the appearance of systolic murmur.**

Differential diagnostics of acquired heart defects characterized by the appearance of systolic murmur. The value of echocardiography. Systolic murmur of "relative" mitral valve insufficiency (prolapse of the valves, impaired tone, rupture of papillary muscles, organic myocardial damage). Noise on large vessels in hypertension of small and large circulation. Drugs reducing pressure in the small and large circle of blood circulation.

Differential diagnostics of acquired heart defects characterized by the appearance of diastolic murmur.

Indications and contraindications for surgical treatment.

### **Theme 11. Differential diagnostics and treatment of non-coronary myocardial lesions**

Primary cardiomyopathy: hypertrophic, restrictive, dilated. Differential diagnostics. Diagnostic capabilities, the role of echocardiography. Treatment. Indications for surgical treatment. Forecast. Secondary cardiomyopathy.

Myocarditises. Clinical variants of the course. Laboratory and instrumental methods of research. Indications for biopsy of the myocardium. Treatment.

## **Theme 12. Differential diagnostics and treatment of infectious endocarditis and pericarditis**

Infective endocarditis. Classification, diagnostics, treatment.

Pericarditis. Diagnosis, differential diagnosis. Classification. Treatment based on etiological factor taken into account. Indications for surgical treatment. Forecast.

## **Theme 13. Differential diagnostics and treatment of hypertension**

Hypertensive disease. Classification. Symptoms. The criteria for diagnostics. Differential diagnostics of hypertension and symptomatic hypertension: renal, endocrine, hemodynamic and drug-induced hypertension. Syndrome of malignant arterial hypertension. Indications for the use of invasive methods (aortography, puncture kidney biopsy). Treatment of hypertension. Classification of antihypertensive agents. Mechanism of action. Emergency treatment of hypertensive crisis. Features of treatment of hypertension in the elderly and senile age, as well as in severe atherosclerosis.

## **Theme 14. Differential diagnostics of edematous syndrome. Diagnosis and treatment of acute and chronic heart failure**

Acute left ventricular failure, differential diagnostics, treatment. Pulmonary edema, provocative factors. Pathogenesis. Characteristics of hemodynamic shifts. Differential diagnostics with other causes of paroxysmal dyspnea. Outcomes. Forecast. Emergency treatment. Features of treatment of pulmonary edema, on the background of hypertension and hypotension, as well as a combination of cardiac and bronchial asthma. Acute right ventricular failure. Features of treatment.

Chronic heart failure, symptoms, diagnostics, treatment, prognosis. Chronic left, right ventricular and biventricular heart failure. Acute decompensated heart failure. Etiology, clinic, instrumental diagnostics, modern medical and non-drug therapy, prevention.

### **Section 3. Kidney and urinary tract diseases.**



**Theme 15. Differential diagnostics and therapy of pathological urinary sediment.**

Differential diagnostics of urinary syndrome. Urinary tract infection. Diagnostic criteria of diseases manifested by tubulo-interstitial lesions. Possibilities of laboratory and instrumental methods of research. Diagnostics and criteria of acute and chronic pyelonephritis. Treatment.

**Theme 16. Differential diagnostics in edema syndrome.**

Nephrotic syndrome. Diagnosis, differential diagnostics. Renal amyloidosis. Treatment taking into account the peculiarities of the pathogenesis of various types of edema. Treatment of nephrotic syndrome. Features of therapy of base disease with the addition of nephrotic syndrome. Possible complications of therapy. Nephrotic crisis.

Clinical features of edema in lesions of the heart, kidneys, liver, endocrine disorders. Edema in disorders of venous and lymphatic circulation. Idiopathic edema syndrome. Kidney damage in diabetes, systemic connective tissue diseases, systemic vasculitis, multiple myeloma.

**Theme 17. Differential diagnostics in renal failure.**

Acute renal injury. Etiology, symptoms, diagnostic criteria, differential diagnostics. Treatment.

Chronic kidney disease. Etiology. Symptoms. Classification, diagnostics, treatment approaches. Indications for and types of replacement therapy.

**Section 4. Joint disease. Systemic diseases of connective tissue.**

**Theme 18. Differential diagnostics and treatment tactics in the inflammatory disorders of joints**

Differential diagnostics of the joint syndrome.

Rheumatoid arthritis. Early detection capabilities. Classification. Diagnostic criteria. Basic and symptomatic therapy. Diagnostic criteria for Bekhterev's disease, Reiter's syndrome, Sjogren's syndrome. Treatment.

Systemic scleroderma. Classification. Diagnostic criteria. Treatment.

Polymyositis, and dermatomyositis. Classification. Diagnostic criteria. Treatment.

## **B semester**

### **Theme 19. Differential diagnostics and treatment tactics in case of degenerative joints diseases and microcrystalline arthritis**

Features of the joint syndrome in joint disorders of degenerative origin.

Osteoarthrosis. Diagnostics and treatment.

Gout. Gout arthropathy, paraneoplastic reaction. Treatment of acute attack of gout.

Gout nephropathy.

### **Theme 20. Differential diagnostics and treatment tactics for joint damage in patients with systemic hemorrhagic vasculitis**

Differential diagnostics and treatment of systemic vasculitis.

Nodular polyarteritis, Wegener granulomatosis. Diagnostics. Treatment.

goodpasture. Hemorrhagic vasculitis, Shenleyn-Schonlein purpura. Diagnostics.

Clinical and laboratory criteria.

Treatment. Anti-inflammatory therapy: indications, safety and adequacy. Tactics of application of biological medications.

Systemic lupus erythematosus. Antiphospholipid syndrome. Differential diagnostics. Diagnostic criterion. Classification. Clinical and laboratory characteristics, determination of process activity. Treatment.

## **Section 5. Diseases of the digestive system.**

### **Theme 21. Differential diagnostics and treatment tactics for hepatomegaly and jaundice**

Differential diagnostics of hepatomegaly and jaundice.

The main reasons of occurrence (chronic hepatitis and liver cirrhosis, accumulation diseases, liver tumors, diseases of the hepatic blood vessels, diseases of the blood and blood-forming organs, diseases of the heart).

Possibilities of modern disease recognition, the role of analysis of the blood enzyme spectrum, radioisotope and echographic methods, X-ray contrast (including angiography) examination, morphological methods.

Treatment of chronic hepatitis.

Cirrhosis. Classification. Diagnostic criterion. Differential diagnostics. Treatment. Complications.

Diagnostic and therapeutic management of bleeding from the gastrointestinal tract.

### **Theme 22. Differential diagnostics and treatment tactics for jaundice**

Differential diagnostics of jaundice occurring with non-conjugated (adrenal and hepatic forms) and conjugated bilirubin (hepatic cell and obturation jaundice). Possibilities of laboratory and instrumental methods of research, including X-ray contrast, endoscopic and ultrasound methods. Possible causes, clinical manifestations and emergency therapy of acute liver failure. Gallstone disease, chronic cholecystitis, biliary dyskinesia. The criteria for diagnostics. Treatment.

### **Theme 23. Differential diagnostics and treatment tactics in pancreatic diseases.**

Differential diagnostics and treatment of pancreatic diseases. Syndrome of maldigestion.

Acute pancreatitis. Diagnostics, treatment. Emergency. Chronic pancreatitis. Diagnosis, differential diagnostics with pancreatic cancer. Treatment.

### **Theme 24. Differential diagnostics and tactics of treatment of the gastric dyspepsia syndrome**

Differential diagnostics and tactics of treatment of the gastric dyspepsia syndrome. Differential diagnostics in gastric dyspepsia, functional lesions of the stomach.

Chronic gastritis. Methods of laboratory and instrumental studies and treatment.

Ulcer. Symptoms, diagnostics. Differential diagnostics with gastric cancer.

Methods of Helicobacter pylori diagnosis.

Treatment of peptic ulcer.

Gastroesophageal reflux disease (GERD), symptoms, diagnostics, treatment.

### **Theme 25. Differential diagnostics and tactics of treatment of the syndrome of intestinal dyspepsia**

Intestinal dyspepsia. Differential diagnostics of inflammatory bowel diseases: ulcerative colitis, Crohn's disease. Diagnostics, features of course. Medical tactics.

Differential diagnostics of diseases manifesting themselves as diarrhea (tumors of the gastrointestinal tract, nonspecific enterocolitis, mono- and disaccharide malabsorption, celiac disease, functional disorders, infectious diseases).

Malabsorption syndrome.

### **Theme 26. Differential diagnostics and tactics of treatment of the constipation syndrome**

Differential diagnostics of diseases associated with constipation (colon dilation, syndrome of overstretched colon, colon tumors, diverticulitis, disease of the distal colon, irritable bowel syndrome). Diagnostics (radiopaque examination of the bowel, fecal, enzymes, endoscopy, biopsy of the intestinal mucosa).

## **Section 7. Diseases of the blood system.**

### **Theme 27. Differential diagnostics and pathogenetic therapy in anaemic conditions.**

Classification of anemia. Diagnostic search program for anemic syndrome.

Indications for blood transfusion and parenteral therapy.

B-12 deficiency anemia. Etiology, mechanisms of development. Diagnostics.

Possibilities of therapy. Maintenance therapy.

Hypo-aplastic anemia.

Partial red-cell aplasia.

Myelodysplastic syndrome. Diagnosis and treatment criteria.

Hemolytic anemia. Congenital and acquired forms. Diagnostic criterion. Sickle-cell disease. Thalassemia.

**Theme 28. Differential diagnostics and pathogenetic therapy of blood diseases.**

Differential diagnosis of hematological malignancies. Clinical and diagnostic criteria. Rational therapy of acute leukemia. Principles of chemotherapy of acute leukemia. Complications of drug therapy of hemoblastosis. Cytostatic disease (causes, clinic, treatment).

**Theme 29. Differential diagnostics and pathogenetic therapy in blood diseases.**

Leukemoid reactions.

Diagnostic criteria of chronic lymphocytic leukemia.

Lymphomas, diagnostics. Tactics of treatment.

Diagnosis and treatment of chronic myeloid leukemia, erythremia, subleukemic myelosis.

Paraproteinemic hemoblastosis. Myeloma. Diagnostics. Treatment.

**Theme 30. Differential diagnostics and pathogenetic therapy in lymphadenopathy and splenomegaly.**

Diseases manifested by local and diffuse lymph node enlargement and splenomegaly.

Chronic lymphocytic leukemia. Diagnostic search program. The value of the morphological method of research. Indications for splenectomy.

**Theme 31. Differential diagnostics and treatment of diseases manifesting in disorders of coagulation system.**

Hemorrhagic diathesis. Classification. Laboratory methods of blood coagulation research. Examination programs for hemorrhagic diathesis. Treatment of hemorrhagic diathesis.

Coagulopathies. Classification, symptoms, diagnosis. Diagnostics.

**Theme 32. Differential diagnostics and treatment of diseases manifesting in disorders of coagulation system.**

Thrombocytopenic purpura. Diagnostics. Treatment. Secondary thrombocytopenia, etiological factors. Diagnostics. Antiphospholipid syndrome, diagnostic criteria.

Hemorrhagic and thrombophilic syndromes in the clinic of internal diseases.

Differential diagnosis. DIC. Symptoms. Diagnostics. Hemostatic and anticoagulant therapy.

**Section 8. Endocrine disease.**

**Theme 33. Diabetes.**

Obesity, metabolic syndrome. Classification, diagnosis, pathogenesis of diabetes.

Diabetes mellitus type 2. Clinical implications. Acute complications of diabetes.

Late complications of diabetes. Treatment. Insulin therapy in patients with type 2 diabetes.

**Theme 34. Differential diagnostics and treatment of thyroid diseases.**

Thyroid disease. Thyrotoxicosis. Etiology, pathogenesis, symptoms, classification.

Thyroiditis. The syndrome of hypothyroidism. Etiology, pathogenesis, symptoms, classification.

**Theme 35. Hypothalamic-pituitary diseases.**

Hypothalamic-pituitary diseases. Etiology, symptoms, classification, diagnostics.

Hyperprolactinemia syndrome. Acromegaly. Cushing's syndrome. Etiology, symptoms, classification, diagnosis.

**Theme 36. Differential diagnostics and treatment of adrenal diseases**

Diseases of the adrenal glands. Tumors of the adrenal glands. Chronic adrenal cortex insufficiency. Etiology, symptoms, classification, diagnosis.

# **I. THE STRUCTURE AND CONTENT OF THE PRACTICAL PART OF THE COURSE**

## **Practical training**

### **9 semester**

#### **Section I. Respiratory diseases**

##### **Theme 1. Differential diagnostics of bronchial patency disorders**

1. Differential diagnosis of bronchial obstruction syndrome in diseases of the larynx, angioedema, trachea, lungs, mediastinal tumors, carcinoid syndrome, nodular periarteritis, hysteria.
2. Bronchial asthma. Diagnostics, classification. Treatment. Emergency therapy for asthmatic status.

##### **Theme 2. Differential diagnostics of bronchial obstruction. COPD.**

1. Differential diagnosis of bronchial patency disorders.
2. COPD. Diagnosis, classification.
3. Modern COPD treatment strategies.

##### **Theme 3. Differential diagnostics of focal lung diseases**

1. Differential diagnostics of focal lung diseases.
2. Differential diagnostics in lung cancer, pulmonary embolism, eosinophilic infiltration.
3. Pneumonias. Diagnostics. Classification. Clinical variant.
4. Treatment of pneumonia depending on the etiology.
5. Urgent therapy of severe course pneumonia.

##### **Theme 4. Differential diagnostics of disseminated lung lesions**

1. Differential diagnostics and treatment of diffuse lung lesions.
2. Idiopathic fibrosing alveolitis, Hamman-Rich syndrome.
3. Lung damage in diffuse diseases of connective tissue, systemic vasculitis, tumor and cardiogenic dissemination, drug pneumopathy (amiodarone, nitrofurans, etc.).

4. Tuberculosis, allergic alveolitis, sarcoidosis. Treatment of sarcoidosis.

### **Theme 5. Differential diagnostic signs of respiratory failure.**

1. Differential diagnostic signs of acute and chronic respiratory failure.
2. Types of respiratory failure. Diagnostics.
3. Differential diagnostics of pulmonary heart. Differential diagnosis of acute pulmonary heart.
4. Pulmonary embolism, diagnosis, and emergency treatment.
5. Emergency therapy of spontaneous pneumothorax, respiratory distress syndrome.
6. Pulmonary hypertension, diagnosis, treatment tactics, prognosis.
7. Chronic pulmonary heart. Diagnostics. Treatment.

### **8. Credit and test control in "Respiratory diseases"**

## **Section 2. Diseases of the blood circulatory system.**

### **Theme 6. Differential diagnostics and treatment tactics for heart pain**

1. Differential diagnosis and treatment tactics for pain in the heart.
2. Features of pain syndrome of coronary and non-coronary origin (including extracardial).
3. Differential diagnostic signs of recurrent chest pain in cardiac pathology, pathology of respiratory organs, musculoskeletal system, gastrointestinal tract, nervous system.
4. The ability of ECG and Echo-CG in the differentiation of pain (pharmacological and load tests).
5. Indications for the use of coronary angiography, atrial stimulation test.
6. Features of treatment of the pain depending on its origin.

### **Theme 7. Differential diagnostics and treatment tactics for the heart pain.**

#### **Acute coronary syndrome. Myocardial infarction**

1. Acute coronary syndrome (ACS).



2. Medical diagnostic tactics in acute coronary syndrome. Routing of ACS patients.
3. Diagnosis of myocardial infarction. Clinical variants.
4. Tactics of management of patients with myocardial infarction.
5. Revascularization methods.
6. Indications and contraindications to thrombolytic therapy and percutaneous interventions on coronary arteries in MI.
7. Complications of myocardial infarction. Diagnosis, differential diagnosis. Treatment algorithms.

### **Theme 8. Differential diagnostics and treatment of cardiac arrhythmias and conduction disorders**

1. Differential diagnostics and treatment of cardiac arrhythmias and conduction.
2. Diagnostics and treatment of extrasystolic arrhythmias.
3. Features of clinical manifestations and the importance of ECG method in the diagnosis of arrhythmias.
4. Modern classification of antiarrhythmic drugs.
5. Etiological factors, diagnosis and treatment of supraventricular tachycardia.
6. Features of management of patients with atrial fibrillation and flutter. The importance of anticoagulant therapy in the treatment and prevention of complications, methods.
7. Diagnosis and treatment of ventricular tachycardia.
8. Sudden arrhythmic death. Algorithm of emergency care.
9. Indications and contraindications to cardioversion and defibrillation, technique, accompanying therapy.

### **Theme 9. Differential diagnostics and treatment of conduction disorders**

1. Conduction disturbance. Diagnosis, differential diagnostics and treatment.
2. Clinical significance of "high" and "low" heart blockades.
3. Indications for an artificial pacemaker implantation (permanent and temporary).

4. Resuscitation measures for ventricular asystole.
5. Sinus node dysfunction, clinical significance.
6. QT elongation syndrome.
7. Ventricular preexcitation syndrome.

### **A semester**

#### **Theme 10. Differential diagnostics of acquired heart defects characterized by the appearance of systolic murmur**

1. Differential diagnosis of acquired heart defects characterized by the appearance of systolic murmur. The value of echocardiography.
2. Systolic murmur of "relative" mitral valve insufficiency (prolapse of the valves, impaired tone, rupture of papillary muscles, organic myocardial damage).
3. Noise on large vessels in hypertension of small and large circulation.
4. Drugs reducing pressure in the small and large circle of blood circulation.
5. Differential diagnostics of acquired heart defects characterized by the appearance of diastolic murmur.
6. Indications and contraindications for surgical treatment.

#### **Theme 11. Differential diagnostics and treatment of non-coronary myocardial lesions**

1. Primary cardiomyopathy: hypertrophic, restrictive, dilated. Differential diagnostics.
2. Diagnostic capabilities, the role of echocardiography.
3. Treatment. Indications for surgical treatment. Forecast.
4. Secondary cardiomyopathy.
5. Myocarditises. Clinical variants of the course. Laboratory and instrumental methods of research. Indications for biopsy of the myocardium. Differentiated therapy.

## **Theme 12. Differential diagnostics and treatment of infectious endocarditis and pericarditis**

1. Infective endocarditis. Classification, diagnosis, treatment. Indications for surgical treatment.
2. Pericarditises. Diagnosis, differential diagnostics. Classification. Treatment with etiological factor taken into account. Indications for surgical treatment. Forecast.

## **Theme 13. Differential diagnostics and treatment of hypertension**

1. Possibilities of differentiation of hypertension and symptomatic hypertension.
2. Hypertensive disease. Classification. Clinical variants.
3. Clinic, diagnosis and treatment of renal, endocrine, hemodynamic and drug-induced hypertension.
4. Syndrome of malignant arterial hypertension. The criteria for diagnostics. Indications for the use of invasive techniques (including aortography, renal puncture biopsy).
5. Treatment of hypertension.
6. Classification of antihypertensive agents. Mechanism of action. Emergency treatment of hypertensive crisis.
7. Features of treatment of hypertension in the elderly and senile age.

## **Theme 14. Diagnostics and treatment of acute and chronic heart failure.**

1. Diagnosis and treatment of acute heart failure. Acute left ventricular failure, differential diagnosis, treatment. Pulmonary edema, provocative factors. Pathogenesis. Characteristics of hemodynamic shifts.
2. Differential diagnosis of left ventricular failure with other causes of paroxysmal dyspnea. Outcomes. Forecast. Emergency treatment.
3. Features of treatment of pulmonary edema with backgrounded hypertension and hypotension as well as a combination of cardiac and bronchial asthma.
4. Acute right ventricular failure. Features of treatment.
5. Chronic heart failure, diagnosis, treatment, prognosis.

6. Chronic left, right ventricular and biventricular heart failure. Etiology, epidemiology, clinic, instrumental diagnostics, modern medical and non-drug therapy, prevention.

7. Acute decompensation of cardiac activity.

**8. Credit and test control in "Diseases of the circulatory system".**

### **Section 3. Kidney and urinary tract diseases.**

#### **Theme 15. Differential diagnostics and therapy of pathological urinary sediment.**

1. Differential diagnostics in pathological urinary sediment.
2. Urinary tract infection.
3. Diagnostic criteria of diseases manifested by tubulo-interstitial lesions.
4. Acute and chronic pyelonephritis. Symptoms. Diagnostics. Classification. Treatment.

#### **Theme 16. Differential diagnostics in edema syndrome**

1. Etiology. Clinical features of edema in lesions of heart, kidneys, liver, and endocrine disorders. Nephrotic syndrome. Renal amyloidosis. Edema in disorders of venous and lymphatic circulation. Idiopathic edema syndrome.
2. Nephrotic syndrome. Diagnosis, differential diagnostics.
3. Renal amyloidosis. Treatment taking into account the peculiarities of the pathogenesis of various types of edema.
4. Treatment of nephrotic syndrome. Features of therapy of the main disease with the addition of nephrotic syndrome. Possible complications of therapy. Nephrotic crisis.
5. Kidney damage in diabetes, systemic connective tissue diseases, systemic vasculitis, multiple myeloma.

#### **Theme 17. Differential diagnostics in renal failure**

1. Acute renal injury. Etiology, symptoms, classification, diagnostic criteria. Differential diagnosis. Treatment.
2. Chronic kidney disease. Etiology. Symptoms. Classification, diagnostics, treatment approaches.
3. Types and indications for replacement therapy.
4. **Credit and test control in "Kidney and urinary tract diseases".**

#### **Section 4. Joint disease. Systemic diseases of connective tissue.**

##### **Topic 18. Differential diagnosis and treatment tactics in case of joint damage**

1. Joint syndrome. Differential diagnostics of joint syndrome.
2. Rheumatoid arthritis. Early detection capabilities.
3. Classification. Diagnostic criterion. Basic and symptomatic therapy.
4. Diagnostic criteria for Bekhterev's disease, Reiter's syndrome, Sjogren's syndrome. Treatment.

#### **A semester**

##### **Theme 19. Differential diagnostics and treatment tactics of the joint diseases of different etiology (8 hours).**

1. Osteoarthritis. Diagnostics and treatment.
2. Gout arthropathy. Treatment of acute attack of gout. Treatment of chronic gout.
3. Paraneoplastic articular syndrome.
4. Systemic scleroderma.
5. Polymyositis, and dermatomyositis. Classification. Diagnostic criteria. Treatment.
6. Differential diagnostics and treatment of systemic diseases of connective tissue and systemic vasculitis. Systemic lupus erythematosus. Diagnostic criteria. Working classification of clinical variants. Clinical and laboratory characteristics of the process activity. Treatment of systemic lupus erythematosus.

**Theme 20. Differential diagnostics in systemic connective tissue diseases (8 hours).**

1. Nodular periarteritis, Wegener's granulomatosis. Diagnostics. Treatment.
2. Goodpasture's syndrome. Diagnostics, treatment.
3. Hemorrhagic vasculitis, Shenleyn-Schonlein purpura. Diagnostics, treatment.
4. The tactics of use of biological medications in rheumatic diseases.

**5. Credit and test control in section "Rheumatology"**

**Section 5. Diseases of the digestive system**

**Theme 21. Differential diagnostics of hepatomegaly and jaundice**

1. The main reasons for the jaundice occurrence (chronic hepatitis and liver cirrhosis, accumulation diseases, liver tumors, diseases of the hepatic blood vessels, diseases of the blood and blood-forming organs, heart diseases).
2. Chronic hepatitis. Diagnostics. The study of blood enzyme spectrum, radionuclide and ultrasonographic methods, radiopaque (including angiography), and morphological studies.
3. Treatment of chronic hepatitis.
4. Differential diagnosis of hepatomegaly and jaundice.
5. Cirrhosis. Classification. Diagnostic criteria. Treatment. Complications.
6. Diagnostic and therapeutic tactics of the therapist for bleeding from the gastrointestinal tract.

**Theme 22. Differential diagnostics and treatment tactics for jaundice**

1. Differential diagnostics of jaundice occurring with non-conjugated (adrenal and hepatic forms) and conjugated bilirubin (hepatic cell and obturation jaundice). Gallstone disease, chronic cholecystitis, biliary dyskinesia. The criteria for diagnostics. Treatment.
2. Possibilities of laboratory and instrumental methods of research (X-ray contrast, endoscopic and ultrasound methods).
3. Etiology, symptoms, emergency therapy of acute liver failure.

4. Differential diagnostics of pancreatic diseases. Acute pancreatitis. Diagnostics. Treatment. Emergency.
5. Diagnostics of chronic pancreatitis.
6. Differential diagnostics with pancreatic cancer.
7. Treatment of chronic pancreatitis.

### **Theme 23. Differential diagnostics and treatment tactics of the gastric dyspepsia syndrome**

1. Differential diagnostics in functional lesions of the stomach, acute and chronic exogenous dyspepsia and gastric dyspepsia.
2. Differential diagnostics and tactics of treatment of the syndrome of gastric dyspepsia. Chronic gastritis. Diagnostics. Methods of laboratory and instrumental studies and treatment.
3. Ulcer. Methods for diagnosing the Helicobacter pylori presence. Modern aspects of treatment of peptic ulcer.
4. Gastroesophageal reflux disease (GERD), "clinical masks", diagnosis, treatment.
5. Early diagnostics of gastric cancer.

### **Theme 24. Differential diagnostics and tactics of treatment of the intestinal dyspepsia syndrome**

1. Intestinal dyspepsia. Differential diagnostics and treatment tactics.
2. Syndromes of disturbed digestion and absorption.
3. Ulcerative colitis. Diagnostics, features of course. Medical tactics.
4. Crohn disease. Diagnostics, features of course. Medical tactics.
5. Differential diagnostics of diseases manifesting themselves as diarrhea (tumors of the gastrointestinal tract, nonspecific enterocolitis, mono- and disaccharide malabsorption, celiac disease, functional disorders, infectious diseases).

### **Theme 25. Differential diagnostics and tactics of treatment of the constipation syndrome (4 hours).**

1. Differential diagnosis of diseases associated with constipation (colon dilation, syndrome of overstretched colon, colon tumors, diverticulitis, disease of the distal colon, irritable bowel syndrome).
2. Diagnostics (radiopaque examination of the bowel, fecal, enzymes, endoscopy, biopsy of the intestinal mucosa).
- 3. Credit and test control in "Gastroenterology".**

### **Section 6. Diseases of the blood system.**

#### **Theme 26. Differential diagnostics and pathogenetic therapy in anaemic conditions**

1. Differential diagnostics and pathogenetic therapy in anaemic conditions. Classification of anemia. Diagnostic search program for anemic syndrome.
2. Indications for blood transfusion and parenteral therapy.
3. B-12 deficiency anemia. Etiology, mechanisms of development. Diagnostics. Possibilities of therapy. Maintenance therapy.
4. Hypo-aplastic anemia.
5. Partial red-cell aplasia.

#### **Theme 27. Differential diagnostics and pathogenetic therapy of anaemic conditions.**

1. Myelodysplastic syndrome. Diagnosis criteria and treatment programs.
2. Hemolytic anemia. Congenital and acquired forms. Diagnostic criterion.
3. Sickle-cell disease.
4. Thalassemia.

#### **Theme 28. Differential diagnostics and pathogenetic therapy in blood diseases**

1. Hemoblastosises. Differential diagnostics and treatment.
2. Diagnostic criteria and rational therapy of acute leukemia.
3. Principles of chemotherapy of acute leukemia. Complications of drug therapy of hemoblastosis.



4. Cytostatic disease (causes, clinic, treatment).

**Theme 29. Differential diagnostics and pathogenetic therapy in blood diseases**

1. Leukemoid reactions.
2. Lymphomas, diagnosis. Tactics of treatment.
3. Diagnosis and treatment of chronic myeloid leukemia.
4. Erythremia. Symptoms. Diagnostics and treatment
5. Sub-leukemic myelosis. Symptoms. Diagnostics and treatment
6. Paraproteinemic hemoblastosis. Myeloma. Symptoms. Diagnostics. Treatment.

**Theme 30. Differential diagnostics and pathogenetic therapy in lymphadenopathy and splenomegaly**

1. Diseases manifested by local and diffuse lymph node enlargement and splenomegaly.
2. Chronic lymphocytic leukemia. Diagnostic search program. The value of the morphological method of research. Indications for splenectomy.

**Theme 31. Differential diagnostics and treatment of diseases manifesting in the coagulation system disorders.**

1. Hemorrhagic diathesis. Classification
2. Examination programs for hemorrhagic diathesis.
3. Laboratory methods of blood coagulation research.
4. Treatment of hemorrhagic diathesis.
5. Coagulopathies. Classification, symptoms. Diagnostics. Treatment.

**Theme 32. Differential diagnostics and treatment of diseases manifesting in the coagulation system disorders**

1. Thrombocytopenic purpura. Symptoms. Diagnostics. Treatment.
2. Secondary thrombocytopenia, etiological factors. Diagnostics.
3. Antiphospholipid syndrome, diagnostic criteria.

### **Theme 33. Differential diagnostics and treatment of diseases manifesting in the coagulation system disorders**

1. Hemorrhagic and thrombophilic syndromes in the clinic of internal diseases. Symptoms. Diagnostics. Differential diagnostics. Treatment.
2. DIC. Symptoms. Diagnostics. Hemostatic and anticoagulant therapy.
3. **Credit and test control under "blood Diseases".**

### **Section 8. Endocrine diseases**

#### **Theme 34. Diabetes.**

1. Obesity, metabolic syndrome. Criteria. Clinical significance.
2. Diabetes mellitus type 2. Etiology, pathogenesis.
3. Classification, diagnosis. Clinical manifestations and treatment.
4. Insulin therapy in patients with type 2 diabetes.

#### **Theme 35. Complication of diabetes.**

1. Acute complications of diabetes. Symptoms. Diagnostics. Differential diagnosis of comatose condition. Emergency.
2. Late complications of diabetes. Micro- and macroangiopathy. Diabetic nephropathy, arthropathy, diabetic foot. Symptoms. Diagnostics.

#### **Theme 36. Differential diagnostics and treatment of thyroid diseases**

1. Thyrotoxicosis. Etiology, pathogenesis, symptoms. Diagnostics. Treatment.
2. Thyroiditis. Etiology, pathogenesis, symptoms, differential diagnosis, classification, treatment.
3. The syndrome of hypothyroidism. Etiology, pathogenesis, symptoms, treatment.

#### **Theme 37. Hypothalamic-pituitary diseases**

1. Hypothalamic-pituitary diseases. Etiology, pathogenesis. Classification, diagnostics. Treatment.

2. Hyperprolactinemia syndrome. Etiology, pathogenesis. Classification, diagnostics. Treatment.
3. Acromegaly. Etiology, pathogenesis. Classification, diagnostics. Treatment.
4. Cushing's syndrome. Etiology, pathogenesis. Classification, diagnosis. Treatment.

**Theme 38. Differential diagnostics and treatment of adrenal diseases**

1. Diseases of adrenal glands.
2. Tumors of adrenal glands.
3. Chronic deficiency of the adrenal cortex.
- 4. Test control section "Endocrinology".**

**III. TRAINING AND METHODOLOGICAL SUPPORT INDEPENDENT WORK OF STUDENTS**

Educational and methodological support of independent work of students in the discipline "Inpatient therapy, endocrinology" is presented in Appendix 1 and includes:

- the schedule of performing independent work in the discipline;
- characteristics of tasks for independent self-work of students and guidelines for their implementation;
- requirements for presentation and execution of the results of independent self-work;
- evaluation criteria performance of independent self-work.

**IV. MONITORING THE ACHIEVEMENT OF THE COURSE OBJECTIVES**

No.	Controlled modules / sections / topics of the discipline	Codes and stages of competence formation	Evaluation tools - name	
			intermediate certification/exam	intermediate certification

1	Section 1. Diseases of the respiratory system	PC-1 PC-5 PC-6 PC-7 PC-8 PC-11 PC-17 PC-19 PC-20 PC-21 PC-22	knows	Questioning Test control Presentation	Credit Question 35-50 Exam Question 35-50
			able to	Case study task	Case study task
			masters	Case study task	Case study task
2	Section 2. Diseases of the cardiovascular system	PC-1 PC-5 PC-6 PC-7 PC-8 PC-11 PC-17 PC-19 PC-20 PC-21 PC-22	knows	Questioning Test control Presentation	Credit Question 1-22 Exam Question 1-22
			able to	Case study task	Case study task
			masters	Case study task	Case study task
3	Section 3. Diseases of the digestive system	PC-1 PC-5 PC-6 PC-7 PC-8 PC-11 PC-17 PC-19 PC-20 PC-21 PC-22	knows	Questioning Test control Presentation	Credit Question 32-64 Exam Question 32-64
			able to	Case study task	Case study task
			masters	Case study task	Case study task
4	Section 4. Kidney and urinary tract diseases	PC-1 PC-5 PC-6 PC-7 PC-8 PC-11 PC-17 PC-19 PC-20 PC-21 PC-22	knows	Questioning Test control Presentation	Credit Question 65-70 Exam Question 65-70
			able to	Case study task	Case study task
			masters	Case study task	Case study task
5	Section 5. Joint disease. Systemic diseases of connective tissue.	PC-1 PC-5 PC-6 PC-7 PC-8 PC-11 PC-17	knows	Questioning Test control Presentation	Credit Question 22-34 Exam Question 22-34
			able to	Case study task	Case study task

		PC-19 PC-20 PC-21 PC-22	masters	Case study task	Case study task
6	Section 6. Endocrine disease	PC-1 PC-5 PC-6 PC-7 PC-8 PC-11 PC-17 PC-19 PC-20 PC-21 PC-22	knows	Questioning Test control Presentation	Credit Question 91-95 Exam Question 91-95
			able to	Case study task	Case study task
			masters	Case study task	Case study task
7	Section 7. Blood system diseases	PC-1 PC-5 PC-6 PC-7 PC-8 PC-11 PC-17 PC-19 PC-20 PC-21 PC-22	knows	Questioning Test control Presentation	Credit Question 71-90 Exam Question 71-90
			able to	Case study task	Case study task
			masters	Control work	Case study task

Control and methodological materials, as well as criteria and indicators necessary for the assessment of knowledge, skills and characterizing the stages of formation of competencies in the process of development of the educational program are presented in Appendix 2.

## **V. A LIST OF TEXTBOOKS AND METHODOLOGICAL SUPPORT OF THE DISCIPLINE**

### **Main literature**

1. Internal Medicine / Springer International Publishing Switzerland 2017  
<https://link.springer.com/book/10.1007/978-3-319-39747-4#authorsandaffiliationsbook>
2. Approach to Internal Medicine / Springer Science+Business Media, LLC 2011  
<https://link.springer.com/book/10.1007/978-1-4419-6505-9#authorsandaffiliationsbook>

3. General Medicine and Hospital Medicine: The Janus of Internal Medicine / Springer US 2017 <https://link.springer.com/article/10.1007/s11606-017-4182-z>
4. Textbook of Hyperbaric Medicine / Springer International Publishing AG 2017 <https://link.springer.com/book/10.1007/978-3-319-47140-2#authorsandaffiliationsbook>

### Additional literature

1. Clinical Pathways in Emergency Medicine / Springer India 2016 <https://link.springer.com/book/10.1007/978-81-322-2710-6#editorsandaffiliations>
- Family Medicine / Springer Science+Business Media LLC 2017 <https://link.springer.com/referencework/10.1007/978-1-4939-0779-3#editorsandaffiliations>

### Internet resources:

1. Scientific electronic library: <http://www.elibrary.ru>
2. Central scientific medical library: <http://www.scsml.rssi.ru>
3. Medical Internet Resources: <http://www.it2med.ru/mir.html>
4. Publishing house "Medicine": <http://www.medlit.ru>

## LIST OF INFORMATION TECHNOLOGIES AND SOFTWARE

The location of the computer equipment on which the software is installed, the number of jobs	List of licensed software
Multimedia auditorium Vladivostok Russian island, Ayaks 10, building 25.1, RM. M723 Area of 80.3 m2 (Room for independent work)	Windows Seven enterprise SP3x64 Operating System Microsoft Office Professional Plus 2010 office suite that includes software for working with various types of documents (texts, spreadsheets, databases, etc.); 7Zip 9.20 - free file archiver with a high degree of data compression; ABBYY FineReader 11 - a program for optical character recognition;

	Adobe Acrobat XI Pro 11.0.00 - software package for creating and viewing electronic publications in PDF; WinDjView 2.0.2 - a program for recognizing and viewing files with the same format DJV and DjVu.
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In order to provide special conditions for the education of persons with disabilities all buildings are equipped with ramps, elevators, lifts, specialized places equipped with toilet rooms, information and navigation support signs

## **VI. GUIDELINES FOR DEVELOPMENT OF THE DISCIPLINE**

The theoretical part of the discipline " Hospital therapy, endocrinology" is revealed in lectures, as the lecture is the main form of training, where the teacher gives the basic concepts of the discipline.

The sequence of presentation of the material in the lecture, aimed at the formation of student indicative basis for the subsequent assimilation of the material in the independent self-work.

Students learn to analyze and predict the development of medical science, reveal its scientific and social problems in practical classes during the discussions at the seminars, in the discussion of abstracts and in the classroom with the use of active learning methods.

Practical classes of the course are held in all sections of the curriculum. Practical work is aimed at the formation of student skills of independent research. In the course of practical training, the student performs a set of tasks that allow to consolidate the lecture material on the topic under study, to gain basic skills in the field of building diets for different groups of the population, taking into account their physiological characteristics. Active consolidation of theoretical knowledge contributes to the discussion of problematic aspects of the discipline in the form of seminars and classes with the use of active learning methods. At the same time there is a development of skills of independent research activities in the process of working with scientific literature, periodicals, the formation of the ability to defend their point of view, listen to others, answer questions, lead the discussion.

When writing essays, it is recommended to find their own literature for students. Essay reveals the content of the problem. Working on the essay helps to

deepen the understanding of individual issues of the course, to form and defend their point of view, to acquire and improve the skills of independent creative work, to conduct active cognitive work.

The main types of independent self-work of students – is a work with literary sources and guidelines on the history of medicine, bioethical problems, on-line resources for a deeper acquaintance with the individual problems of development of medicine and bioethics. The results of the work are made in the form of essays or reports with subsequent discussion. Topics of essays correspond to the main sections of the course.

To conduct ongoing monitoring and interim certification, oral interviews and control essays are carried out.

### **MATERIAL AND TECHNICAL MAINTENANCE OF DISCIPLINE**

Multimedia audience	<p>AIO PC HP ProOne 400 G1 AiO 19.5" Intel Core i3-4130T 4GB DDR3-1600 SODIMM (1x4GB)500GB; Screen projection Projecta Elpro Electrol, 300x173 cm; Multimedia projector, Mitsubishi FD630U, 4000 ANSI Lumen 1920 x 1080; Flush interface with automatic retracting cables TLS TAM 201 Stan; Avervision CP355AF; lavalier Microphone system UHF band Sennheiser EW 122 G3 composed of a wireless microphone and receiver; Codec of videoconferencing LifeSizeExpress 220 - Codeconly - Non-AES; Network camera Multipix MP-HD718; Two 47 " LCD panels, Full HD, LG M4716CCBA; audio commutation and sound amplification Subsystem; centralized uninterruptible power supply</p> <p>Accreditation and simulation center:          Medical couch (1 PC.)          Simulator for auscultation with interactive whiteboard (1 PC.)          Dummy for SLS and auscultation (1 PC .)          Sam II (1 PC.)          Blood pressure monitor (2 PCs)          Simulator for auscultation (1 PC .)</p> <p>Spirometer portable (1 PC.)          The ECG unit (1 PC.)          Spirograph (1 PC.)          Blood pressure monitor (2 PCs)          Set with point electrodes for EEG registration in the system 10-20 "MCScap-26" (1 PC.)          Medical couch (2 PCs.)</p> <p>Federal state institution "1477 Naval clinical hospital" of the Ministry of defence of the Russian Federation</p> <p>Non-state healthcare institution Branch hospital at the station of Vladivostok, Russian Railways</p>	<p>690922, Primorsky Krai, Vladivostok, island Russian, the Saperny Peninsula, the village of ayaks, 10, RM. M 422</p> <p>690922, Primorsky Krai, Vladivostok, island Russian, the Saperny Peninsula, the village of ayaks, 10, RM. M 508A</p> <p>690922, Primorsky Krai, Vladivostok, island Russian,</p>
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		<p>the Saperny Peninsula, the village of ayaks, 10, RM. M 510</p> <p>690005, Vladivostok, Ivanovskaya str., 4</p> <p>690003, Primorski Krai, Vladivostok Verkhneportovaya str., 25</p>
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MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION  
Federal state autonomous educational institution  
of higher education  
**« Far Eastern Federal University »**  
(FEFU)

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**SCHOOL OF BIOMEDICINE**

**TRAINING AND METHODOLOGICAL SUPPORT OF INDEPENDENT  
WORK OF STUDENTS**

**on discipline « Hospital therapy, endocrinology»  
Specialty 31.05.01 «General medicine»**

**Form of study: full time**

**Vladivostok  
2017**

## Schedule of independent work on the discipline

No.	Date / Deadline	Type of independent work	Estimated norms of time for execution (hour)	Form of control
<b>9 semester – 49 hours</b>				
1	During course study	Essay	14 hours	OA-3-Reports
2	During course study	Presentation on the topic of essay	14 hours	OA-3-Reports
3	During course study	Working with literature, lectures	14 hours	OA-3- lecture texts Abstracts of books, articles, monographs
3	During course study	Preparation for credit	7 hours	OA-1-Interview PW-1 - Test
<b>10 semester – 48 hours</b>				
1	During course study	Essay	14 hours	OA-3-Reports
2	During course study	Presentation on the topic of essay	14 hours	OA-3-Reports
3	During course study	Working with literature, lectures	14 hours	OA-3- lecture texts Abstracts of books, articles, monographs
3	During course study	Preparation for credit	7 hours	OA-1-Interview PW-1 - Test
<b>11 semester – 48 hours</b>				
1	During course study	Essay	14 hours	OA-3-Reports
2	During course study	Presentation on the topic of essay	14 hours	OA-3-Reports
3	During course study	Working with literature, lectures	14 hours	OA-3- lecture texts Abstracts of books, articles, monographs
3	During course study	Preparation for credit	7 hours	OA-1-Interview PW-1 - Test
<b>12 semester – 48 hours</b>				
1	During course study	Essay	14 hours	OA-3-Reports
2	During course study	Presentation on the topic of essay	14 hours	OA-3-Reports
3	During course study	Working with literature, lectures	14 hours	OA-3- lecture texts Abstracts of books, articles,

				monographs
3	During course study	Preparation for credit	7 hours	OA-1-Interview PW-1 - Test
		<b>Botal</b>	<b>193 hours</b>	

### **Approximate guidelines for writing and design of an essays**

Essay is a creative activity of the student reproducing in its structure the research activities to solve theoretical and applied problems in a particular branch of scientific knowledge. That is why the course certification work is an essential component of the educational process in higher education.

The essay is a model of scientific research, independent self-work in which a student solves a problem of a theoretical or practical nature, applying the scientific principles and methods of a given branch of scientific knowledge. The result of this scientific search may have not only subjective, but also objective scientific novelty, and therefore can be presented for discussion by the scientific community in the form of a scientific report or presentation at scientific-practical conferences, as well as in a form of research article.

Essay involves the acquisition of skills for building business cooperation, based on ethical standards of scientific activity. Purposefulness, initiative, disinterested cognitive interest, responsibility for the results of their actions, conscientiousness, competence - personality traits that characterize the subject of research activities corresponding to the ideals and norms of modern science.

The essay is an independent educational and research activity of the student. The teacher assists in a consultative manner and assesses the process and the results of the activity. Teacher provides an approximate topic of the essay work, specifies the problem and topic of research with a student or intern, helps to plan and organize research activities, assigns time and a minimum number of consultations.

The teacher receives the text of the essay for verification at least ten days before the defense.

Generally there is a certain structure of the essay, the main elements of which in order of their location are the following:

1. Title page.
2. Goal.
3. Table of Contents
4. List of abbreviations, symbols and terms (if necessary).
5. Introduction.
6. Main part.
7. Conclusion.
8. Reference list.
9. Appendixes.

The title page contains educational institution, graduating department, author, teacher or supervisor, research topic, place and year of the essay.

The title of the essay should be as short as possible and fully consistent with its content.

The table of contents (content) reflects the names of the structural parts of the essay and the pages on which they are located. The table of contents should be placed at the beginning of work on one page.

The presence of a detailed introduction - a mandatory requirement for the abstract. Despite the small volume of this structural part, its preparation causes considerable difficulties. However, this is a qualitatively executed introduction that is the key to understanding the entire work, which testifies to the professionalism of the author.

Thus, the introduction is a very crucial part of the essay. The introduction should start with a justification of the relevance of the chosen topic. As applied to the essay, the concept of "relevance" has one feature. From how the author of the essay can choose a topic and how correctly he understands and evaluates this topic from the point of view of modernity and social significance, characterizes his scientific maturity and professional preparedness.

In addition, in the introduction it is necessary to isolate the methodological basis of the essay, name the authors, whose works constituted the theoretical basis of the study. A review of the literature on the topic should show the author's thorough acquaintance with special literature, his ability to systematize sources, critically examine them, highlight the essential and determine the most important in the up-to-date state of knowledge of the topic.

The introduction reflects the importance and relevance of the chosen topic, defines the object and subject, purpose and objectives, and the chronological framework of the study.

The introduction ends with a statement of the general conclusions about the scientific and practical significance of the topic, the degree of its knowledge and sources, and the hypothesis being put forward.

The main part describes the essence of the problem, reveals the topic, determines the author's position, factual material is given as an argument and for display of further provisions. The author must demonstrate the ability to consistently present the material while analyzing it simultaneously. Preference is given to the main facts, rather than small details.

The essay ends with the final part called "conclusion". Like any conclusion, this part of the essay serves as a conclusion due to the logic of the study which is a form of synthesis accumulated in the main part of scientific information. This synthesis is a consistent, coherent presentation of the results obtained and their relation to a common goal and specific tasks set and formulated in the introduction. At this place there is a so-called "output" knowledge, which is new in relation to the original knowledge. The conclusion may include suggestions of practical matter, thereby increasing the value of theoretical materials.

So, the conclusion of the essay should contain: a) presents the conclusions of the study; b) theoretical and practical significance, novelty of the essay; c) indicated the possibility of applying the results of the study.

After conclusion it is acceptable to place the reference list of the literature used throughout. This list is one of the essential parts of the essay and reflects the independent creative work of the author of the essay.

The list of sources used is placed at the end of the work. It is made either in alphabetical order (by the name of the author or the name of the book), or in the order in which the references appear in the text of the prepared work. In all cases, the full title of the work, the names of the authors or the editor of publication are indicated if the writing team involved a group of authors, data on the number of volumes, the name of the city and publisher in which the work was published, year of publication, number of pages.

### **Methodical recommendations for the presentation preparation**

For preparation of presentation it is recommended to use: PowerPoint, MS Word, Acrobat Reader, LaTeX-bev package. The simplest program for creation of presentations is Microsoft PowerPoint. To prepare a presentation, it is necessary to process the information collected while writing the essay.

The sequence of preparation of the presentation:

1. Clearly state the purpose of the presentation.
2. Determine what the presentation format will be: live presentation (then how long it will be) or e-mail (what will be the context of the presentation).
3. Select the entire content of the presentation and build a logical chain of presentation.
4. Identify key points in the content of the text and highlight them.
5. Determine the types of visualization (pictures) to display them on slides in accordance with the logic, purpose and specificity of the material.
6. Choose the design and format the slides (the number of pictures and text, their location, color and size).
7. Check the visual perception of the presentation.

The types of visualization include illustrations, images, charts, tables. The illustration is a representation of a real-life visual. The images - as opposed to

illustrations - are metaphor. Their purpose is to cause an emotion and create an attitude towards it, to influence the audience. With the help of well-designed and presented images, information can remain permanently in a person's memory. Chart is visualization of quantitative and qualitative relationships. They are used for convincing data demonstration, for spatial thinking in addition to the logical one. Table is a specific, visual and accurate data display. Its main purpose is to structure information, which sometimes facilitates the perception of data by the audience.

*Practical hints on preparing a presentation*

- printed text + slides + handouts are prepared separately;
- slides -visual presentation of information that should contain a minimum of text and maximum of images that bring a meaning, to look visually and simply;
- textual content of the presentation - oral speech or reading, which should include arguments, facts, evidence and emotions;
- recommended number of slides 17-22;
- mandatory information for the presentation: the subject, surname and initials of the speaker; message plan; brief conclusions from all that has been said; list of sources used;
- handouts should be provided with the same depth and coverage as the live performance: people trust more what they can carry with them than disappear images, words and slides are forgotten, and handouts remain a constant tangible reminder; handouts are important to distribute at the end of the presentation; Handouts should be different from slides, should be more informative.

**Evaluation criteria for essays.**

The stated understanding of the essay as a holistic copyright text defines the criteria for its evaluation: the novelty of the text; the validity of the source choice;



the degree of disclosure of the issue essence; compliance with the requirements for registration.

**Essay novelty:** a) the relevance of the research topic; b) novelty and independence in the problem formulation, formulation of a new aspect of the well-known problem in the establishment of new connections (interdisciplinary, intra-subject, integration); c) ability to work with research and critical literature, systematize and structure research material; d) the appearance of the author's position, independence of assessments and judgments; d) stylistic unity of the text, the unity of genre features.

**The degree of disclosure of the question essence:** a) the plan compliance with an essay; b) compliance with the content of topic and plan of an essay; c) completeness and depth of knowledge on the topic; d) the validity of the methods and techniques of work with the material; e) ability to generalize, draw conclusions, compare different points of view on one issue (problem).

**The validity of the source choice:** a) evaluation of the used literature: whether the most famous works on the research topic are involved (including recent journal publications, recent statistics, reports, references, etc.)

**Compliance with the requirements for registration:** a) How true are the references to the used literature, quotes; b) assessment of literacy and presentation culture (including spelling, punctuation, stylistic culture), knowledge of terminology; c) compliance with the requirements for the volume of essay.

**The reviewer should clearly state** the remarks and questions, preferably with references to the work (possible on specific pages of the work), to research and evidence that the author did not take into account.

**The reviewer may also indicate:** whether student has addressed the topic earlier (essays, written works, creative works, olympic works, etc.) and whether there are any preliminary results; how the graduate has conducted the work (plan, intermediate stages, consultation, revision and processing of the written or lack of a clear plan, rejection of the head recommendations).

**The student submits** an essay for review no later than a week before the defense. The reviewer is the teacher. Experience shows that it is advisable to acquaint the student with the review a few days before the defense. Opponents are appointed by the teacher from the students. For an oral presentation a student needs about 10–20 minutes (approximately as long as he answers with tasks for the exam).

**Grade 5** is given if all the requirements for writing and defending an essay are fulfilled: the problem is indicated and its relevance is justified, a brief analysis of different points of view on the problem under consideration is made and one's own position is logically presented, conclusions are formulated, the topic is fully disclosed, the volume is met, external requirements are met design, given the correct answers to additional questions.

**Grade 4** is given if the basic requirements for the essay and its defense are met, but there are some shortcomings. In particular, there are inaccuracies in the presentation of the material; or there is no logical sequence in the judgments; not sufficient volume of the essay; there are omissions in the design; additional questions for the defense are accompanied with incomplete answers.

**Grade 3** is given if there are significant deviations from the requirements for referencing. In particular: the topic is covered only partially; factual errors in the content of an essay or when answering additional questions; there is no output c.

**Grade 2** - the topic of an essay is not disclosed, a significant misunderstanding of the problem is found.

**Grade 1** - student's essay is not presented.

**Topics of essay and presentations  
on discipline "Inpatient therapy, endocrinology" for 6-year students  
majoring in "General medicine".**

Sample topics of essays

1. National guidelines for diagnostics and treatment of acute coronary syndrome
2. National guidelines for diagnostics and treatment of dyslipidemia
3. National guidelines for diagnostics and treatment of chronic heart failure
4. National guidelines for diagnostics and treatment of acute cardiac decompensation
5. Thrombophilic conditions in diseases of internal organs
6. Classification of COPD phenotypes
7. National guidelines for diagnostics and treatment of chronic kidney disease
8. National guidelines for diagnostics and treatment of acute kidney injury
9. National guidelines for diagnostics and treatment of rheumatoid arthritis
10. National guidelines for diagnostics and treatment of diabetes
11. National guidelines for diagnostics and treatment of pneumonia
12. Treatment of gastric and duodenal ulcers
13. Diagnosis and treatment of gout
14. National guidelines for diagnostics and treatment of hypertension
15. National guidelines for diagnostics and treatment of diabetes
16. Differential diagnostics of chest pain
17. Diagnosis and treatment of myocardial infarction.
18. "Double" antiplatelet therapy. Benefits and risks.
19. The possibilities of laboratory monitoring of antiplatelet therapy.
20. Bone marrow transplantation in patients with acute leukemia. Indications and possibilities.
21. Spleen and blood diseases.
22. Prospects of antithrombotic therapy.
23. Thrombophilia, the role of genetic mutations in the therapeutic clinic.

24. Venous thrombosis and pulmonary embolism in medical patients: how to detect and prevent?
25. Anemia and chronic heart failure. A new target for treatment?
26. Acute coronary syndrome. Invasive and conservative treatments.
27. Thrombolytic therapy for acute myocardial infarction. Benefits and risks.
28. The patient after IM: how to prevent repeating disasters?
29. Clinical examination of patients with postinfarction atherosclerosis
30. Gender differences in cardiovascular disease.
31. Fibrillation and atrial flutter, the difficulties of supervision.
32. Wolf-Parkinson-White Syndrome. Clinical significance, features of relief of paroxysmal rhythm disturbances.
33. Problems of treatment of patients with extrasystolic arrhythmia.
34. The possibility of diagnostics of a sinus node weakness syndrome.
35. New inotropic agents in the treatment of chronic heart failure.
36. Determination of indications for pacing. Methods and practice.
37. Possibilities of surgical treatment of arrhythmias.
21. Metabolic syndrome as an interdisciplinary problem.
38. Cardiovascular aspects of antiphospholipid syndrome.
39. Tactics of management of pregnant women with heart defects in outpatient practice.
40. Features of management of pregnant women with arrhythmias.
41. Arterial hypertension in pregnant women. The difficulties of diagnostics, peculiarities of treatment.
42. Hormone replacement therapy and cardiovascular disease in women.
43. The role of ACE inhibitors in improving prognosis in patients with cardiovascular diseases.
44. Corticosteroids and anticoagulants in the treatment of patients with severe pneumonia and sepsis.
45. Evolution of COPD concepts.
46. The possibility of a combination of asthma and COPD.

47. Diagnosis and treatment of lung diseases in pregnant women.
48. Safety of modern research methods in pregnant women, determination of indications.
49. Obstructive sleep apnea syndrome, the possibility of diagnosis and treatment.
50. GERD: modern ideas. Diagnostics. Therapeutic approaches.
51. Features of treatment of intractable ulcers of the stomach and duodenum.
52. Cholestasis and cross syndrome. The difficulties of diagnostics.
53. Symptoms, diagnosis of abdominal aortic aneurysm. When to suspect?
54. Iatrogenic lesions of the liver and kidneys in therapeutic practice.
55. Proteinuria as a factor of progression of kidney damage. Possibilities of nephroprotection.
56. Extracorporeal methods in the treatment of chronic renal failure.
57. Pain: a practical approach to treatment and drug selection.
58. Diagnostics and treatment of complications of steroid therapy in medical patients.
59. The problem of multimorbidity in gerontological patients.
60. New biological agents in the treatment of rheumatoid arthritis.
61. Arthritis and diseases of the gastrointestinal tract.
62. Infectious arthritis in the practice of the internist.
63. The ability to diagnose systemic diseases of connective tissue.
64. Diagnostics of diabetes in the practice of the district therapist.



MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION  
Federal state autonomous educational institution  
of higher education  
**« Far Eastern Federal University »**  
(FEFU)

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**SCHOOL OF BIOMEDICINE**

**ASSESSMENT FUND**  
**on discipline « Hospital therapy, endocrinology»**  
**Specialty 31.05.01 «General medicine»**  
**Form of study: full time**

**Vladivostok**  
**2017**

## Passport of assessment fund

*Completed in accordance with the Regulations on the Funds of Evaluation Assets of Educational Programs of Higher Education - Bachelor's Programs, Specialties, FEFU Magistrates, approved by order of the Rector No. 12-13-850 of May 12, 2015.*

### Scale of assessment of the level of competence formation

Code and formulation of competence	Stages of competence formation		criteria	indicators	points
PC-1 Ability and readiness to implement a set of measures aimed at the preservation and promotion of health, including the formation of a healthy lifestyle, prevention of the occurrence and (or) spread of diseases, their early diagnosis, identification of the causes of their occurrence and development, as well as aimed at eliminating the harmful effects on human health factors of its habitat	Knows	information sources of reference and normative character, the main normative documents concerning the organization and control of sanitary and hygienic condition of various institutions; environmental factors affecting human health and livelihoods; mechanisms of influence of various factors on the human body; modern requirements to sanitary-hygienic and anti-epidemic regime of various medical institutions;	Knows the basic regulations. Knows the effect of major environmental factors on the human body.	Knowledge of the regulatory framework.	65-71
	Able to	independently work with educational, scientific, regulatory and reference literature, to search and turn the information into a tool for solving professional problems; to determine and evaluate the microclimate parameters of production facilities of various medical institutions; carry out instrumental and calculated determination of natural and artificial illumination of premises; evaluate the effectiveness of natural and artificial ventilation; to assess the quality of drinking water; calculate the number of bactericidal irradiators in the disinfection of air and surfaces of premises; assess the energy and nutritional value of the daily diet of a person taking into account the coefficient of physical activity.	Skills evaluation of the effects of environmental factors	Assessment of environmental factors on the human body.	71-84
	Masters	methods of planning and development of the biomedical experiment scheme;	Ability to develop a plan of preventive	Owns the methodology of the	85-100

		methods of assessment of health and physical development of the population, evaluation of the functional state of the central nervous system and mental performance; methods of carrying out specific preventive measures to survey the conditions of external factors and the working environment; methods of assessment of health and physical development of the population, evaluation of the functional state of the Central nervous system and mental performance;	measures to avoid negative impact of environmental factors on the human body	preventive measures planning	
PC-5 commitment to collection and analysis of patient's complaints, data of anamnesis, physical examination, laboratory, instrumental, post-mortem and other studies in order to determine the state or of ascertaining the presence or absence of the disease	Knows	Methods of collecting complaints, anamnesis, examination of patients, indications for the appointment of additional methods of examination and examinations of specialists in internal diseases	Methods of collecting complaints, anamnesis, examination of patients, indications for the appointment of additional methods of examination	Knowledge of the algorithm of recognition of the condition or establishment of the fact of presence or absence of the disease	65-71
	Able to	Correctly draw up the identified changes in a disease history, to assess the severity of the condition, to formulate a diagnosis, to make a plan of examination.	To implement the technology of medical records management	establish the presence or absence of the disease	71-84
	Masters	Skills of general clinical examination, writing medical history, diagnosis formulation	Methods of examination of the patient	Skills to recognize the condition or establish the presence or absence of the disease	85-100
PC- 6 ability to determine the patient's main pathological conditions, symptoms, disease syndromes, nosological forms in accordance with the International statistical classification of diseases and health-related problems, X revision	Knows	Clinical picture, classification, features of the course diagnostic methods and criteria for the diagnosis of the studied internal diseases, the formulation in accordance with the ICD codes	the basic pathological condition of the symptoms, syndromes, diseases, nosological forms in accordance with the ICD, X revision	Diagnostics methods and criteria for the diagnosis of the studied internal diseases, the formulation in accordance with the ICD codes 10	65-71
	Able to	To determine the leading syndromes, to assess the severity of the underlying disease or a combination of diseases with mutual aggravation, to determine the ICD code in accordance with clinical diagnosis	To determine the leading syndromes, to assess the severity of the underlying disease, to determine the ICD code in accordance with the clinical	Ability to formulate a diagnosis	71-84



			diagnosis		
	Masters	Criteria for assessing the patient's condition on the basis of clinical diagnostic methods	Skills criteria for assessing the patient's condition on the basis of clinical diagnostic methods	Methods of clinical diagnosis	85-100
PC-7 Readiness to carry out expert examination of temporary disability	Knows	The main orders for evaluation of temporary disability	Methods of examination of temporary and permanent disability	Knowledge of the regulatory framework	65-71
	Able to	To formulate criteria for temporary and permanent disability depending on the work performed	Determine the criteria for temporary and permanent disability, depending on the work performed in a particular patient	Criteria for temporary and permanent disability, depending on the work performed in a particular patient	71-84
	Masters	Rules of examination of temporary disability	Methods of evaluation of temporary and permanent disability	Skills of evaluation of temporary and permanent disability	85-100
PC-8 Ability to determine the tactics of management of patients with different nosological forms	Knows	Criteria for diagnostics of main therapeutic diseases studied and rules for routing patients with acute conditions and complicated course	Diagnostic criteria major study of therapeutic diseases	The patient routing rules	65-71
	Able to	To assess the patient's condition for making tactical decisions on planned and emergency care, to identify and carry out priority diagnostic and therapeutic measures	Assess the patient's condition to make tactical decisions on planned and emergency care	to make tactical decisions on planned and urgent care, to allocate and carry out priority diagnostic and therapeutic measures	71-84
	Masters	The main therapeutic and assessment skills and the choice of the medical care level	skills to assess the state and choose the level of medical care	Criteria for assessment of the state and selection of the level of medical care	85-100

PC-11 Readiness to participate in the provision of emergency medical care in conditions that require urgent medical intervention	Knows	Algorithms of emergency care in conditions requiring urgent intervention in the clinic of internal diseases	Algorithms of emergency medical care in diseases of internal organs	Criteria for emergency medical care	65-71
	Able to	Assess the severity of the patient's condition, make quick decisions	Assess the severity of the patient's condition, make quick decisions	Criteria for assessing the severity of the patient's condition	71-84
	Masters	Skills to provide urgent care in life-threatening conditions in the clinic of internal diseases	Methods for assessing the severity of the patient's condition	criteria for assessing the severity of the patient's condition	85-100
PC-17 Ability and willingness to identify the main symptoms and syndromes of diseases, to analyze the functioning patterns of various organs and systems in various diseases, using the algorithm of diagnosis, to perform basic diagnostic measures to identify negative and life-threatening conditions	Knows	etiology, pathogenesis and prevention of the most common diseases; modern classification of diseases; clinical picture, features of the course and possible complications of the most common diseases occurring in a typical form in different age groups; criteria for the diagnosis of various diseases.	diagnosis algorithm, perform basic diagnostic measures to identify negative and life-threatening conditions	Criteria for the diagnosis	65-71
	Able to	to make a preliminary diagnosis - to synthesize information about the patient in order to determine the pathology and the causes of it; to outline the scope of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result; to formulate a clinical diagnosis.	to make a preliminary and final clinical diagnosis	Criteria for preliminary and final complete clinical diagnosis	71-84
	Masters	the algorithm of preliminary diagnosis followed by the direction of the patient to the appropriate medical specialist; algorithm of detailed clinical diagnosis.	algorithm of preliminary and detailed clinical diagnosis	Criteria for diagnosis, skills to perform basic diagnostic measures	85-100
PC-19 Ability and willingness to perform basic therapeutic measures in the most common diseases and conditions in adults and adolescents, capable of causing severe complications and (or) death: diseases of the endocrine, cardiovascular, respiratory,	Knows	methods of treatment and indications for their use: the mechanism of therapeutic action of physical therapy and physiotherapy, indications and contraindications to their appointment, especially their conduct; clinical and pharmacological characteristics of the main groups of drugs and the rational choice of specific drugs in the treatment of major pathological syndromes of diseases and emergency conditions in patients, including the basics of anti-doping	Algorithms of emergency medical care in the treatment of major pathological syndromes of diseases and emergency conditions in diseases of internal organs	Criteria for provision of planned and urgent medical care	65-71

digestive, genitourinary systems and blood, in a timely manner to identify life-threatening disorders (acute blood loss, respiratory disorders)		legislation.			
	Able to	to develop a plan of therapeutic actions, taking into account the course of the disease and its treatment; to formulate indications for the chosen method of treatment, taking into account the etiotropic and pathogenetic agents, to justify pharmacotherapy for the main pathological syndromes and emergency conditions, to determine the route of administration, mode and dose of drugs, to assess the effectiveness and safety of the treatment; to use different methods of drug administration; provide first aid in case of emergency conditions, first aid to victims of lesions in emergency situations (heart failure, coma, shock), use the methods of their immediate elimination, to carry out anti-shock measures (partially implemented).	Assess the severity of the patient's condition, make quick decisions	Criteria for assessing the severity of the patient's condition	71-84
	Masters	the main medical diagnostic and therapeutic measures to provide first aid in emergency and life-threatening conditions.	Methods for assessing the severity of the patient's condition	criteria for assessing the severity of the patient's condition	85-100
PC-20 Readiness to participate in the provision of emergency medical care in conditions that require urgent medical intervention	Knows	Basic principles of evidence-based medicine and forms of presentation and analysis of medical information	forms of presentation, analysis of medical information	principles of evidence-based medicine	65-71
	Able to	Interpret the results of the available information, allocate qualitative information, and use clinical recommendations	To interpret the results of the information available	to distinguish high-quality information, use of clinical guidelines	71-84
	Masters	Access to evidence-based research, quality medical information, public speaking skills	Access to evidence-based research	Methods of search of high-quality medical information, public speaking skills	85-100
PC-21 Ability to participate in research studies	Knows	Principles of scientific research and data analysis	Principles of scientific research	Data analysis methods	65-71
	Able to	Use available sources of information	Use available sources of	Use available sources of	71-84

		in a particular scientific field	information in a particular scientific field	information in a particular scientific field	
	Masters	Skills of interpretation, elementary statistical processing of research results	Skills of interpretation, elementary statistical evaluation of research results	Skills of interpretation, elementary statistical evaluation of research results	85-100
PC-22 Readiness to participate in implementation of the new methods and techniques based on evidence-based research purposed for protection of public health	Knows	Principles of implementation of new techniques in practice	Principles of implementation of new techniques in practice	Principles of implementation of new techniques in practice	65-71
	Able to	Assess the possibility of introducing new methods into the diagnostics and treatment of patients	Assess the possibility of introducing new methods in the diagnosis and treatment of patients	Assessment of the possibility of introducing new methods in the diagnosis and treatment of patients	71-84
	Masters	Skills to evaluate new methods of diagnostics and treatment	Skills to evaluate new methods of diagnosis and treatment	Skills to evaluate new methods of diagnosis and treatment	85-100

\* **Criterion** is a sign by which to judge the difference between the state of one phenomenon from another. The criterion is broader than the indicator, which is an integral element of the criterion and characterizes its content. The criterion expresses the most common feature by which the evaluation, comparison of real phenomena, qualities, processes. And the degree of manifestation, quality formation, certainty of criteria is expressed in specific indicators. The criterion is a tool, a necessary assessment tool, but the assessment itself is not. The functional role of the criterion is in determining or not determining the essential features of the object, phenomenon, quality, process, etc.

**The indicator** acts in relation to the criterion as a particular to the General.

The indicator does not include a universal dimension. It reflects the individual properties and characteristics of the cognizable object and serves as a means of accumulation of quantitative and qualitative data for criteria generalization.

The main characteristics of the concept of "indicator" are the specificity and diagnostic, which implies its availability for observation, accounting and recording, and also allows us to consider the indicator as a more specific in relation to the criterion, and hence the meter of the latter.

### **Assessment tools for current and intermediate certification**

**Control tests** are designed for students studying the course " Hospital therapy, endocrinology". Tests are necessary for both the control of knowledge in the process of the current interim certification, and for the assessment of knowledge, the result of which can be set off.

When working with tests, the student is asked to choose one answer out of three or four proposed. At the same time, the tests vary in their complexity. There

are tests among the proposed ones containing several options for correct answers. The student must provide all correct answers.

Tests are designed for both individual and collective solutions. They can be used in the process and classroom, and independent self-work. The selection of tests necessary for the control of knowledge in the process of interim certification is made by each teacher individually.

Results of performance of the test tasks are evaluated by a teacher using a five-grade scale for certification or on system "credit" - "no credit". Grade "excellent" is given if the number of correct answers is more than 90% of the tests offered by the teacher. Grade "good" is given if the number of correct answers is more than 70% of the tests. Grade "satisfactory" is given if the number of correct answers is more than 50% of the tests offered to the student.

## **APPROXIMATE TESTS ON HOSPITAL THERAPY**

**1. LIKELY CAUSE OF ANEMIA IN MEN 55 YEARS WHO HAD UNDERGONE A RESECTION OF THE STOMACH (IN A SMEAR OF BLOOD MACROCYTOSIS) 7 YEARS AGO IS THE DEFICIT OF**

- A) cyanocobalamin**
- B) iron
- C) erythropoietin
- D) pyridoxine

**2. THE MAIN GOAL OF ANTI-H. PYLORI THERAPY IN PEPTIC ULCER DISEASE IS**

- A) reduction in relapse rates**
- B) reducing the severity of pain syndrome
- C) the acceleration of the cicatrization of the ulcer
- D) reducing the risk of ulcer perforation

**3. IN THE ABSENCE VITAMIN B12 CONSUMPTION WITH FOOD THE CLINICAL MANIFESTATIONS OF VITAMIN B12 DEFICIENCY DEVELOP IN**

- A) **4-5 years**
- B) 3-4 months
- C) 5-8 months
- D) 9-12 months

**4. IF WILSON'S DISEASE AFFECTS**

- A) **liver and brain**
- B) heart and kidneys
- C) kidneys and lungs
- D) liver and kidneys

**5. THE MOST COMMON CAUSE OF BACTERIAL COMPLICATIONS OF COPD IS**

- A) **Haemophilus influenzae**
- B) pneumococcus
- C) Staphylococcus
- D) Mycoplasma

**6. FOR DIAGNOSTICS OF LIVER CIRRHOSIS THE CRUCIAL IS**

- A) **elastometry**
- B) ultrasound examination
- C) x-ray
- D) barium enema

**7. THE CHARACTERISTIC COMPLICATION OF LIVER CIRRHOSIS IS**

- A) **liver failure**
- B) hemoptysis
- C) violation of atrioventricular conduction
- D) hypertensive crisis

**8. THE PRESENCE OF CHOLESTASIS INDICATES**

- A) **increased alkaline phosphatase, bilirubin, cholesterol**
- B) increase of aspartic and alanine transaminases, glucose
- C) reduction of prothrombin, hemoglobin, fibrinogen
- D) increase in amylase, total protein, creatinine

**9. THE MAIN CLINICAL SYMPTOM OF CHOLESTASIS IS**

- A) **itching**
- B) splenomegaly
- C) ascites
- D) hepatomegaly

**10. WITH IRRITABLE BOWEL SYNDROME IS ASSOCIATED WITH**

- A) **functional disorders**
- B) organic changes
- C) hereditary disorders
- D) anomalies of intestinal

**11. FACTOR, PREDISPOSING TO THE FORMATION OF POST-INFECTIOUS IRRITABLE BOWEL SYNDROME, IS**

- A) **transferred intestinal infection**
- B) milk
- C) consumption of fiber-rich products
- D) dyslipidemia

**12. THE DIAGNOSIS OF IRRITABLE BOWEL SYNDROME EXCLUDES**

- A) **presence of blood in the feces**
- B) chairs more often than 3 times a week
- C) feeling of incomplete bowel emptying
- D) chairs at least 3 times a week

**13. THE LEVEL OF BLOOD PRESSURE CHARACTERISTIC OF I DEGREE HYPERTENSION IS \_\_\_\_\_ MM HG.**

- A) **150/95**
- B) 160/100
- C) 150/100
- D) 160/95

**14. THE LEVEL OF BLOOD PRESSURE CHARACTERISTIC OF II DEGREE HYPERTENSION IS \_\_\_\_\_ MM HG.**

- A) **170/100**
- B) 180/90
- C) 180/95
- D) 160/110

**15. THE LEVEL OF BLOOD PRESSURE CHARACTERISTIC OF III DEGREE HYPERTENSION IS \_\_\_\_\_ MM HG.**

- A) **170/115**
- B) 175/105
- C) 165/95
- D) 170/100

**16. BLOOD PRESSURE IS REGULATED \_\_\_\_\_FACTORS**

- A) **tissue**
- B) psychosocial
- C) genetic
- D) intoxication

**17. HUMORAL FACTOR DETERMINING THE TONE OF THE VASCULAR WALL IS**

- A) **endothelin**
- B) adrenaline
- C) adrenocorticotropin
- D) nitric oxide

**18. THE MAIN CAUSE OF INCREASED DIASTOLIC BLOOD PRESSURE IS**

- A) **increased tone of the arterioles**
- B) increased cardiac output
- C) decreased elasticity of the aortic wall
- D) increasing the elasticity of the aortic wall

**19. ARTERIAL HYPERTENSION IS THE MOST TYPICAL OF**

- A) **increased cardiac output**
- B) reduction of cardiac output
- C) reduction of total peripheral resistance



D) increase inC venous pressure

**20. THE LEVEL OF TRIGLYCERIDES WHICH IS A RISK FACTOR OF CARDIOVASCULAR DISEASE, IS \_\_\_\_\_ MMOL/L**

A) 1.7

B) 1.2

C) 1.0

D) 0.7

**21. THE NUMBER OF THE BLOOD PRESSURE MEASUREMENT DURING ONE VISIT TO A DOCTOR IS**

A) 2

B) 1

C) 3

D) 4

**22. BEFORE MEASUREMENT OF BLOOD PRESSURE IT IS RECOMMENDED TO AVOID SMOKING FOR \_\_\_\_\_ H.**

A) 0.5

B) 2.5

C) 1.5

D) 2

**23. A SIGN OF TARGET ORGANS DAMAGE DUE TO HYPERTENSION IS THE MASS INDEX OF THE LEFT VENTRICULAR MYOCARDIUM, WHICH IS \_\_\_\_\_ G/M<sup>2</sup>**

A) 125

B) 115

C) 110

D) 105

**24. ASSOCIATING CLINICAL CONDITION FOR HYPERTENSION IS**

A) dissecting aortic aneurysm

B) aortic stenosis

C) aortic insufficiency

D) tricuspid insufficiency

**25. THE THRESHOLD LEVEL OF THE OFFICE BLOOD PRESSURE FOR DIAGNOSIS OF HYPERTENSION IS \_\_\_\_\_ MM HG.**

- A) **140/90**
- B) 130/80
- C) 135/85
- D) 145/90

**26. ADDITIONAL METHOD OF EXAMINATION OF PATIENTS WITH ARTERIAL HYPERTENSION ESTABLISHING THE PRESENCE AND SEVERITY OF LESIONS OF THE TARGET ORGANS IS**

- A) **fundus assessment**
- B) daily urinary excretion of cortisol
- C) the content of aldosterone in the blood
- D) the daily excretion of adrenaline

**27. SIGN OF HYPERTENSION ON THE ELECTROCARDIOGRAM IS**

- A) **RV5,V6>RV4**
- B) RV4>RV5, V6
- C) S1>R1
- D) RIII>RI

**28. PATIENTS WITH ARTERIAL HYPERTENSION WITH HIGH AND VERY HIGH RISK ARE CONSIDERED IN THE PRESENCE OF \_\_\_\_\_ SYNDROME**

- A) **metabolic**
- B) asteno-vegetative
- C) dyspeptic
- D) postcholecystectomy

**29. HYPERTENSION IN PHEOCHROMOCYTOMA IS CAUSED**

- A) **increased secretion of catecholamines**
- B) increased renin secretion
- C) excessive secretion of mineralocorticoids
- D) increased formation of angiotensin

**30. CAUSE OF HYPERTENSION IN LESIONS OF THE RENAL PARENCHYMA IS**

- A) **activation of the renin-angiotensin system**
- B) excessive secretion of mineralocorticoids
- C) increased secretion of catecholamines
- D) increased synthesis of angiotensin

**31. MOST SPECIFIC METHOD IN THE DIFFERENTIAL DIAGNOSIS OF HYPERTENSION WITH CUSHING'S SYNDROME IS A DEFINITION**

- A) **17-oxycorticosteroid**
- B) thyrotropin
- C) renin
- D) creatinine

**32. SUDDEN HEADACHE, SUDDEN INCREASE OF BLOOD PRESSURE, TACHYCARDIA, POLYURIA AFTER ATTACK CHARACTERISTIC OF**

- A) **pheochromocytomas**
- B) Con's syndrome
- C) Cushing's syndrome
- D) climacteric syndrome

**54. WHAT CHANGES IN THE LEVELS OF THYROID AND THYROTROPIC HORMONES ARE NOTED IN HYPERTHYROIDISM?**

- A) **T3-increased, T4-increased, TTG-reduced**
- B) T3 – normal, T4 normal, TSH – reduced
- C) T3 –elevated, T4 – normal, TTG-normal
- D) T3 – normal, T4 reduced, TSH increased

**55. WHAT CHANGES of THYROID LEVELS AND THYROID-STIMULATING HORMONE IS CHARACTERISTIC OF PRIMARY OVERT HYPOTHYROIDISM?**

- A) **T4 reduced, TSH increased**
- B) T4-reduced; TTG-normal
- C) T4-reduced; TTG-reduced
- D) T4-normal; TTG-increased

**56. THE FIRST LEVEL TEST IN THE DIAGNOSIS OF PRIMARY HYPOTHYROIDISM IS THE DEFINITION OF A LEVEL**

- A) thyroid hormone
- B) total thyroxine
- C) free thyroxine
- D) triiodothyronine

**57. DISEASE OF THE ADRENAL GLANDS, DEVELOPING IN TUMOR LESIONS OF CORTICAL SUBSTANCE, IS**

- A) corticosteroma
- B) pheochromocytoma
- C) secondary hyperaldosteronism
- D) somatotropinoma

#### **Test evaluation criteria**

Evaluation is conducted in an e-learning session on a scale.

Tests for the current certification include 20 tasks, the maximum score on the test-100.

As part of the current level of knowledge of the discipline the test result is not less than 61 points is acceptable.

## EXAMPLES OF THE CASE STUDY TASKS FOR HOSPITAL THERAPY

### Case study task № 1.

Patient 50 years old was admitted to a clinic with complaints of asthma attacks occurring more often at night, lasting from 30 minutes to 2 hours, poorly controlled by bronchodilators. Being sick about 5 years when had started to get asthma attacks with shortness of breath, painful cough. The attacks were relieved by the inhalation of astmopent, berotek. A year ago she entered the hospital intensive care unit with asthmatic status, developed after taking aspirin. Asthmatic condition was derived via administration of prednisone, later gradually abolished. For many years, she suffers from polypous rhinosinusitis and experienced polypectomy three times. Acetylsalicylic acid, aminopyrine, dipyrrone caused the asthma attacks. In the hospital the seizures were observed daily. Despite treatment with sympathomimetics and eufillin, they have become longer and heavier. On the 4th day the condition worsened even more. The patient became suddenly aggressive, motor anxiety, visual and auditory hallucinations appeared. Shortness of breath is up to 40 per minute, marked cyanosis of the skin and mucous membranes. BP 90/60 mm Hg. Previously a large number of dry rales were heard and now progressively disappeared, sputum did not depart. There were epileptiform seizures. Further, there was a sudden loss of consciousness. Tachypnea was replaced with bradypnea. The ECG showed signs of right atrial overload.

### Questions:

1. Evaluate the clinical situation, the development of condition you can think of? **Asthmatic status.**
2. Formulate a clinical diagnosis and justify it.  
**Aspirin induced bronchial asthma, severe course, acute phase. Asthmatic status, slow developing, stage 3 (coma).**
3. List the pathogenic variants of bronchial asthma.

**Atopic, infectious-dependent, autoimmune, disovariant, cholinergic, mental, aspirin, primary altered reactivity.**

4. Give the definition and classification of asthmatic status.

**Asthmatic status-severe, prolonged attack of bronchial asthma, characterized by severe or progressive respiratory failure due to obstruction of the airways with the formation of resistance to therapy. Pathogenetic variants – slowly developing, anaphylactic, anaphylactoid. Stage: 1-compensation, 2-decompensation (silent lung), 3 – hypoxic coma. Treatment: prednisolone - 1-5-10 mg per kg of body per day according to the severity of the condition. Eufillin 24 mg/kg/day. ARV. Cardiac glycoside. Bronchoscopic sanitation. Acidosis - 400 ml of 4% sodium bicarbonate. Extracorporeal membrane oxygenation. In early status of status asthmaticus: 1 – corticosteroids, aminophylline 15 ml of 2.4% i/v slowly, infusion up to 3 liters, ambroxol, iodide of sodium, terbutaline, heparin, contrical, halothane anaesthesia.**

### **Case study task № 2.**

Patient 42 years old was admitted to a hospital with complaints of cough with mucopurulent sputum, pain in the left half of the chest, increased body temperature to 38°C. Disease started acutely. A week before admission to the hospital there was a significant hypothermia. The next day, these symptoms appeared. For a week was treated on an outpatient basis for the flu, but the state of health did not improve, the body temperature reached 39.5°C, General weakness increased. Objective examination: the state of moderate severity, the number of breaths 24 per min. In the lungs on the left in the scapular region a shortening of percussion sound is noted, as well as weakened vesicular breathing, finely bubbly moist sonorous rales. Clinical analysis of blood: leukocytes  $\cdot 13 \times 10^9/l$ , toxic granularity of neutrophils, ESR - 36 mm/hour. Urinalysis: mild proteinuria, and cylindruria. Radiography of the chest: 8-9 ribs on the left — infiltrative darkening with indistinct contours.

### Questions:

1. Formulate a clinical diagnosis. **Community-acquired pneumonia of the lower lobe of the left lung severe, RF II degree.**
2. What explains the change in urine? **Infection induced toxic kidney damage, microcirculation disorders.**
3. What diseases should be considered for differential diagnostics of the disease. **Pulmonary tuberculosis, lung cancer, pulmonary embolism, eosinophilic infiltration.**
4. List the possible complications of the disease. **Extrapulmonary: myocarditis, meningitis, glomerulonephritis, DIC. Pulmonary: pleurisy, respiratory failure, abscess, carnification.**
5. Make a plan of treatment of the patient, give a description of drugs.  
**Antibacterial therapy. In pneumonia caused by pneumococcus - semisynthetic penicillins: 500 mg 3 times a day (amoxicillin), macrolides - clarithromycin, azithromycin; fluoroquinolones with anti-pneumococcal activity - levofloxacin, sparfloxacin, moxifloxacin**  
**Immuno-replacement therapy: native, fresh-frozen plasma.**  
**Correction of microcirculation: heparin, reopolyglucin**  
**Correction of dysproteinemia: albumins**  
**Detoxification therapy: isotonic solution, ringer solution 1000-3000 ml / day, glucose 5% 400-800 ml, hemodez,**  
**O<sub>2</sub> therapy**  
**Glucocorticoids (prednisolone 60-90 ml) in infection induced toxic kidney and liver damage**  
**\* Antioxidants: ascorbic acid 2 g per day**  
**• Anti-enzymes: contrical if there are signs of accession**  
**• Expectorants: ambroxol, ACC**

### Case study task № 3.

A 44-year-old woman visited a doctor with complaints of shortness of breath during exercise, which appeared three months ago, increased body temperature to

37.2°C in the evenings, joint pain, whitewashing of fingers in the cold. She was diagnosed with pneumonia, which was treated with antibiotics for 1.5 months. Despite the treatment, the patient's condition worsened, increased shortness of breath, cyanosis appeared, and was admitted into inpatient department of clinic. Objective examination: state of moderate severity. Cyanosis of face and hands. The skin on the hands is dense, marked areas of pigmentation. In the lungs: vesicular breathing, in the lower parts, crepitation is heard. Heart sounds clear, no noise, pulse 96 beats per minute, rhythmic, blood pressure 120/70 mm Hg, liver and spleen are not enlarged. General blood analysis: erythrocyte sedimentation rate is 33 mm/hour. The urinalysis is unaffected. Chest X-ray: diffuse amplification and deformation of the pulmonary pattern, numerous small focal shadows in the lower parts of the lungs. Lung roots are not dilated. ECG - deviation of the electrical axis of the heart to the right, signs of hypertrophy of the right atrium. The study of respiratory function: VC 36%, FEV1 of 82%.

Questions:

1. The most likely diagnosis?

**Systemic scleroderma, acute the 2nd (sub) stage, 3 activity degree**

2. What kind of examination is necessary to carry out in this patient to clarify the diagnosis.

**Clinical blood analysis - hypochromic anemia, acceleration of ESR, urine analysis - microhematuria, proteinuria, cylindrical, leukocyturia, rheumatoid factor, antinuclear factor, sclerodermic autoantibodies; radiography of hands - osteolysis of distal phalanges, areas of calcification in the subcutaneous tissue, osteoporosis, narrowing of the articular slit. Chest X-ray - interstitial fibrosis of the lower lung, total pulmonary fibrosis-cell lungs. Capillaroscopy of the nail bed - unevenly expanded capillary loops, avascular fields, ECG, ultrasound of the heart.**

3. Determine the type of respiratory dysfunction.

**Restrictive.**



4. What diseases should be considered conducting differential diagnostics.

**Paraneoplastic scleroderma (torpid for treatment), rheumatoid arthritis, systemic lupus erythematosus.**

5. Tactics of treatment.

– **prevention and treatment of vascular complications: avoid cold, smoking; calcium channel blockers, selective blockers of 5HT<sub>2</sub>-serotonin receptors: ketanserin 60-120mg/day, alpha-blockers – prazosin 1-2 mg 1-4times; PG-E – alprostadil, antiplatelet agents;**

- **suppression of disease progression: cytostatics (methotrexate, azathioprine)**

- **anti-inflammation therapy - GC 15-20 mg/day, methotrexate 15 mg/week, cyclosporine**

- **treatment of internal organs - symptomatic therapy.**

#### **Case study task № 4.**

Patient 36 years old was admitted into a clinic with complaints of cough with a small amount of mucopurulent sputum, chills, fever up to 39°C, pain in the right half of the chest associated with the act of breathing, shortness of breath, general weakness. He considers himself sick for 10 days, since hypothermia there was a headache and pain in the muscles of the body, the body temperature rose to 37.8°C. He went to the doctor and was diagnosed a flu. After 2 days got a runny nose, sore throat, soreness behind the sternum, dry cough. On the 4th day of the disease, the general condition deteriorated sharply: general weakness increased, pain appeared in the right half of the chest while breathing, body temperature increased to 38.2°C. District doctor diagnosed pneumonia and prescribed treatment with ampicillin in tablets. The condition continued to deteriorate: there were chills, sweating, fever up to 39°C, shortness of breath, headache. With the listed complaints the patient was taken to hospital. Heavy smoker (one and a half packs per day for 16 years) abusing alcohol, working in the workplace with adverse

temperature conditions and dustiness. Objective examination: general state of moderate severity, moderate acrocyanosis. The NPV at 28 min there is a gap in the right half of thorax in the act of respiration. Right in the projection of medium part is determined the dullness of percussion sound, hard breathing, moist fine bubbling sonorous rales, bronhophony and voice tremor is strengthened. Heart sounds muffled, heart rate - 112 per/min. During the examination, the patient had a cough attack with the discharge of purulent sputum of an unpleasant odor in an amount of about 100 ml.

Questions:

1. Formulate a preliminary diagnosis.

**Community-acquired lobar pneumonia of the middle lobe of the right lung, severe course, acute abscess of the middle lobe of the right lung (primary, purulent, bronchogenic).**

2. Make a plan for additional research.

**X-ray and CT of the lungs, bronchoscopy with pus aspiration to determine the flora and its sensitivity to AB, transthoracic puncture, FVD, UAC, sputum analysis.**

3. Run a differential diagnostics.

**Tuberculosis, pleural empyema, lung cancer, lung cysts.**

4. What explains the sudden release of large amounts of sputum? **Destruction of lung tissue, the formation of an abscess and the breakthrough of its contents into the bronchi**

5. Make a treatment plan.

**Hospitalization, diet - increased energy value, a lot of protein, little fat, vitamins C, a, B, salt restriction to 6-8 g/day and fluid. Conservative therapy: Antibacterial therapy, pneumonia caused by pneumococcus, semisynthetic penicillins 500 mg 3 times a day (amoxicillin), macrolides – roxithromycin, clarithromycin, azithromycin, fluoroquinolones with anti – pneumococcal activity-levofloxacin, sparfloxacin, moxifloxacin.**

**Immuno-replacement therapy: native, fresh-frozen plasma, people. norms.IG.**

**Correction of microcirculation: heparin, reopolyglucin**

**Correction of dysproteinemia: albumins**

**Detoxification therapy: isotonic solution, ringer solution 1000-3000 ml per day, glucose 5% 400-800 ml, hemodesis,**

**O<sub>2</sub> therapy**

**Glucocorticoids (prednisolone 60-90 ml) in infectious-toxic lesions of the kidneys, liver**

**Antioxidants: ascorbic acid 2G per day.**

**Anti-enzymes: contrical if there are signs of abscession**

**Expectorants: Ambroxol, ACC.**

**Transbronchial drainage (during bronchoscopy). Percutaneous puncture and drainage of the abscess cavity under the control of ultrasound or WG.**

**Surgical treatment. Vibration massage, postural drainage.**

#### **Case study task № 5.**

A patient 20 years old has entered the hospital with complaints of pain in the left half of the chest increasing with deep breathing, shortness of breath, dry cough. Five days ago after hypothermia, the temperature rose to 38°C and pain appeared in the left half of the chest. The pain was at first very strong, then became weaker, but increased shortness of breath. Then condition became more serious, shortness of breath. The number of breaths 32 per/min, prefers a sitting position. The left half of the chest bulges, lags in breathing. In the lungs - on the left shortening of percussion sound below 10 ribs, breathing is not carried out. The right border heart is 3 cm outside from the edge of the sternum. Heart sounds muffled. Pulse 100 beats/min, BP 100/65 mm Hg. Liver at the edge of the rib arch.

ECG: sinus tachycardia, right deviation of the electrical axis of the heart.

Chest X-ray: left intense shading with oblique level. The displacement of the mediastinal organs to the right.

Pleural puncture obtained 2000 ml of cloudy yellowish liquid. Specific density 1023, protein 4.8 g/l, Rivalta test positive (the test for the differential

diagnosis of the former and transudate), microscopy the bulk of the cells are degenerative-altered neutrophils: isolated macrophages and the cells of the mesothelium.

#### Questions:

1. Formulate a clinical diagnosis. **Exudative left-sided pleural effusion. Respiratory failure 3rd degree.**
2. Specify the clinical signs that allow you to suspect infection of pleural effusion. **Turbid, yellowish pleural fluid, degenerative changes in neutrophils.**
3. Evaluate the data of the analysis of pleural fluid. **Exudate, because the specific gravity is above 1015, Rivalta test +, high protein, leukocytes – neutrophils.**
4. List the reasons that lead to the accumulation of fluid in the pleural cavity. **Infectious diseases: tuberculosis, pneumonia; tumors: mesothelioma, metastatic, leukemia; gastrointestinal diseases: pancreatitis, intra-abdominal or intrahepatic abscess; systemic connective tissue diseases: RA, SLE; Dressler syndrome; uremia; pneumothorax, hemothorax; drugs: methotrexate, metronidazole, amiodorone.**
5. Make a treatment plan.  
**Antibiotics, Immunostimulants, adaptogens, detoxification, NSAIDs, pleural puncture, pleural drainage, diuretics, physiotherapy, electrophoresis with CaCl<sub>2</sub>, heparin, manual vibration chest massage.**

#### Case study task № 6.

A patient 19 years old has visited hospital with complaints of weakness, fatigue, subfebrile temperature. 2 years ago had suffered a rheumatic attack, arthritis, lesions of the mitral valve (insufficiency). The real deterioration came after hypothermia. Objective examination: pallor, shortness of breath up to 26 per minute at rest. In the lungs - vesicular breathing, no rales. The area of the heart is not visually changed. Through palpation: apical push spilled and reinforced, located in the IV-V intercostal space 2 cm outside the left mid-clavicle line. In the

region IV – V intercostal space on the left is determined by systolic jitter. The boundaries of the heart in percussion: right-on the right edge of the sternum, upper-in the II intercostal space, left - 2 cm outside the mid-clavicle line. Through auscultation at the top of the heart, a blowing systolic noise associated with the I tone and occupying 2/3 of the systole is heard; the noise is carried out in the axillary region and on the back, remains in the standing position and increases in the position on the left side. In II – III intercostal space to the left of the sternum is heard through diastolic murmur, conducted along the left edge of the sternum. Heart rate 100 beats/min. BP 105/40 mm Hg. Abdomen is soft, painless, liver and spleen are not enlarged. Total blood count: HB-115 g/l, red blood cells- $4,3 \cdot 10^{12}/l$ ; leukocytes-  $10,0 \cdot 10^9/l$ , p/n-4%, s/n – 54%, e – 3%, l – 36%, m – 3%, SOE – 35 mm / h. Urinalysis: weight-1015, protein - traces, leukocytes-2-3 in vision field, red blood cells - are absent. ECG: sinus tachycardia, electrical axis deviation to the left, the PQ interval of 0.16 s, the signs of overload of the left ventricle and left atrium. Signs of overload of the upper sub-endocardial myocardial ischemia of the left ventricle.

Questions:

1. Justify and formulate a diagnosis according to classification.

**Rheumatism, active phase. Combined heart disease: mitral and aortic insufficiency. CHF IIA stage 3 FC.**

2. What other examinations are necessary for the patient?

**UAC, OAM, BH: sialic acids, CRP, RF, antistreptolysin-O; SCF study; ultrasound, radiography of the heart.**

3. What morphological changes determine the severity of the process?

**Endocarditis.**

4. What diseases should be considered at differential diagnostics?

**Cardiomyopathy, infectious endocarditis, congenital heart disease.**

5. Make a plan of treatment of the patient. **Stationary regime, diet №10 by Pevsner: the restriction of salt, protein 1.5 g/kg, ACE inhibitors in small doses, riboxin, mildronat. Anti-inflammatory: NSAIDs, glucocorticoids at**

**high activity, Plaquenil, delagil. Diuretics. Digoxin, penicillin 1,500,000 with the transition to bicillin-5 once every two weeks (for 2 months), then once every 3-4 weeks.**

#### **Case study task № 7.**

Patient R., 29 years old, have complained of prolonged subfebriles, weakness, fatigue, poor appetite. These complaints appeared after removal of carious tooth 4 weeks ago. She was treated independently with antipyretic agents. Fever persisted, weakness grew, went to the doctor. In early childhood, the patient was diagnosed with systolic murmur in the III-I intercostal space to the left of the sternum. In the examination diagnosed with the defect seem to be of small size, located in the membranous portion subaortic. It was observed in the clinic, while the state of health remained good, no signs of heart failure were observed, no treatment was received. Objective examination: condition of the patient is severe, pale, lethargic, marked shortness of breath at rest up to 28 min/min. In the lungs - vesicular breathing, no rales. The area of the heart is not visually changed. Apical beat spilled and shifted in IV-V intercostal space 2 cm outside the left mid-clavicle line. In the area III – IV intercostal space on the left — systolic tremor, diastolic tremor in II – III intercostal space to the left of the sternum. The boundaries of the heart in percussion: right-on the right edge of the sternum, upper-in the II intercostal space, left-2 cm outside the mid-clavicle line. Through auscultation: in III-IV intercostal space to the left of the sternum is heard rough, scratching timbre systolic noise associated with I tone and occupies 3/4 systole; noise is carried out almost over the entire area of the heart. In II-III intercostal space to the left of the sternum is heard through diastolic murmur, conducted along the left edge of the sternum. In II intercostal space on the left – accent II tone. Heart rate 100 beats / min, BP 115/40 mm Hg. The abdomen is soft, painless, the liver protrudes 3 cm from under the edge of the rib arch on the right mid-clavicle line. Total blood count: HB-105 g / l, red blood cells–  $4,1 \cdot 10^{12}/l$ , leukocytes–  $12 \cdot 10^9/l$ , s/n-7%, s/n – 37%, e – 3%, l –

50%, m – 3%, ESR – 4 mm / h. Urinalysis: specific weight-1018, protein-0,05%, leukocytes-2-3 in vision field, red blood cells – 2-3 in vision field. ECG: sinus tachycardia, normal position of the electrical axis of the heart, signs of overload of the right and left ventricles.

Questions:

1. Formulate a preliminary diagnosis.

**Infectious endocarditis. Aortic insufficiency. Congenital heart disease: VSD.**

2. What further examination is necessary to carry out for this patient?

**X-ray, ultrasound of the heart; blood for sterility (3 times). BKH; OAK; OAM.**

3. Run a differential diagnostics.

**Rheumatism, cardiomyopathy.**

4. Make a plan for the treatment of the patient.

**Antibiotics, 2-3 time i/v. Oxygen therapy, infusion therapy, antiplatelet agents, anticoagulants, Mildronate. Surgical treatment.**

5. Forecast: **Doubtful.**

#### **Evaluation criteria for the decision of case study tasks:**

- the "excellent" grade is given to a student who correctly solved the problem and justified his decision, who gave a reference to the normative document required for the decision;
- a student who has solved the problem correctly, but has not justified his decision at the proper level deserves a "good" grade;
- grade "satisfactory" deserves a student who has found a sufficient level of knowledge to solve the problem, but allowed errors in its solution;
- the "unsatisfactory" grade is given to the student who has not solved the problem.

**Questions of intermediate control in the discipline**

## **"Inpatient therapy, endocrinology»**

1. Coronary heart disease. Angina, etiology, pathogenesis, classification, symptoms, diagnostics, differential diagnostics, treatment, prevention.
2. Coronary heart disease. Myocardial infarction, etiology, pathogenesis, classification, symptoms, diagnostics, differential diagnostics, treatment, prevention.
3. Complications of myocardial infarction. Classification, symptoms, diagnostics, differential diagnostics, treatment, prevention.
4. Myocarditis: etiology, pathogenesis, classification, symptoms, diagnostics, differential diagnostics, treatment, prevention.
5. Cardiomyopathy: classification, mechanism of development, symptoms, diagnostics, differential diagnostics, treatment, prevention.
6. Myocardiodystrophy: etiology, pathogenesis, classification, symptoms, diagnostics, differential diagnostics, treatment, prevention.
7. Pericarditis: etiology, pathogenesis, classification. Clinic of dry, effusion and constrictive pericarditis, diagnosis, differential diagnostics, treatment.
8. Congenital heart diseases in adults: etiology, classification. Open ductus arteriosus: hemodynamics, diagnostic criteria, differential diagnostics, treatment.
9. Coarctation of the aorta: hemodynamics, symptoms, diagnostic criteria, differential diagnostics, indications for surgical treatment.
10. Atrial septal defect: hemodynamics, symptoms, diagnostic criteria, stages, treatment, indications for surgical treatment.
11. Ventricular septal defect: hemodynamics, symptoms, diagnostic criteria, stages, treatment, indications for surgical treatment.
12. Hypertensive disease. Definition, diagnostic criteria, symptoms, differential diagnosis, treatment, prevention of complications.
13. Symptomatic hypertension: classification, diagnosis, differential diagnostics, treatment, prevention of complications.
14. Renal hypertension: etiology, symptoms, diagnostics, differential diagnosis, treatment.



15. Endocrine arterial hypertension (Cushing's syndrome and disease, pheochromocytoma, aldosterone), symptoms, diagnostics, differential diagnosis, treatment.

16. Arrhythmias (extrasystole, paroxysmal tachycardia), pathogenesis, symptoms, hemodynamic changes and ECG, treatment, indications for electropulse therapy.

17. Atrial fibrillation and flutter: pathogenesis, classification, ECG changes, treatment, indications for electropulse therapy.

18. Sinus node weakness syndrome: diagnosis, symptoms, treatment, indications for implantation of an artificial pacemaker.

19. Morgana-Adams-Stokes syndrome: etiology, symptoms, diagnostics, treatment.

20. Conduction disorders: pathogenesis, classification, symptom, causes of ECG changes, treatment. Indications for temporary pacemaker implantation.

21. Pulmonary embolism: etiology, classification, symptoms, diagnostics, differential diagnosis, treatment and prevention.

22. Neurocirculatory dystonia: etiology, pathogenesis, classification, symptoms, diagnostics, differential diagnosis, treatment, prevention.

23. Acute rheumatic fever. Definition, etiology, pathogenesis, classification, diagnostic criteria, differential diagnostics, treatment, prevention.

24. Chronic rheumatic heart disease. Definition, etiology, pathogenesis, classification, diagnostic criteria, differential diagnostics, treatment, prevention.

25. Mitral heart disease: pathogenesis, hemodynamics, symptoms, diagnostics, treatment.

26. Aortic heart defects: pathogenesis, hemodynamics, symptoms, diagnostics, treatment.

27. Primary osteoarthritis: etiology, pathogenesis, symptoms, forms and stages, differential diagnosis, treatment, indications for orthopedic treatment.

28. Gout: etiology, pathogenesis, symptoms, diagnostics, differential diagnosis, treatment.

29. Rheumatoid arthritis: etiology, pathogenesis, classification, diagnostic criteria, differential diagnostics, treatment, types of surgical treatment, indications.
30. Ankylosing spondylitis: etiology, pathogenesis, symptoms, degree of activity, diagnosis criteria, differential diagnosis, treatment.
31. Systemic lupus erythematosus: etiology, pathogenesis, clinic, degree of activity, diagnosis criteria, differential diagnosis, treatment.
32. Nodular polyarteritis: etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment.
33. Systemic scleroderma: etiology, pathogenesis, classification, clinic, diagnostic criteria, differential diagnosis, treatment.
34. Dermatomyositis: etiology, pathogenesis, diagnostic criteria, differential diagnosis, treatment, prevention.
35. Bronchial asthma: definition, etiology, pathogenesis, classification, clinical picture. Diagnostics. Treatment.
36. Bronchial asthma: differential diagnostics, complications. Asthmatic status: criteria for diagnostics, treatment, prevention.
37. Bronchial asthma: criteria for control levels. Treatment of exacerbations of the disease.
38. Chronic obstructive pulmonary disease, etiology, pathogenesis, classification, symptoms, diagnostics, differential diagnosis, complications, treatment and prevention.
39. Differential diagnosis of bronchial obstruction syndrome, diagnostic criteria, clinical features, treatment.
40. Pneumonia: definition, etiology, pathogenesis, classification. The main clinical manifestations of pneumonia, differential diagnostics, complications, outcomes. Treatment.
41. Pneumonia: features of the clinical course depending on the type of pathogen, diagnostic criteria. Treatment.
42. Differential diagnostics of pulmonary tissue compaction syndrome (pneumonia, tuberculosis, lung cancer, bronchiectasis, cystic fibrosis).

43. Bronchiectasis disease, bronchiectasis: etiology, pathogenesis, diagnostic criteria, differential diagnostics, treatment, prevention.

44. Cystic fibrosis: etiology, pathogenesis, diagnostic criteria, differential diagnostics, treatment, prevention of exacerbations.

45. Differential diagnosis of pleural effusion. Criteria for the diagnosis of pleurisy, features of clinical course, differential diagnostic criteria, treatment.

46. Pulmonary heart: etiology, pathogenesis, classification, symptoms, diagnostic criteria, differential diagnosis, treatment, prevention.

47. Lung sarcoidosis: etiology, pathogenesis, classification, symptoms, diagnostics, differential diagnosis, complications, treatment, prevention.

48. Exogenous allergic alveolitis: etiology, pathogenesis, classification, symptoms, diagnostics, differential diagnosis, complications, treatment, prevention.

49. Idiopathic pulmonary fibrosis: etiology, pathogenesis, classification, symptoms, diagnostics, differential diagnosis, complications, treatment, prevention.

50. Differential diagnosis of disseminated lung diseases (exogenous allergic alveolitis, idiopathic pulmonary fibrosis, sarcoidosis). Diagnostic criteria, clinical features, treatment.

51. Anaphylactic shock: etiology, pathogenesis, diagnostic criteria, differential diagnostics, treatment, prevention.

52. Functional disorders of motor and secretory function of stomach, pathogenesis, symptoms, diagnostics, differential diagnosis, treatment, prevention.

53. Functional bowel disease, etiopathogenesis, variants of motility disorders. Irritable bowel syndrome: etiology, pathogenesis, diagnostic criteria, classification, differential diagnostics, symptoms, treatment.

54. Chronic gastritis, etiology, pathogenesis, symptoms, diagnostics, treatment.

55. Peptic ulcer disease, etiology, pathogenesis, symptoms, role of Helicobacter infection, diagnosis, differential diagnostics, complications, eradication schemes, complications, treatment, prevention.

56. Symptomatic ulcers of the stomach and duodenum, etiopathogenesis, symptoms, diagnostics, differential diagnostics, complications, treatment, prevention.

57. Operated stomach disease, pathogenesis, symptoms, classification, complications, treatment.

58. Chronic pancreatitis, etiology, pathogenesis, symptoms, diagnostics, differential diagnosis, complications, treatment, prevention.

59. Chronic cholecystitis, etiology, pathogenesis, symptoms, diagnostics, differential diagnosis, complications, treatment, prevention.

60. Post-cholecystectomy syndrome, pathogenesis, classification, clinic, diagnostics, treatment, prevention.

61. Chronic hepatitis, etiology, pathogenesis, symptoms, diagnostics, diagnostic criteria of activity, differential diagnostics, complications, treatment.

62. Liver cirrhosis, etiology, pathogenesis, classification, symptoms, severity criteria, diagnosis, differential diagnostics, complications, treatment. Indications for liver transplantation.

63. Ulcerative colitis, etiology, pathogenesis, classification, symptoms, diagnostics, differential diagnosis, treatment.

64. Crohn's disease, etiology, pathogenesis, symptoms, diagnostics, differential diagnosis, treatment.

65. Chronic pyelonephritis, etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention.

66. Chronic glomerulonephritis, etiology, pathogenesis, symptoms, diagnostics, differential diagnosis, complications, treatment, prevention.

67. Nephrotic syndrome, etiology, pathogenesis, classification, symptoms, diagnostics, differential diagnosis, treatment.

68. Kidney amyloidosis, etiology, pathogenesis, classification, clinic, diagnosis, treatment.

69. Acute kidney injury, etiology, pathogenesis, symptoms, stages of course, differential diagnosis, treatment, indications for hemodialysis.

70. Chronic kidney disease, etiology, pathogenesis, stages, syndromes, differential diagnosis, treatment, indications for renal replacement therapy. Chronic renal failure.

71. Iron deficiency anemia, etiology, pathogenesis, clinical picture, differential diagnostics, treatment, prevention.

72. Megaloblastic anemia, B12-folic deficiency anemia, etiology, pathogenesis, symptoms, diagnostics, differential diagnostics, treatment, medical examination, prevention.

73. Hemolytic anemia, etiology, mechanism of development, classification, general signs, methods of diagnostics.

74. The main clinical and laboratory signs of microspherocytosis, enzymopathy, hemoglobinopathies, differential diagnosis.

75. Autoimmune hemolytic anemia, hemoglobinuria, diagnosis, differential diagnostics, treatment, indications for immunosuppressive therapy.

76. Aplastic anemia, etiology, pathogenesis, symptoms, diagnosis criteria, differential diagnosis, treatment, possibility of stem cell transplantation.

77. Acute leukemia, etiology, pathogenesis, classification, laboratory-morphological, cytochemical and immunophenotypic diagnostics, differential diagnostics.

78. Clinical syndromes of acute leukemia, complications, principles of therapy, prevention of neuroleukemia, clinical examination.

79. Chronic myeloid leukemia, etiology, pathogenesis, classification, symptoms, diagnostic criteria, differential diagnostics, treatment.

80. Polycythemia, etiology, pathogenesis, classification, symptoms, diagnosis criteria, differential diagnostics, complications, treatment.

81. Symptomatic erythrocytosis, definition, classification, diagnostic criteria, differential diagnostics.

82. Chronic lymphocytic leukemia, etiology, pathogenesis, classification, clinic, diagnostic criteria, differential diagnostics, treatment.

83. Multiple myeloma, pathogenesis, classification, clinical variants, diagnosis, differential diagnostics, treatment.

84. Agranulocytosis, clinical and laboratory diagnosis of agranulocytosis (myelotoxic and autoimmune), clinical picture, differential diagnostics, treatment.

85. Hemorrhagic diathesis, etiology, classification, general signs, types of bleeding, research methods, differential diagnostics.

86. Hemophilia, the role of heredity, the pathogenesis of bleeding, symptoms, diagnosis, differential diagnosis, treatment, prevention.

87. Thrombocytopenic purpura, etiology, pathogenesis, symptoms, differential diagnosis with symptomatic thrombocytopenia, treatment.

88. Hemorrhagic vasculitis, pathogenesis of bleeding, variants of course, diagnosis, differential diagnostics, treatment.

89. Osler–Weber–Rendu disease, the role of heredity, the mechanism of bleeding, symptoms, diagnostics, differential diagnosis, treatment.

90. Leukemoid reactions, etiology, symptoms, differential diagnostics, treatment.

91. Criteria for the diagnostics of type 2 diabetes.

92. Complications of type 2 diabetes.

93. Thyrotoxicosis. Symptoms. Diagnostics. Treatment.

94. Adenoma of the adrenal gland. Symptoms. Diagnostics. Treatment.

95. Hypothyroidism. Symptoms. Diagnostics. Treatment.

**Criteria for grading evaluation of the student in the exam/competition  
in the discipline "Inpatient therapy, endocrinology»**

<b>Exam grade</b>	<b>Requirements to the formed competences</b>
«excellent»	Grade "excellent" is given to a student, if he/she deeply and

	<p>firmly learned the program material, exhaustively, consistently, clearly and logically presents it, is able to closely link the theory with practice, freely copes with tasks, questions and other types of application of knowledge, and does not complicate with the answer when modifying tasks, uses the material of monographic literature in the answer, correctly justifies the decision, has versatile skills and techniques of performing practical tasks;</p>
«good»	<p>Grade "good" is given to a student, if he/she knows the material, competently and essentially sets it without allowing significant inaccuracies in the answer to the question, correctly applies the theoretical provisions in solving practical issues and problems, has the necessary skills and techniques of their implementation;</p>
«satisfactory»	<p>Grade "satisfactory" is given to a student if he/she has knowledge only of the basic material, but did not learn its details, admits inaccuracies, insufficiently correct formulations, violations of logical sequence in the statement of program material, has difficulties at performance of practical works;</p>
«unsatisfactory»	<p>Grade "unsatisfactory" is given to a student who knows the significant parts of the program material, allows substantial errors, uncertain, with great difficulty performs practical work.</p>