



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



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

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

**«Policlinical Therapy»**

Education program

Specialty 31.05.01 «General medicine»

**Form of study: full time**

year 5.6, semester C, A, B  
lectures 88 hours  
practical classes 159 hours  
laboratory works not provided  
total amount of in-classroom works 247 hours  
independent self-work 185 hours  
including preparation to exam 36 hours  
control works ()  
pass-fail exam year 5, 6, semester A, B  
exam year 6, semester C

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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## ANNOTATION

Discipline "Policlinical Therapy" is purposed for students enrolled in the educational program 31.05.01 "General medicine" and included in the basic part of the curriculum.

Discipline is realized on 5, 6 years in 9,10,11 semesters.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" and the curriculum of training in the specialty 31.05.01 "General medicine".

The total complexity of the development of the discipline is 12 credits, 432 hours. The curriculum provides 88 hours of lectures, 159 hours of practical training and independent work of the student (185 hours.).

Discipline "Policlinical Therapy" refers to the basic part of the professional cycle of disciplines in the preparation of a specialist in the specialty "General medicine".

A basic feature in the construction and content of the course is the use of methods of active learning, software and hardware, educational fund, evaluation and electronic means of discipline.

The study of the discipline "Policlinical Therapy" is based on the basic knowledge gained in the study of fundamental and clinical disciplines: Anatomy, Variant anatomy; Histology, embryology, Cytology; Biochemistry; Normal physiology; Pathological anatomy, clinical pathological anatomy; Pathophysiology, clinical pathophysiology; Pharmacology; Hygiene; Nursing; Propedeutics of internal diseases, radiation diagnosis.

The course program is based on the basic knowledge gained by students:

- ability and willingness to implement ethical and deontological principles in professional activity (GPC 4);
- readiness for medical use of drugs and other substances and their combinations in solving professional problems (GPC-8);

- the ability to assess morphofunctional, physiological States and pathological processes in the human body to solve professional problems (GPC-9);
- readiness to ensure the organization of patient care and the provision of primary health care (GPC 10);
- readiness for collection and analysis of patient's complaints, data of anamnesis, physical examination, laboratory, instrumental, pathological and other investigations in order to determine the state or of ascertaining the presence or absence of the disease (5 PC);
- the ability to determine the tactics of management of patients with different nosological forms (PC-8);
- readiness to provide medical care for sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the life of the patient and do not require emergency medical care (PC 10);
- readiness to participate in the provision of emergency medical care in conditions requiring urgent medical intervention (PC 11).

**Goal of the study:** to form a holistic view of the main stages of the doctor's work in the provision of primary health care in an outpatient clinic; to acquire the competence of providing medical and preventive care to the adult population in ambulatory.

**Objectives of the discipline:**

- to study characteristics of organization, workload and physician outpatient clinics, temporary diagnostic capabilities of outpatient services;
- to develop competencies for the implementation of disease prevention among the adult population;
- to develop competencies for the implementation of clinical supervision of the adult population taking into account age, gender and initial health status;
- to develop the competence of clinical thinking in diagnostics of the most common therapeutic diseases and pathological conditions in the adult

population in outpatient units on the basis of ownership of propaedeutic and laboratory-instrumental methods of research;

- develop competence of clinical thinking to evaluate characteristics of course of the most common therapeutic diseases in the adult population and their outpatient treatment;
- to develop competence in rehabilitation activities among the adult population with somatic diseases, in an outpatient unit;
- develop competence to perform examination of temporary and permanent disability;
- develop competence to provide medical care to the adult population in case of emergency conditions at the prehospital stage

### 3. Requirements for the results of the discipline studying.

Code and formulation of competence	Stages of competence formation	
<p style="text-align: center;"><b>PC 2</b></p> <p>the ability and willingness to conduct of preventive medical examinations, clinical examinations and dispensary observations.</p>	<b>To know</b>	fundamentals of preventive medicine, organization of preventive measures aimed at improvement of public health; organization of medical control over the health of population, principles of medical examination of population.
	<b>Be able to</b>	to participate in organization and provision of medical and preventive, sanitary and anti-epidemic assistance for population, taking into account its social and professional (including professional sports), its age and sex structure; develop a plan of therapeutic (surgical) actions taking into account the course of the disease and its treatment.
	<b>To master</b>	interpretation of the laboratory and instrumental diagnostic methods results.
<p style="text-align: center;"><b>PC 5</b></p> <p>the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases</p>	<b>To know</b>	etiology, pathogenesis of the most common diseases; criteria for the diagnosis of various diseases.
	<b>Be able to</b>	to determine the status of patient: to collect anamnesis, to conduct a questioning of a patient and/or his relatives, to conduct physical examination of the patient (examination, palpation, auscultation, measurement of blood pressure, determination of the arterial pulse properties, etc.); conduct a primary examination of systems and organs: nervous, endocrine, immune, respiratory, cardiovascular, blood and hematopoietic organs, digestive, urinary,

		<p>reproductive, musculoskeletal and joints, eyes, ears, throat, nose;</p> <p>to make a preliminary diagnosis-to synthesize information about the patient in order to determine the pathology and causes of it.</p>
	<b>To master</b>	the algorithm of preliminary diagnostics followed by referral of the patient to the appropriate medical specialist.
<p><b>PC 6</b></p> <p>the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review.</p>	<b>To know</b>	<p>etiology, pathogenesis of the most common diseases;</p> <p>temporary classification of diseases;</p> <p>clinical picture, features of the course and possible complications of the most common diseases occurring in a typical form in different age groups.</p>
	<b>Be able to</b>	<p>to outline the scope of additional studies in accordance with prognosis of disease, to clarify the diagnosis and obtain reliable results;</p> <p>to assess the patient condition for decision-making on necessity of rendering medical assistance;</p> <p>to formulate a clinical diagnosis.</p>
	<b>To master</b>	<p>methods of general clinical examination.</p> <p>algorithm of the developed clinical diagnosis.</p>
<p><b>PC 7</b></p> <p>readiness for the examination of temporary disability, participation in the conduction of medical and social expert reviews, detection of human biological death</p>	<b>To know</b>	<p>basics of legislation of the Russian Federation for protection of public health and normative documents for carrying out evaluation n of working capacity;</p> <p>questioning for examination of working capacity and medical and legal assistance to the population.</p>
	<b>Be able to</b>	<p>fill in the medical history of an outpatient patient, issue standard medical documentation;</p> <p>apply legal and medical aspects of ascertaining a person's death, biological and clinical death.</p>
	<b>To master</b>	proper maintenance of medical records.

<p style="text-align: center;"><b>PC 9</b></p> <p>the willingness to treat patients with different nosological entities in the outpatient settings and a day hospitals</p>	<p><b>To know</b></p>	<p>features of organization and volume of the doctor work of out-patient and ambulatory units, modern diagnostic opportunities of ambulatory service, methods of carrying out urgent actions, indications for planned hospitalization of patients;</p> <p>diagnostic methods, diagnostic capabilities of methods of direct examination of the patient therapeutic, surgical and infectious profile, modern methods of clinical, laboratory, instrumental examination of patients.</p>
	<p><b>Be able to</b></p>	<p>set priorities for addressing the health problems of patient: critical (terminal) condition as pain and chronic disease, the condition with infectious disease;</p> <p>choose an individual type of care for the treatment of the patient in accordance with the situation: primary care, ambulance, hospitalization.</p>
	<p><b>To master</b></p>	<p>algorithm of the detailed clinical diagnosis;</p> <p>the main medical diagnostic and therapeutic measures to provide qualified medical care.</p>

## I. THE STRUCTURE AND CONTENT OF THE THEORETICAL PART OF THE COURSE (88 hours)

### A SEMESTER (18 hours)

#### Section I. General principles of organization of work of outpatient clinics.

##### Theme 1. Organization of outpatient primary health care (2 hours)

The main objectives of temporary clinics. Levels of primary outpatient care.  
Structural units of outpatient clinics.

New organizational and structural preventive unit clinics:

Day hospital ambulatory (DSA). The structure, organization of work, tasks and provisions of chipboard as a promising form of effective out-of-hospital medical care to the population of different social categories. Indications, selection and procedure for routing patients to the DSA. Hospital at home.

Organization of work of the department of general medical practice (GP), General practitioner in the conditions of city ambulatory, rural district hospital.

The structure of the department of general medical practice and regulations on the organization. Normative documents regulating the activities of a general practitioner. The role of OFP in reforming outpatient care.

Procedures for the provision and approved standards in the treatment of patients at the outpatient stage. Clinical guidelines.

## **Theme 2. Regulatory and legal issues in the work of the district physician (2 hours)**

The Constitution of the Russian Federation

Federal law "on protection of public health»

Objectives and duties of the district physician of outpatient unit. Organization of work. Job description of the therapist. Therapist's professional standard.

Evaluation of temporary and permanent disability

Composition and functions of the medical commission

Analysis of morbidity in the serviced area

The procedure for prescription of SPA-resort treatment

Drug provision, procedure and rules of prescribing

Medical documentation, basic forms.

## **Theme 3. Preventive and anti-epidemic measures at the medical area (2 hours)**

Prevention, the concept of risk factors, primary prevention

Medical examination, additional medical examination of working persons

Rehabilitation: types, stages, principles

Cancer alertness

Anti-tuberculosis measures - the role of the therapist

## **Theme 4. SPA-resort treatment for diseases of internal organs (2 hours)**

Regulatory framework for SRT in the work of the therapist.

Classification of resorts and sanatoria

Indications and contraindications for SPA treatment.

Local sanatoria and resorts.

### **Theme 5. Clinical and expert work. (2 hours).**

Evaluation of temporary disability

Medical commission, functions and objectives.

Normative documents on ETD. Average duration of temporary disability.

Preparation of documents for medical examination: forms of disability, referral to the SME.

SPA-resort selection.

Drug provision, procedure and rules of prescribing

### **Theme 6. Issues of medical and social expertise (2 hours)**

Evaluation of permanent disability. The procedure for referral to medical and social expertise. The procedure of medical and social evaluation. Companies (Bureau) medical-social expertise (MSE). Objectives and functions of the medical and social expert commission (MSE).

Regulations of the person recognition as a disabled person.

Classification and time criteria used in the implementation of medical and social assessment. Basic concepts: disabled person, disability, restriction of life activity, degree of restriction of life activity, social insufficiency, social protection, social support.

Classification of violations of the basic functions of the human body. Classification of the main categories of life activity (ability to self-service, ability to move, ability to learn, ability to work, ability to orientation, ability to communicate, ability to control their behavior).

Criteria for determining disability groups (I, II, III). Causes of disability. General principles for solving particular issues of the MSE. Rehabilitation programmes for the disabled. The role of the district doctor in the rehabilitation of disabled people.



## **Section 2. Cardiology in the outpatient practice of therapist.**

### **Theme 7. Syndrome of arterial hypertension in ambulatory practice. (2 hours)**

The program of differential diagnostic search of diseases with arterial hypertension in outpatient unit;

Identification of persons with arterial and borderline hypertension in outpatient unit;

Classification of hypertension;

Symptoms and complications of hypertension;

Formulation of the hypertension diagnosis;

The differential diagnostics of hypertension with a hypertension of renal origin in clinic;

Renovascular hypertension diagnosis in outpatient unit;

Hemodynamic hypertension;

Differential diagnostics of hypertension with diseases of the endocrine system (pheochromocytoma, Kon's syndrome, Cushing's disease);

Features of the hypertension course in the elderly and senile age;

Evaluation of temporary and permanent disability;

Spa treatment

Prophylactic medical examination.

### **Theme 8. Differentiated approach in the treatment of hypertension. Features of treatment of elderly patients and pregnant women with hypertension syndrome. (3 hours)**

Classification of antihypertensive drugs.

Non-pharmacological methods of treatment of hypertension in outpatient unit.

Treatment of hypertension depending on a stage. Indications for admission.

Emergency care for patients with hypertensive crisis at home and in the clinic.

Complications of drug therapy in hypertensive disease.

Features of treatment of elderly patients and pregnant women with hypertension syndrome.

**Theme 9. Acute coronary syndrome in outpatient practice. Analysis of medical errors in the diagnosis of myocardial infarction. (2 hours)**

Classification of coronary artery disease. Angina. The criteria for diagnostics.

Risk factors for coronary heart disease.

Diagnosis of unstable angina at the outpatient stage. Indications for admission.

Differential diagnostics of angina pectoris in outpatient settings.

Diagnostic tests (VEM, drug tests, myocardial stress scintigraphy).

Diagnosis of cardiac arrest in the prehospital stage.

Diagnostic markers of myocardial infarction.

Emergency therapy for angina attack at home and in clinic.

The main groups of antianginal drugs and their side effects.

Indications and contraindications for surgical treatment of angina.

Analysis of the ECG.

Secondary prevention of coronary heart disease.

Evaluation of working capacity.

Features of management of elderly patients.

**10 SEMESTER (18 hours)**

**Section 2. Cardiology in the outpatient practice of a therapist.**

**Theme 10. Chronic heart failure syndrome in outpatient practice. Acute decompensation of cardiac activity. (2 hours)**

Heart failure (HF). Clinical syndrome. Differential diagnostics. Classification.

Instrumental methods of research in outpatient unit.

Features of management of elderly and senile patients.

Basic principles of treatment: the main groups of drugs taken in the treatment of CF. Complications of drug therapy

Emergency care for cardiac asthma and pulmonary edema at home and in the clinic.

Temporary disability.

Permanent disability. Indications for referral to MSE.

SPA treatment.

Dispensary observation.

### **Theme11. Diseases of myocardium. Myocarditis in outpatient practice. (2 hours)**

Myocarditis: concept, incidence, clinical classification.

Etiology, pathogenesis of myocarditis.

Markers of acute and chronic myocardial inflammation.

Algorithm of diagnosis of chronic infection-induced myocarditis.

Complaints, data of physical examination at chronic infection-induced myocarditis.

Instrumental verification of the heart dysfunction.

Diagnosis of damage to cardiomyocytes and the presence of immuno-inflammatory process.

Verification of inflammation and fibrosis in the myocardium.

Signs of persistent clinical and laboratory remission of the inflammatory process in myocardium.

Adverse factors affecting the outcome of myocarditis.

Causes of death in chronic infection-induced myocarditis.

Treatment and rehabilitation of patients.

### **Theme 12. Cardiomyopathies hypertrophic and dilated (2 hours)**

The main symptoms of each of the pathology variants.

The scope of diagnostic examination in a clinic.

Tactics of the doctor-therapist in establishing the diagnosis. Indications for admission.

Treatment, differences in the treatment of these variants of the disease.

Principles of evaluation of temporary disability, factors determining the labor forecast.

Medical and social examination.

### **Theme 13. Coronary heart disease in outpatient practice therapist. (2 hours)**

Chest pain. Differential diagnostics. The diagnosis of coronary artery disease in the clinic. Classification.

Tactics of conducting. Treatment in a polyclinic. The indications for hospitalization in CHD.

Prophylactic medical examination.

Primary and secondary prevention.

Evaluation of temporary disability. MSE.

Rehabilitation. SPA-resort treatment.

### **Theme 14. Myocardial infarction in outpatient practice of therapist. (2 hours)**

Early symptoms of myocardial infarction. Atypical forms of myocardial infarction.

Tactics of the doctor-therapist in clinic for suspected myocardial infarction.

Therapeutic measures before the arrival of the emergency medical team (EMT) and hospitalization.

Tactics of management of a patient with myocardial infarction after discharging from the hospital or department of rehabilitation in cardiological sanatorium.

Treatment. The outpatient stages of rehabilitation.

The main methods of physical rehabilitation in the clinic, organization of control over its conduct.

Psychological and social-labor rehabilitation.

Temporary disability, its terms in small-focal, large-focal, transmural, uncomplicated, complicated myocardial infarction.

Indications for direction to MSE.

Dispensary observation in the first 6 months after discharge to work.

Secondary prevention. SPA-resort treatment.

### **Theme 15. Heart rhythm disturbance. (2 hours)**

Tactics of the doctor clinics in identifying a patient with arrhythmic syndrome.

Atrial fibrillation. Classification. Management of patients with a permanent form of atrial fibrillation in outpatient unit.

Evaluation of working capacity.

Prophylactic medical examination. SPA-resort treatment.

## **Section 3. Respiratory diseases in outpatient practice of the therapist**

### **Theme 16. Frequent syndromes in diseases of the respiratory system. Low-grade fever and febrile syndrome. Tonsillar catarrhal symptoms. General toxic syndrome. ARVI. (2 hours)**

The possible causes of prolonged fever infection focal and generalized, connective tissue disease, paraneoplastic processes, and a system blood diseases, lymphoproliferative processes, and allergic reactions.

The most common Infectious diseases in the practice of the therapist clinics: typhoid-parathyroid group, brucellosis, "children" infections in adults, their diagnosis. Tactics of the therapist at their identification.

Infectious endocarditis, diagnostic methods. Clinical manifestations of connective tissue diseases associated with fever. Methods of their diagnostics.

Low-grade fever and fever with paraneoplastic processes. Scope of examination for diagnosis.

Blood diseases associated with fever. Tactics of the doctor-therapist in establishing the diagnosis.

Lymphoproliferative diseases as the cause of fever, detection methods. The tactics of the therapist in establishing the diagnosis.

Fever, lymphadenopathy, weight loss and other symptoms suspected of HIV infection. Methods of examination to clarify the diagnosis. Tactics therapist with a positive serological reaction.

Angina. Chronic tonsillitis. Symptoms. Diagnostics. Classification.

Primary prevention. Diagnosis. Treatment. Indications for hospitalization.

Prophylactic medical examination. Prevention.

Evaluation of temporary disability.

### **Theme 17. SARS in ambulatory practice of the therapist. (2 hours)**

Classification of SARS.

Clinic main SARS.

Differential diagnosis with flu.

Primary prevention. Diagnosis. Treatment.

Indications for hospitalization.

Medical examination of patient with SARS. Prevention.

Examination of temporary disability.

### **Theme 18. Chronic obstructive pulmonary disease, management in outpatient unit (2 hours)**

Differential diagnostics of bronchial obstruction syndrome.

Indications for hospitalization of patients with COPD.

Treatment. Prevention of exacerbations.

Examination of temporary and permanent disability.

Prophylactic medical examination. Rehabilitation.

SPA-resort treatment.

## **B SEMESTER (36 hours)**

### **Theme 19. Bronchial asthma - management in outpatient unit (2 hours)**

Differential diagnostics of bronchospastic syndrome.

Indications for hospitalization of patients with BA.

Treatment. Prevention of exacerbations.

Evaluation of temporary and permanent disability.

Prophylactic medical examination. Rehabilitation.

SPA-resort treatment.

### **Theme 20. Outpatient treatment of pneumonia, tactics of doctor at the clinic (2 hours)**

Community-acquired pneumonia. Etiology. Diagnostics.

Indications for hospitalization.

The state of emergency. Hospital at home.

Empirical antibiotic therapy in the clinic.

Evaluation of temporary disability.

Prophylactic medical examination. Rehabilitation.

SPA-resort treatment.

## **Section 4. Diseases of the gastrointestinal tract in outpatient practice of the therapist**

### **Theme 21. Outpatient management of patients with esophagitis, peptic ulcer, gastritis, pancreatitis (2 hours)**

Tactics of management of patients with acid-dependent diseases of the upper gastrointestinal tract at the outpatient stage.

Pain abdominal syndrome in esophagitis, peptic ulcer, gastritis, pancreatitis.

Differential diagnostics.

Diagnostics in an outpatient unit.

Indications for hospitalization.

The state of emergency. Hospital at home.

Treatment in the clinic.

Evaluation of temporary disability.

Prophylactic medical examination. Rehabilitation.

SPA-resort treatment.

**Theme 22. General approach in patients with chronic diffuse liver diseases at the outpatient stage. (2 hours)**

Differential diagnostics of pain syndrome in the right hypochondrium.

Differential diagnostics of jaundice syndrome.

Chronic hepatitis. Symptoms, diagnosis, classification, differential diagnosis.

Cirrhosis. Symptoms, diagnosis, classification, differential diagnostics.

Treatment of chronic hepatitis of various etiologies.

Evaluation of temporary disability.

Prophylactic medical examination. Rehabilitation.

Treatment of liver cirrhosis.

Evaluation of temporary disability.

Prophylactic medical examination. Rehabilitation.

SPA-resort treatment.

**Theme 23. Tactics of management of patients with functional disorders of the gastrointestinal tract at the outpatient stage. (2 hours)**

Functional dyspepsia,

Irritable bowel syndrome,

Biliary dyskinesia, Oddi's sphincter dysfunction.

Treatment. Modern medications, monitoring the effectiveness.

Indications for hospitalization.

Temporary disability, its terms, criteria of working capacity.

Dispensary observation.



Features of management of geriatric patients.

**Theme 24. Diagnostics and treatment of chronic non-calculous cholecystitis, pancreatitis at the outpatient stage. (2 hours)**

Symptoms, diagnosis of chronic non-calculous cholecystitis.

Treatment. Evaluation of working capacity.

Symptoms, diagnosis of chronic pancreatitis.

Treatment. Evaluation of working capacity.

Spa-resort treatment.

**Theme 25. Joint syndrome in the practice of the therapist. (2 hours)**

Joint syndrome as a manifestation of diffuse connective tissue damage and as an independent joint disease.

Inflammatory and non-inflammatory diseases of the joint system.

Arthritis: acute, subacute and chronic. Clinical and laboratory data confirming the diagnosis of arthritis.

Clinical, laboratory and radiological data in inflammatory, degenerative joint diseases in violation of purine metabolism.

Osteoarthritis. Etiology. Pathogenesis. Primary and secondary prevention. Diagnosis and treatment.

Gout. Symptoms. Diagnostics.

Rheumatoid arthritis. The most typical clinical signs of rheumatoid arthritis (RA). Course.

Diagnostic criteria of rheumatoid arthritis, degree of RA activity, degree of functional insufficiency of joints. Treatment.

Indications for hospitalization.

Temporary disability. Management of employment.

Permanent disability.

Secondary prevention. Medical examination, rehabilitation.

SPA-resort treatment.

**Section 5. Kidney and urinary tract diseases in the practice of district therapist.**

**Theme 26. General approach to patients with urinary syndrome at the outpatient stage. (2 hours)**

Differential diagnostics of urinary syndrome.

Changes in urinary sediment, characteristic of glomerulo- and pyelonephritis. Early diagnostics of these diseases in the latent course.

Acute and chronic pyelonephritis. Diagnostics. Classification.

Prevention, early diagnosis.

Medical examination, rehabilitation.

SPA-resort treatment.

Changes in urinary sediment, characteristic of nephropathies of different origin.

**Theme 27. Outpatient management of patients with glomerulonephritis (2 hours)**

Changes of the urinary sediment, which is characteristic for glomerulonephritis.

Acute glomerulonephritis. Symptoms. Diagnostics. Classification. Treatment.

Evaluation of temporary and permanent disability.

Prevention. Medical examination, rehabilitation.

SPA-resort treatment.

Chronic glomerulonephritis. Symptoms. Diagnostics. Classification. Outpatient treatment.

Prevention, early diagnosis, principles of nephroprotection

Medical examination, rehabilitation.

SPA-resort treatment.

**Theme 28. Tactics of management of patients with chronic kidney disease on an outpatient basis.**

Diagnosis of CKD at the outpatient stage.

Therapist management tactics in patients with early stages of CKD.

Nephro-and cardioprotection in CKD.

Features of the use of diuretic and antihypertensive drugs in patients with different stages of CKD.

## **B SEMESTER (34 hours)**

### **Section 5. Diseases of internal organs in pregnant women in the practice of district therapist**

#### **Theme 29. Features of somatic pathology during pregnancy Features of management of pregnant women. (4 hours).**

The importance of women's somatic health in the formation of a healthy generation.

Medical indications for termination of pregnancy.

Acquired heart disease, hypertension, kidney disease, lungs and bronchi, gastrointestinal tract, diabetes, anemia during pregnancy rheumatism. Principles of their treatment.

Features of dispensary observation of the therapist for pregnant women suffering from somatic diseases.

#### **Theme30. Drug therapy of diseases of internal organs in pregnant women. (2 hours)**

Classification of drugs for pregnant women

Indications and contraindications to the use of drugs depending on the period of pregnancy (antibiotics, sulfonamides, anti-inflammatory, antihypertensive, etc.).

Indications and contraindications to the use of drugs in nursing.

#### **Theme 31. Features of the course and treatment of somatic diseases in the elderly and senile age (2 hours)**

Age gradation.

Disease, the most typical ones for these ages.

Features of the course of somatic diseases, treatment, and therapy at a younger age.

Social aspects of disability in these age groups.

Ethics and deontology.

### **Theme 32. Anemic syndrome in outpatient practice. (4 hours)**

Diagnostic criteria for iron deficiency anemia.

Diagnostic criteria in 12 (folic) deficiency anemia.

Diagnostic criteria for hemolytic / aplastic anemia.

Features of laboratory studies of blood analysis, sternal punctate.

Management of patients at outpatient unit. Indications for admission. Examination of working capacity

SPA-resort treatment.

Prophylactic medical examination. Features of management of elderly patients

### **Theme 33. Syncopal conditions in the practice of therapist. (4 hours)**

Hemodynamic essence of syncopal conditions.

The etiology of this syndrome.

Differential diagnostics of syncopal conditions at the outpatient stage.

Fainting as a severe prognostic sign in both cardiac and extracardial pathology.

Tactics of management of patients with syncopal conditions.

Primary and secondary screening of syncopal conditions.

Emergency conditions in cardiology, neurology, obstetrics, surgical practice and primary care at the prehospital stage.

Expert questions are solved in the context of the underlying disease complicated by syncopal conditions.

### **Theme 34. Alcoholic disease in the practice of the district therapist (2 hours)**

Criteria of alcoholic disease.

Target organ damages in alcoholic disease.

Features of the clinical course of diseases of the pancreas, kidneys, liver, heart in alcohol abusers.

**Theme 35. Diagnostics of type 2 diabetes in the practice of therapist at the outpatient stage. (4 hours)**

Criteria for the diagnosis of type 2 diabetes in accordance with the 2014 National recommendations.

Management of patients with type 2 diabetes at outpatient unit.

Criteria for type 2 diabetes in pregnant women.

Complication of diabetes.

Modern medications, monitoring the effectiveness.

Indications for admission.

Temporary disability, terms, criteria of working capacity.

Dispensary observation.

**Theme 36. Outpatient management of patients with post-gastroresection and post-cholecystectomy syndrome in outpatient conditions (2 hour)**

Classification, symptoms, diagnostics postgastrectomy syndrome.

Classification, symptoms, diagnostics of postcholecystectomy syndrome.

Treatment. Examination of working capacity.

Spa treatment.

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

**Practical classes (159 hours)**

**A semester (54 hours)**

### **Section I. General principles of organization of work of outpatient clinics**

#### **Lesson 1. Organization of therapeutic care in the clinic. (4 hours)**

1. Structural units of the clinic.
2. Day inpatient ambulatory (DIA). Indications, selection and procedure for referral of patients to the DIA.
3. Hospital at home.
4. The structure of the department of general medical practice and regulations on the organization. Normative documents regulating the activities of a general practitioner.
5. Procedures for provision and approved standards in the treatment of patients at the outpatient stage. Clinical guidelines.

#### **Lesson 2. Regulatory and legal issues in the work of district physician (4 hours)**

1. Preventive orientation of health care. Risk factors for noncommunicable diseases. "Dispensary" in the direction of a doctor-therapist clinic. Rehabilitation at the outpatient stage.
2. Objectives and duties of the district physician of outpatient unit.
3. Organization of work:
  - Evaluation of working capacity
  - Composition and functions of the medical commission
  - Procedure for referral to MSE
  - Analysis of morbidity in the serviced area
  - The order of a direction on sanatorium treatment

- Drug provision, procedure and rules of prescribing
- Medical documentation, basic forms in the work of the district therapist.

### **Lesson 3. Preventive and anti-epidemic measures at the medical area (4 hours)**

1. Prevention, the concept of risk factors, primary prevention
2. Medical examination
3. Medical examination, additional medical examination of working persons
4. Rehabilitation: types, stages, principles
5. Cancer alertness
6. Anti-tuberculosis measures - the role of the therapist

### **Lesson 4. SPA-resort treatment for diseases of internal organs (4 hours)**

1. Regulatory framework for SRT in the work of the therapist.
2. Classification of resorts and sanatoria
3. Indications and contraindications for SPA-resort treatment.
4. Local sanatoria and resorts.

### **Lesson 5. Clinical and expert work. (4 hours).**

1. Evaluation of temporary disability
2. Medical commission, functions and tasks.
3. Normative documents on ETD. Average duration of temporary disability.
4. Preparation of documents for medical examination: forms of disability, referral to SME, individual rehabilitation program.
5. Sanatorium-resort selection.
6. Drug provision.

### **Lesson 6. Issues of medical and social expertise. (4 hours)**

1. Evaluation of permanent disability. The procedure for referral to medical and social examination. The procedure of medical and social examination.

2. Regulations on the person recognition as the disabled person.
3. Classification and time criteria used in the implementation of medical and social assessment. Basic concepts: disabled person, disability, restriction of life activity, degree of restriction of life activity, social insufficiency, social protection, social support.
4. Classification of violations of the human body basic functions. Classification of the main categories of life quality (ability to self-service, ability to move, ability to learn, ability to work, ability to orientation, ability to communicate, ability to control their behavior).
5. Criteria for determining disability groups (I, II, III). Causes of disability. General principles for solving particular issues of the MSE. Rehabilitation programs for the disabled persons. The role of district doctor in the rehabilitation of disabled people.

## **Section 2. Cardiology in outpatient practice of the therapist.**

### **Lesson 7. Syndrome of arterial hypertension in ambulatory practice. (4 hours)**

1. The program of differential diagnostic search of diseases with arterial hypertension in a polyclinic;
2. Identification of persons with arterial hypertension in outpatient unit;
3. Classification of hypertension;
4. Symptoms and complications of hypertension;
5. Formulation of the diagnosis of hypertension;
6. The differential diagnostics of hypertension with a hypertension of renal origin in clinic;
7. Renovascular hypertension diagnosis in outpatient;
8. Hemodynamic hypertension;
9. Differential diagnostics of hypertension with diseases of the endocrine system (pheochromocytoma, Kon's syndrome, Cushing's disease);
10. Features of the course of hypertension in the elderly and senile age;
11. Evaluation of temporary and permanent disability;



12. SPA-resort treatment

13. Prophylactic medical examination.

**Lesson 8. Differentiated approach in the treatment of hypertension. Features of treatment of elderly patients and pregnant women with hypertension syndrome (4 hours)**

1. Classification of antihypertensive drugs;
2. Non-pharmacological methods of treatment of hypertension in outpatient unit;
3. Treatment of hypertension depending on the stage;
4. Indications for admission;
5. Emergency care for patients with hypertensive crisis at home and in clinic;
6. Complications of drug therapy in hypertensive disease;
7. Features of treatment of elderly patients and pregnant women with hypertension syndrome.

**Lesson 9. Acute coronary syndrome in outpatient practice. Diagnosis and emergency care for myocardial infarction on an outpatient basis. (4 hours)**

1. Angina. The criteria for diagnostics. Classification of coronary artery disease.
2. Risk factors for coronary heart disease.
3. Diagnosis of unstable angina at the outpatient stage. Indications for admission.
4. Differential diagnostics of angina pectoris in outpatient settings. Differential diagnostics of pain in the left half of chest.
5. Diagnostic tests (VEM, drug tests, myocardial stress scintigraphy)
6. Diagnosis of cardiac arrest in the prehospital setting.
7. Diagnostic markers of myocardial infarction.
8. Emergency therapy for angina attack at home and in clinic.
9. The main groups of antianginal drugs and their side effects.
10. Indications and contraindications for surgical treatment of angina.
11. Analysis of the ECG.

12. Secondary prevention of coronary heart disease.
13. Evaluation of working capacity.
14. Features of management of elderly patients.

**Lesson 10. Tactics of management of patients with acute coronary syndrome at the prehospital stage (4 hours).**

- 1. Acute coronary syndrome. Definition, clinical and diagnostic criteria.**
- 2. Differential diagnosis with myocardial infarction.**
- 3. Emergency care at the prehospital stage.**
- 4. Issues of hospitalization.**
- 5. Temporary disability**
- 6. Secondary prevention**
- 7. Spa treatment.**

**Lesson 11. Myocardial infarction in the outpatient practice of therapist. (4 hours)**

1. Early symptoms of myocardial infarction. Atypical form of myocardial infarction.
2. Tactics of the doctor-therapist of clinic for suspected myocardial infarction. Therapeutic measures at the prehospital stage.
3. Tactics of management of patient with myocardial infarction after discharge from hospital or department of rehabilitation of cardiological sanatorium. Treatment.
4. Temporary disability, its terms in small-focal, large-focal, transmural, uncomplicated, complicated myocardial infarction.
5. Indications for direction to MSE.
6. Dispensary observation within the first 6 months after discharge to work.
7. Secondary prevention

8. SPA-resort treatment.

**Lesson 12. Issues of rehabilitation of post-infarction patients at the outpatient stage. (4 hours)**

1. Polyclinic stage of rehabilitation.
2. The main methods of physical rehabilitation in the clinic, organization of control over its conduct.
3. Psychological and social-labor rehabilitation.
4. Clinical rehabilitation.
5. Prophylactic medical examination.

**Lesson 13. Arrhythmias due to violation of excitability and conductivity of myocardium. (4 hours)**

1. Tactics of doctor in clinics in identifying patient with an arrhythmic syndrome.
2. Atrial fibrillation. Management of patients with a permanent form of atrial fibrillation in a polyclinic.
3. Extrasystole. Classification. Treatment in outpatient care.
4. Evaluation of working capacity. Clinical rehabilitation.
5. Heart block. Classification. Treatment in a polyclinic.
6. Prophylactic medical examination.
7. SPA-resort treatment.
8. The order of Ministry of health of Russia N 711H from 09.11.2012. Standard of primary health care for supraventricular tachycardia.
9. The order of Ministry of health of Russia N 787H from 09.11.2012. Standard of primary care for ventricular tachycardia.
10. Order of Ministry of health and social development of the Russian Federation of September 25, 2006 No. 679. Standard of care for patients with cardiac arrhythmias and conduction, unspecified

11. Order of the Ministry of health and social development of the Russian Federation No. 580 of 14.09.2005. Standard of care for patients with sinus node weakness syndrome.

**Lesson 14. Chronic heart failure syndrome in outpatient practice. Acute decompensation of cardiac activity. (4 hours)**

1. Heart failure (HF). Clinical syndrome. Differential diagnosis.
2. Classification.
3. Instrumental methods of research in outpatient care.
4. Features of management of elderly and senile patients.
5. Basic principles of treatment. The main groups of drugs taken in the treatment of HF.
6. Complications of drug therapy
7. Emergency care for cardiac asthma and pulmonary edema at home and in clinic.
8. Supportive therapy, tactics of its implementation. Prevention. Rehabilitation measures. Prevention of complications of long-term drug therapy.
9. Dispensary observation. School of CHF patients. Features of management of geriatric patients.
10. Temporary disability.
11. Permanent disability. Indications for direction to MSE.
12. SPA-resort treatment.
13. Primary and secondary prevention of sudden death in patients with heart failure.

Regulatory documents:

- \* Order of the Ministry of health of Russia “on approval of the standard of primary specialized medical care for heart failure”.
- \* National guidelines for the diagnosis and treatment of chronic heart failure (2013).

**Lesson 15. Disease of the myocardium. Myocarditis in outpatient practice. (4 hours)**

1. Myocarditis: concept, incidence, clinical classification.
2. Etiology, pathogenesis of myocarditis.
3. Markers of acute and chronic myocardial inflammation.
4. Algorithm of diagnostics of chronic infection-induced myocarditis.
5. Complaints, data of physical examination at chronic infection-induced myocarditis.
6. Instrumental verification of the heart dysfunction.
7. Diagnosis of cardiomyocyte damage and the presence of immuno-inflammatory process.
8. Verification of inflammation and fibrosis in the myocardium.
9. Analysis of diagnostic errors.
10. Signs of persistent clinical and laboratory remission of the inflammatory process in the myocardium.
11. Adverse factors affecting the outcome of myocarditis.
12. Treatment and rehabilitation of patients.

**Lesson 16. Cardiomyopathy, myocardiodystrophy, diagnosis, treatment in the clinic (4 hours).**

1. The main symptoms of each pathology variants.
2. The scope of examination in the clinic for diagnosis.
3. Indications for hospitalization.
4. Treatment, differences in the treatment of these disease variants.
5. Principles of evaluation of temporary disability, factors determining the labor forecast.
6. Medical and social examination.

**Lesson 17. Coronary heart disease in outpatient practice of therapist (4 hours)**

1. Pain in the left half of the chest. Differential diagnostics.
2. The diagnosis of coronary artery disease in clinic. Classification.
3. Differential diagnostics.

4. Tactics of treatment. The indications for admission with CHD. Treatment in outpatient care unit.
5. Prophylactic medical examination.
6. Primary and secondary prevention.
7. Evaluation of temporary disability. MSE.
8. Rehabilitation. SPA-resort treatment.

**Credit - 9 semester - 2 hours**

## **B SEMSTER (54 hours)**

### **Section 3. Respiratory diseases in outpatient practice of therapist**

#### **Lesson 18. Common syndromes in diseases of respiratory system (General toxic syndrome, low-grade fever, a febrile syndrome) (4 hours)**

1. Causes of prolonged fever and subfebrile conditions: focal and generalized infection, connective tissue disease, paraneoplastic processes, and system blood diseases, lymphoproliferative processes, and allergic reactions.
2. Infectious diseases as a cause of prolonged fever and low-grade fever in the practice of the therapist: typhoid-paratyphoid group, brucellosis, "child" infections in adults, its diagnosis. Tactics of therapist at their identification.
3. Infective endocarditis, connective tissue disease, accompanied by fever and low-grade fever. Methods of their diagnostics.
4. Low-grade fever and fever with paraneoplastic processes. Scope of examination for diagnosis.
5. Blood diseases associated with fever and subfebrile conditions. Tactics of the doctor-therapist in establishing the diagnosis.
6. Lymphoproliferative diseases as the cause of fever, detection methods. The tactics of the therapist in establishing the diagnosis.
7. Fever, lymphadenopathy, weight loss and other symptoms suspected of HIV infection. Methods of examination to clarify the diagnosis. Tactics therapist with a positive serological reaction.

## **Lesson 19. Frequent diseases of the ENT organs in the practice of the district therapist (4 hours)**

1. Catarrhal, tonsillar syndrome.
2. Angina. General symptom. Local changes of tonsils (lymphoid formations of the oropharynx), classification. The difference between the symptoms of angina and other diseases occurring with the pathology of lymphoid formations in oropharynx, methods of diagnostics of these diseases.
3. Examination of the patient with angina.
4. Treatment: medical and non-drug, general and local ones.
5. Tactics of district therapist in case of suspected diphtheria and positive sowing from the throat.
6. Complications of angina - early and late ones.
7. Temporary disability during pregnancy and its timing.
8. Chronic tonsillitis. Symptoms. Diagnostics. Classification.
9. Indications for hospitalization.
10. Diagnosis. Treatment.
11. Prophylactic medical examination. Primary and secondary prevention.
12. Examination of temporary disability.

## **Lesson 20. ARVI in ambulatory practice of therapist. (4 hours)**

1. Classification of ARVI.
2. Symptoms of the main ARVI.
3. Differential diagnosis with the flu.
4. Angina. Chronic tonsillitis.
5. Primary prevention. Diagnosis. Treatment.
6. Indications for hospitalization.
7. Prophylactic medical examination. Prevention.
8. Examination of temporary disability.

## **Lesson 21. Bronchoobstructive syndrome. (4 hours)**

1. Determination of the origin and clinical signs of bronchoobstructive syndrome. The mechanisms of its occurrence, role of inflammation, bronchospasm, diffuse pneumosclerosis, limited (local) obturation.
2. Identification of possibilities in clinic, methods of examination.
3. Diseases associated with bronchial obstruction syndrome. Differential diagnostics with COPD, asthma, lung cancer.
4. Chronic obstructive pulmonary disease, management in outpatient care. Indications for hospitalization of patients with COPD.
5. Treatment. Prevention of exacerbations.
6. Examination of temporary and permanent disability.
7. Prophylactic medical examination. Rehabilitation.
8. SPA-resort treatment.

## **Lesson 22. Bronchitis acute and chronic (4 hours).**

1. Acute bronchitis. Symptoms, treatment.
2. Evaluation of temporary disability, indications for employment.
3. Primary and secondary prevention.
4. Definition of chronic bronchitis. Criteria of severity of the disease. Forms of the disease in accordance to classification.
5. Clinical, laboratory and instrumental methods of examination for the diagnosis of simple and purulent bronchitis.
6. Treatment during periods of exacerbation and remission.
7. Early symptoms of respiratory failure, pulmonary hypertension. Methods of their detection in outpatient unit.
8. Temporary disability, the criteria for its duration. Criteria of recovery.
9. Indications for a rational employment.
10. Indications for the establishment of disability groups.
11. Prophylactic medical examination. Secondary prevention.
12. Spa-resort treatment.



### **Lesson 23. Bronchial asthma - management in outpatient care (4 hours)**

1. Differential diagnostics of bronchospastic syndrome.
2. Examination in outpatient care for verification of diagnosis and form of the disease.
3. Indications for hospitalization of patients with BA.
4. Treatment. Prevention of exacerbations. Treatment of bronchial asthma in the intercept period, relief of the attack in outpatient care.
5. Evaluation of temporary and permanent disability.
6. Prophylactic medical examination. Secondary prevention. Rehabilitation.
7. Tactics of the district therapist in case of suspicion of professional  
Ethnology of the disease.
8. SPA-resort treatment.

### **Lesson 24. Outpatient treatment of pneumonia, tactics of doctor at clinic (4 hours)**

1. Community-acquired pneumonia. Etiology. Diagnostics.
2. Indications for hospitalization.
3. The state of emergency. Hospital at home.
4. Empirical antibiotic therapy in the clinic.
5. Evaluation of temporary disability.
6. Prophylactic medical examination. Rehabilitation.
7. Spa-resort treatment.

## **Section 4. Diseases of the gastrointestinal tract in outpatient practice of therapist**

### **Lesson 25. Outpatient management of patients with gastric ulcer and duodenum (4 hours)**

1. Differential diagnostics of abdominal pain syndrome in diseases of the gastrointestinal tract on outpatient basis.
2. Pain abdominal syndrome in esophagitis, peptic ulcer, gastritis, pancreatitis.

3. Gastric and duodenum ulcers. Diagnosis in outpatient care.
4. Indications for hospitalization.
5. The state of emergency. Hospital at home.
6. Treatment in clinic.
7. Examination of temporary disability.
8. Prophylactic medical examination. Rehabilitation.
9. SPA-resort treatment.
10. Order of the Ministry of health and social development of Russia № 241 of 22.11.2004 "on approval of the standard of medical care for patients with gastric ulcer and duodenal ulcer"
11. Clinical recommendations of the Russian gastroenterological Association for the diagnosis and treatment of peptic ulcer disease. 2013.
12. Clinical recommendations of the Russian gastroenterological Association for the diagnosis and treatment of erosive and ulcerative lesions of the stomach caused by taking non-steroidal anti-inflammatory drugs 2014.

**Lesson 26. Outpatient management of patients with esophagitis, GERD. (4 hours).**

1. Differential diagnostics of sternal pain.
2. Diagnosis in outpatient unit.
3. Indications for hospitalization.
4. The state of emergency. Hospital at home.
5. Treatment in clinic.
6. Examination of temporary disability.
7. Prophylactic medical examination. Rehabilitation.
8. SPA-resort treatment.
9. Order of the Ministry of health of Russia № 247 of 22.11.2004 "on approval of the standard of medical care for patients with gastroesophageal reflux".
10. Clinical recommendations of the Russian gastroenterological Association for the diagnosis and treatment of eosinophilic esophagitis

### **Lesson 27. Outpatient management of patients with gastritis (4 hours)**

1. Differential diagnostics of pain in epigastric area.
2. Chronic gastritis. Diagnostics in an outpatient unit. Indications for hospitalization.
3. The state of emergency. Hospital at home.
4. Treatment in the clinic.
5. Evaluation of temporary disability.
6. Prophylactic medical examination. Rehabilitation.
7. SPA-resort treatment.
8. Order of the Ministry of health of Russia № 248 of 22.11.2004 "on approval of the standard of medical care for patients with chronic gastritis, duodenitis, dyspepsia".

### **Lesson 28. Outpatient management of patients with pancreatitis (4 hours)**

1. Differential diagnostics of abdominal pain syndrome. Diagnosis in an outpatient setting.
2. Indications for hospitalization.
3. The state of emergency. Hospital at home.
4. Treatment in the clinic.
5. Evaluation of temporary disability.
6. Prophylactic medical examination. Rehabilitation.
7. SPA-resort treatment.
8. Clinical guidelines of the Russian gastroenterological Association for the management of patients with abdominal pain, 2015.

### **Lesson 29. General approach to patients with chronic diffuse liver diseases at outpatient stage. (4 hours)**

1. Differential diagnostics of pain syndrome in the right hypochondrium.
2. Biochemical analysis in liver diseases.

3. Violation of the hepatocyte integrity: cytolysis syndrome, increased permeability, hyperfermentemia.
4. Excretory-biliary syndrome: the ratio of enzyme activity and bilirubin fractions.
5. Inflammatory syndrome: total serum protein and protein fractions, types of proteinograms.
6. Enzymodiagnosics of the liver diseases.
7. The algorithm of differential diagnostics of jaundice.
8. Syndrome of cytolysis, cholestasis, mesenchymal-inflammatory syndrome of hepatocellular failure, portal hypertension. Differential diagnostics, the program of patient examination at the outpatient stage.
9. Indications for hospitalization. Emergency care for a patient with biliary colic.

**Lesson 30. Chronic diffuse liver disease at the outpatient stage. Chronic hepatitis. (4 hours)**

1. Chronic hepatitis. Etiology. Symptoms, diagnosis, classification, differential diagnostics.
2. Treatment of chronic hepatitis of various etiologies.
3. Fatty hepatosis. Diagnostics. Treatment.
4. Examination of temporary disability.
5. Prophylactic medical examination.
6. Rehabilitation.

**Lesson 31. Chronic diffuse liver disease at the outpatient stage. Cirrhosis. (4 hours)**

1. Cirrhosis. Symptoms, diagnostics, classification, differential diagnostics.
2. Treatment of liver cirrhosis.
3. Evaluation of temporary disability.
4. Prophylactic medical examination. Rehabilitation.

5. SPA-resort treatment.

**Credit at the end of semester – 2 hours**

**C semester - 51 hours**

**Lesson 32. Tactics of management of patients with functional disorders of gastrointestinal tract at the outpatient stage. (4 hours)**

1. Functional dyspepsia
2. Functional constipation.
3. Irritable bowel syndrome,
4. Biliary dyskinesia, Oddi's sphincter dysfunction.
5. Treatment. Modern medications, monitoring of effectiveness.
6. Indications for hospitalization.
7. Temporary disability, its terms, criteria of working capacity.
8. Dispensary observation.
9. Features of management of geriatric patients.

**Lesson 33. Diagnosis and treatment of chronic non-calculous cholecystitis, pancreatitis at the outpatient stage. (4 hours)**

1. Symptoms, diagnosis of chronic non-calculous cholecystitis.
2. Differential diagnostics of pain in the right hypochondrium.
3. Treatment.
4. Evaluation of working capacity.
5. Symptoms, diagnosis of chronic pancreatitis.
6. Differential diagnostics of abdominal pain syndrome.
7. Treatment.
8. Evaluation of working capacity.
9. SPA-resort treatment.
10. Order of the Ministry of health and social development of Russia № 240 of 22.11.2004 "on approval of the standard of medical care for patients with pancreatitis"

11. Order of the Ministry of health of Russia № 262 of 23.11.2004 "on approval of the standard of medical care for patients with cholecystitis"

12. Clinical recommendations of the Russian gastroenterological Association for the diagnosis and treatment of chronic pancreatitis. 2014.

### **Lesson 34. Tactics of management of patients with inflammatory bowel diseases at the outpatient stage. (4 hours).**

1. Ulcerative colitis, Crohn's disease. Symptoms, diagnosis. Clinical picture and algorithm of differential diagnostics of irritable bowel syndrome, ulcerative colitis, Crohn's disease. Indications for hospitalization.

2. Treatment in outpatient care. Drug and non-drug therapy. Up-to-date medications, monitoring of effectiveness.

3. Tactics of doctor in the development of complications at the prehospital stage. Emergency care for the patient with bleeding from the lower gastrointestinal tract at the prehospital stage.

4. SPA-resort treatment.

5. Features of management of elderly patients.

6. Examination of temporary disability.

7. Indications for the direction to MSE Bureau.

8. Regulatory documents:

\* Clinical recommendations of the Russian gastroenterological Association for the diagnosis and treatment of adult patients with Crohn's disease. 2013.

\* Clinical recommendations of the Russian gastroenterological Association for the diagnosis and treatment of patients with irritable bowel syndrome 2014.

\* Clinical guidelines of the Russian gastroenterological Association for the diagnosis and treatment of chronic constipation in adult patients 2014.

\* Clinical guidelines of the Russian gastroenterological Association for the diagnosis and treatment of adult patients with ulcerative colitis, 2015.

### **Section. Joint syndrome in the practice of the district therapist.**

### **Lesson 35. Differential diagnosis of the joint syndrome. (4 hours)**

1. General approach to patients with joint pain at the outpatient stage. Joint or extra-joint, acute or chronic, inflammatory or non-inflammatory, localized or common lesion.
2. Differential diagnostics of pain in bones, joints, muscles, the patient's examination program. Analysis of synovial fluid.
3. Joint syndrome as a manifestation of diffuse connective tissue damage and as an independent joint disease.
4. Features of joint syndrome in inflammatory and non-inflammatory diseases of the joints.
5. Arthritis: acute, subacute, chronic.
6. Clinical and laboratory data confirming the diagnosis of arthritis.
7. Reactive arthritis. Symptoms. Diagnostics.
8. Indications for hospitalization.
9. Temporary disability. Management of employment.
10. Permanent disability.
11. Primary and secondary prevention. Medical examination, rehabilitation.
12. SPA-resort treatment.

### **Lesson 36. Joint syndrome in the practice of therapist. Osteoarthritis. Gout. (4 hours)**

1. Joint syndrome as a manifestation of degenerative joint disease.
2. Osteoarthritis. Etiology. Pathogenesis.
3. Diagnostics and treatment.
4. Temporary disability. Management of employment.
5. Permanent disability.
6. Primary and secondary prevention. Medical examination, rehabilitation. Indications for joint replacement.
7. SPA-resort treatment.
8. Inflammatory and non-inflammatory diseases of the joint system.

Microcrystalline arthritis.

9. Gout. Symptoms. Diagnostics.
10. Emergency care for a patient with acute gout arthritis at the prehospital stage.
11. Temporary disability. Management of employment.
12. Permanent disability.
13. Secondary prevention. Medical examination, rehabilitation.
14. Spa-resort treatment.
15. Federal clinical guidelines for the diagnosis and treatment of osteoarthritis 2013.
16. Federal clinical guidelines for the diagnosis and treatment of gout 2014.

### **Lesson 37. Joint syndrome in the practice of the therapist. (4 hours)**

1. Joint syndrome as a manifestation of diffuse connective tissue damage.
2. Differential diagnostics of inflammatory diseases of the joint system.
3. Rheumatoid arthritis. Symptoms, diagnostics of rheumatoid arthritis (RA).
4. Course.
5. Diagnostic criteria of rheumatoid arthritis, degree of RA activity, degree of functional insufficiency of joints.
6. Treatment.
7. Indications for hospitalization.
8. Temporary disability. Management of employment.
9. Permanent disability.
10. Secondary prevention. Medical examination, rehabilitation.
11. SPA-resort treatment.
12. Federal clinical guidelines for the diagnosis and treatment of rheumatoid arthritis 2013.

### **Section 5. Kidney and urinary tract diseases in the practice of district therapist.**



**Lesson 38. General approach to patients with urinary syndrome at the outpatient stage. (4 hours)**

1. Differential diagnostics of urinary syndrome.
2. Changes in urinary sediment, characteristic of nephropathies of different origin.
3. Changes in urinary sediment, characteristic of pyelonephritis.
4. Acute and chronic pyelonephritis. Diagnostics. Classification.
5. Prevention, early diagnostics.
6. Medical examination, rehabilitation.
7. SPA-resort treatment.

**Lesson 39. Acute and chronic glomerulonephritis. (4 hours)**

1. Acute glomerulonephritis. Symptoms. Diagnostics. Classification.
2. Examination of temporary and permanent disability.
3. Prevention. Medical examination, rehabilitation.
4. SPA-resort treatment.
5. Chronic glomerulonephritis. Symptoms. Diagnostics. Classification.
6. Medical examination, rehabilitation.
7. SPA-resort treatment.
8. Clinical guidelines for the diagnosis and treatment of membranoproliferative glomerulonephritis (2013).

**Lesson 40. Diagnosis of CKD at the outpatient stage. (4 hours).**

1. Criteria for CKD diagnosis.
2. Therapist management tactics in patients with early stages of CKD.
3. Nephro- and cardioprotection in CKD.
4. Features of the use of diuretic and antihypertensive drugs in patients with different stages of CKD.
5. Prevention, early diagnosis, principles of nephroprotection
6. Normative documents:

1. National recommendations. Chronic kidney disease: basic principles of screening, diagnosis, prevention and treatment approaches (2013).
2. Order of the Ministry of health of Russia N1270n of 20.12.2012 Standard of primary health care for chronic kidney disease stage 4
3. Order of the Ministry of health of Russia N1269n of 20.12.2012 Standard of primary health care in chronic kidney disease stage 5 in the predialysis period.
4. National guidelines "Cardiovascular risk and chronic kidney disease: strategies for cardio-nephroprotection" (2014).

## **Section 5. Diseases of internal organs in pregnant women, the elderly and senile in the practice of district therapist**

### **Lesson 41. Features of somatic pathology during pregnancy. (4 hours).**

1. The importance of women's somatic health in the formation of healthy generation.
2. Medical indications for pregnancy termination.
3. Rheumatism, acquired heart disease, hypertension, kidney disease, lungs and bronchi, gastrointestinal tract, diabetes, anemia during pregnancy. Principle of treatment.
4. Features of dispensary observation of the therapist for pregnant women suffering from somatic diseases.

### **Lesson 42. Drug therapy of internal organ diseases in pregnant women. (4 hours)**

1. Classification of drugs for pregnant women
2. Indications and contraindications for the use of drugs depending on the period of pregnancy (antibiotics, sulfonamides, anti-inflammatory, antihypertensive, etc.).
3. Indications and contraindications for the use of drugs in nursing.

### **Lesson 43. Features of the course and treatment of somatic diseases in the elderly and senile age (4 hours)**

1. Age gradation.
2. Disease, the most typical ones for these ages.
3. Features of the course of somatic diseases, treatment, unlike therapy at a younger age.
4. Social aspects of disability in these age groups.
5. Ethics and deontology.

#### **Lesson 44. Anemic syndrome in outpatient practice. (4 hours)**

1. Diagnostic criteria for iron deficiency anemia
2. Diagnostic criteria in B-12 (folic) deficiency anemia
3. Diagnostic criteria for hemolytic/aplastic anemia
4. Features of laboratory studies of blood analysis, sternal punctate.
5. Management of patients on an outpatient basis
6. Indications for hospitalization
7. Evaluation of working capacity
8. SPA-resort treatment.
- 9.. Prophylactic medical examination
10. Features of management of elderly patients
11. Order of the Ministry of health and social development of Russia № 169 of 28.02.2005 " on approval of the standard of medical care for patients with iron deficiency anemia»
12. Federal clinical guidelines for the diagnosis and treatment of iron deficiency anemia 2014.

**Credit at the end of semester – 2 hours**

#### **11 semester - 51 hours**

#### **Lesson 45. Metabolic syndrome at the outpatient stage (4 hours)**

1. The problem of overweight and obesity in outpatient practice.
2. Diagnostic value of determination of cholesterol and its fractions in blood lipoproteins.

3. The role of diet in maintaining health.
4. Diagnostics of individual disorders of lipid metabolism.
5. Treatment of lipid metabolism disorders, lipid-lowering drugs. Procedures for the provision and approved standards in the treatment of patients at the outpatient stage.
6. Dispensary observation. Features of management of elderly patients.
7. Regulatory documents:
  - \* The order of the Ministry of health of Russia N 752n of 09.11.2012 "about the approval of the standard of primary health care at obesity»
  - \* Order of the Ministry of health and social development of Russia No. 239 of 22.11.2004 " on approval of the standard of medical care for patients with atherosclerosis»
  - \* "Diagnosis and correction of lipid metabolism disorders for the prevention and treatment of atherosclerosis" /Russian recommendations V revision – Moscow, 2012.
  - \* Generalized guidelines for the treatment of familial hypercholesterolemia of the International Foundation for familial hypercholesterolemia (2014).

#### **Lesson 46. Alcoholic disease in the practice of district therapist (4 hours)**

1. Criteria of alcoholic disease. Diagnostics of alcoholism.
2. Lesions of target organs in alcoholic disease: heart, kidneys, liver, pancreas. Peculiarities of symptoms.
3. Alcoholic hepatitis, fatty hepatosis.
4. Alcoholic pancreatitis.
5. Peculiarities of CHD.

#### **Lesson 47. General approach to patients with diabetes mellitus at the outpatient stage. (4 hours)**

1. Diagnostic criteria of type I and type II diabetes. Hyperglycemia and glucosuria. Effective control of hyperglycemia:

2. Determination of glycosylated hemoglobin, fructosamine, lipid profile.
3. Assessment of complications of diabetes.
4. Clinical picture, algorithm of diagnosis and differential diagnostics of patients with diabetes.
5. Indications for hospitalization. Emergency care for a patient with diabetic ketoacidosis, hypoglycemic coma at the prehospital stage.
6. Clinical guidelines. Algorithms of specialized medical care for patients with diabetes. 7th edition. 2015.
7. Clinical guidelines for the diagnosis, screening, prevention and treatment of chronic kidney disease in patients with diabetes. 2015.
8. Clinical guidelines for the diagnosis and treatment of diabetic foot syndrome. 2015.
9. Clinical recommendations Russian national consensus "Gestational diabetes mellitus: diagnosis, treatment, postpartum follow-up". 2013.

**Lesson 48. Outpatient management of patients with post-gastroresection and post-cholecystectomy syndrome in outpatient conditions (4 hours)**

1. Classification. Symptoms. Diagnosis of post-gastrectomy syndrome.
2. Classification of post-cholecystectomy syndrome.
3. Symptoms. Diagnostics.
4. Treatment.
5. Evaluation of working capacity.
6. SPA-resort treatment.

**Lesson 49. Organization of the "school of the patient" (AH, COPD, CHD, DM). (4 hours)**

1. "School of the patient" with AH
2. "School of the patient" with COPD
3. "School of the patient" with coronary heart disease
4. "School of the patient" with DM

### **Lesson 50. Neurocirculatory dystonia (4 hours)**

1. Neurocirculatory dystonia. Etiology. Pathogenesis.
2. Differential diagnostics and treatment.
3. Examination of working capacity.
4. Prevention.
5. Prophylactic medical examination

### **Lesson 51. Emergency care at the pre-hospital stage (4 hours)**

1. The state of emergency in the influenza and acute respiratory viral infections: infectious-toxic shock, neurotoxicity, convulsions.
2. Emergency conditions in cardiology, pulmonology, gastroenterology, Nephrology, Hematology,
3. Emergency conditions in diabetes.
4. Acute allergic reaction

### **Final lesson at the end of the semester – 3 hours**

**(defense of educational outpatient cards, presentation on the essay topic).**

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

Educational and methodological support of independent work of students in the discipline "Outpatient therapy," 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 GOALS

№ п/п	Controlled modules / sections / topics of discipline	Codes and stages of the formation of competencies	Evaluation tools - name		
			current control	intermediate certification	
1	Module I. General principles of organization of work of outpatient clinics. Module 2. Cardiology in the outpatient practice of the therapist Module 3. Diseases of the respiratory organs in the outpatient practice of the therapist Module 4. Diseases of the gastrointestinal organs in the outpatient practice of the therapist Module 5. Kidney and urinary tract diseases in the practice of the district therapist. Module 6. Diseases of the internal organs in pregnant women and the elderly in the practice of the district therapist Module 7. Endocrinology	the ability and willingness to conduct of preventive medical examinations, clinical examinations and dispensary observations. (PC – 2)	<b>To know</b>	OQ-1 Interview	Exam questions 1-25
			<b>Be able to</b>	PW-1 Test	PW-1 Test
			<b>To master</b>	OQ-3 Report Presentation	YO-2 Colloquium
2	Module I. General principles of organization of work of outpatient clinics. Module 2. Cardiology in the outpatient practice of the therapist Module 3. Diseases of the respiratory organs in the outpatient practice of the therapist Module 4. Diseases of the gastrointestinal organs in the outpatient practice of the therapist Module 5. Kidney and urinary tract diseases in the practice of the district therapist. Module 6. Diseases of the internal organs in pregnant women and the elderly in the practice of the district therapist Module 7. Endocrinology	the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	<b>To know</b>	OQ-1 Interview	Exam questions 26-64
			<b>Be able to</b>	PW-1 Test	PW-1 Test
			<b>To master</b>	OQ-3 Report Presentation	YO-2 Colloquium
3	Module I. General principles of organization of work of outpatient clinics. Module 2. Cardiology in the outpatient practice of the therapist Module 3. Diseases of the respiratory organs in the outpatient practice of the therapist Module 4. Diseases of the gastrointestinal organs in the outpatient practice of the therapist Module 5. Kidney and urinary tract diseases in the practice of the	the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and	<b>To know</b>	OQ-1 Interview	Exam questions 64-100
			<b>Be able to</b>	PW-1 Test	PW-1 Test
			<b>To master</b>	OQ-3 Report Presentation	YO-2 Colloquium

	district therapist. Module 6. Diseases of the internal organs in pregnant women and the elderly in the practice of the district therapist Module 7. Endocrinology	problems related to health , the 10th review. (PC – 6)			
4	Module I. General principles of organization of work of outpatient clinics. Module 2. Cardiology in the outpatient practice of the therapist Module 3. Diseases of the respiratory organs in the outpatient practice of the therapist Module 4. Diseases of the gastrointestinal organs in the outpatient practice of the therapist Module 5. Kidney and urinary tract diseases in the practice of the district therapist. Module 6. Diseases of the internal organs in pregnant women and the elderly in the practice of the district therapist Module 7. Endocrinology	readiness for the examination of temporary disability, participation in the conduction of medical and social expert reviews, detection of human biological death (PC – 7)	<b>To know</b>	OQ-1 Interview	Exam questions 1-25
			<b>Be able to</b>	PW-1 Test	PW-1 Test
			<b>To master</b>	OQ-3 Report Presentation	YO-2 Colloquium
5	Module I. General principles of organization of work of outpatient clinics. Module 2. Cardiology in the outpatient practice of the therapist Module 3. Diseases of the respiratory organs in the outpatient practice of the therapist Module 4. Diseases of the gastrointestinal organs in the outpatient practice of the therapist Module 5. Kidney and urinary tract diseases in the practice of the district therapist. Module 6. Diseases of the internal organs in pregnant women and the elderly in the practice of the district therapist Module 7. Endocrinology	the willingness to treat patients with different nosological entities in the outpatient settings and a day hospitals (PC – 9)	<b>To know</b>	OQ-1 Interview	Exam questions 26-64
			<b>Be able to</b>	PW-1 Test	PW-1 Test
			<b>To master</b>	OQ-3 Report Presentation	YO-2 Colloquium

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 course 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>
2. 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>

## V. LIST OF INFORMATION TECHNOLOGIES AND SOFTWARE

<b>The location of the computer equipment on which the software is installed, the number of jobs</b>	<b>List of licensed software</b>
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.

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 "Faculty therapy" 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.

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

<p>Policlinicalj Therapy</p>	<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</p>	<p>Multimedia audience</p>
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	<p>220 - Codeonly - 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>Non-state healthcare institution Branch hospital at the station of Vladivostok, Russian Railways</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 « Polyclinical Therapy »  
Specialty 31.05.01 «General medicine»**

**Form of study: full time**

**Vladivostok  
2018**

## 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>A semester – 36 hours</b>				
1	During the course module	Essay	10 hours	OA-3-Report
2	During the course module	Report of presentation on the essay topic	10 hours	OA-3-Report
3	During the course module	Work with periodical literature, lectures	10 hours	TOA-3-lecture notes Book abstracts, articles, monographies
3	During the course module	Preparation for pass-fail exam	6 hours	OA-1-Interview PW-1 - Test
<b>B semester – 54 hours</b>				
1	During the course module	Essay	10 hours	OA-3-Report
2	During the course module	Report of presentation on the essay topic	10 hours	OA-3-Report
3	During the course module	Work with periodical literature, lectures	28 hours	TOA-3-lecture notes Book abstracts, articles, monographies
3	During the course module	Preparation for pass-fail exam	6 hours	OA-1-Interview PW-1 - Test
<b>C semester – 95 hours</b>				
1	During the course module	Essay	13 hours	OA-3-Report
2	During the course module	Report of presentation on the essay topic	10 hours	OA-3-Report
3	During the course module	Work with periodical literature, lectures	36 hours	TOA-3-lecture notes Book abstracts, articles, monographies
3	During the course module	Preparation for exam	36 hours	OA-1-Interview PW-1 - Test
		<b>Total</b>	<b>185 hours</b>	

### Approximate guidelines for writing and design of an essay

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;

e) 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 essays and presentations**

### **Essay topics**

1. Methodical approaches to the issues of the MSE.
2. Diagnostics and treatment of acute coronary syndrome.
3. Diagnostics and treatment of dyslipidemia. National recommendations.
4. Diagnostics and treatment of chronic heart failure in the outpatient practice of a therapist.
5. Diagnostics and treatment of coronary artery disease in outpatient practice therapist
6. Diagnostics and treatment of myocardial infarction in outpatient practice therapist.

7. Diagnostics and treatment of chronic kidney disease in outpatient practice therapist.
8. Differential diagnostics of articular syndrome in outpatient practice.
9. Treatment of community-acquired pneumonia. National guidelines for the diagnostics and treatment of pneumonia.
10. Treatment of gastric ulcer and duodenal ulcer.
11. Diagnostics and treatment of gout.
12. National guidelines for the diagnosis and treatment of hypertension.
13. Differential diagnostics of chest pain.
14. Diagnostics and treatment of myocardial infarction on an outpatient basis.
15. General principles of organization of work of outpatient clinics.
16. Issues of medical and social expertise in diseases.
17. Syndrome of arterial hypertension in ambulatory practice.
18. Differentiated approach in the treatment of hypertension. Features of treatment of elderly patients and pregnant women with hypertension syndrome.
19. Anemic syndrome in outpatient practice.
20. Acute coronary syndrome in outpatient practice. Diagnostics. Emergency.
21. The syndrome of acute cardiac decompensation in ambulatory practice. Emergency care for cardiac asthma and pulmonary edema at home and in the clinic.
22. Basic principles of treatment of chronic cardiovascular insufficiency. Features of management of elderly and senile patients.
23. Disease of myocardium. Myocarditis in outpatient practice. Analysis of diagnostic errors.
24. Syncopal conditions in the practice of district therapist.

**Criteria for grading evaluation of the student in the exam/competition  
in the discipline "Outpatient therapy"**

Exam grade	Requirements to the formed competences
«excellent»	Grade "excellent" is given to a student, if he/she deeply and 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;
«good»	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;
«satisfactory»	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;
«unsatisfactory»	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.



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**SCHOOL OF BIOMEDICINE**

**ASSESSMENT FUND**  
**on discipline « Polyclinical Therapy »**  
**Specialty 31.05.01 «General medicine»**  
**Form of study: full time**

**Vladivostok**  
**2018**



## 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.

Code and formulation of competence	Stages of competence formation	
<p style="text-align: center;"><b>PC 2</b></p> <p>the ability and willingness to conduct of preventive medical examinations, clinical examinations and dispensary observations.</p>	<b>To know</b>	fundamentals of preventive medicine, organization of preventive measures aimed at improvement of public health; organization of medical control over the health of population, principles of medical examination of population.
	<b>Be able to</b>	to participate in organization and provision of medical and preventive, sanitary and anti-epidemic assistance for population, taking into account its social and professional (including professional sports), its age and sex structure; develop a plan of therapeutic (surgical) actions taking into account the course of the disease and its treatment.
	<b>To master</b>	interpretation of the laboratory and instrumental diagnostic methods results.
<p style="text-align: center;"><b>PC 5</b></p> <p>the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases</p>	<b>To know</b>	etiology, pathogenesis of the most common diseases; criteria for the diagnosis of various diseases.
	<b>Be able to</b>	to determine the status of patient: to collect anamnesis, to conduct a questioning of a patient and/or his relatives, to conduct physical examination of the patient (examination, palpation, auscultation, measurement of blood pressure, determination of the arterial pulse properties, etc.); conduct a primary examination of systems and organs: nervous, endocrine, immune, respiratory, cardiovascular, blood and hematopoietic organs, digestive, urinary, reproductive, musculoskeletal and joints, eyes, ears, throat, nose; to make a preliminary diagnosis-to synthesize information about the patient in order to determine the pathology and causes of it.
	<b>To master</b>	the algorithm of preliminary diagnostics followed by referral of the patient to the appropriate medical specialist.
<p style="text-align: center;"><b>PC 6</b></p> <p>the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in</p>	<b>To know</b>	etiology, pathogenesis of the most common diseases; temporary 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.

accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review.	<b>Be able to</b>	to outline the scope of additional studies in accordance with prognosis of disease, to clarify the diagnosis and obtain reliable results; to assess the patient condition for decision-making on necessity of rendering medical assistance; to formulate a clinical diagnosis.
	<b>To master</b>	methods of general clinical examination. algorithm of the developed clinical diagnosis.
<b>PC 7</b> readiness for the examination of temporary disability, participation in the conduction of medical and social expert reviews, detection of human biological death	<b>To know</b>	basics of legislation of the Russian Federation for protection of public health and normative documents for carrying out evaluation n of working capacity; questioning for examination of working capacity and medical and legal assistance to the population.
	<b>Be able to</b>	fill in the medical history of an outpatient patient, issue standard medical documentation; apply legal and medical aspects of ascertaining a person's death, biological and clinical death.
	<b>To master</b>	proper maintenance of medical records.
<b>PC 9</b> the willingness to treat patients with different nosological entities in the outpatient settings and a day hospitals	<b>To know</b>	features of organization and volume of the doctor work of out-patient and ambulatory units, modern diagnostic opportunities of ambulatory service, methods of carrying out urgent actions, indications for planned hospitalization of patients; diagnostic methods, diagnostic capabilities of methods of direct examination of the patient therapeutic, surgical and infectious profile, modern methods of clinical, laboratory, instrumental examination of patients.
	<b>Be able to</b>	set priorities for addressing the health problems of patient: critical (terminal) condition as pain and chronic disease, the condition with infectious disease; choose an individual type of care for the treatment of the patient in accordance with the situation: primary care, ambulance, hospitalization.
	<b>To master</b>	algorithm of the detailed clinical diagnosis; the main medical diagnostic and therapeutic measures to provide qualified medical care.

## MONITORING THE ACHIEVEMENT OF THE COURSE GOALS

№ п/п	Controlled modules / sections / topics of discipline	Codes and stages of the formation of competencies	Evaluation tools - name		
			current control	intermediate certification	
1	Module I. General principles of organization of work of outpatient clinics. Module 2. Cardiology in the outpatient practice of the therapist	the ability and willingness to conduct of preventive medical	<b>To know</b>	OQ-1 Interview	Exam questions 1-25
			<b>Be able to</b>	PW-1 Test	PW-1 Test

	<p>Module 3. Diseases of the respiratory organs in the outpatient practice of the therapist</p> <p>Module 4. Diseases of the gastrointestinal organs in the outpatient practice of the therapist</p> <p>Module 5. Kidney and urinary tract diseases in the practice of the district therapist.</p> <p>Module 6. Diseases of the internal organs in pregnant women and the elderly in the practice of the district therapist</p> <p>Module 7. Endocrinology</p>	<p>examinations, clinical examinations and dispensary observations. (PC – 2)</p>	<b>To master</b>	OQ-3 Report Presentation	YO-2 Colloquium
2	<p>Module I. General principles of organization of work of outpatient clinics.</p> <p>Module 2. Cardiology in the outpatient practice of the therapist</p> <p>Module 3. Diseases of the respiratory organs in the outpatient practice of the therapist</p> <p>Module 4. Diseases of the gastrointestinal organs in the outpatient practice of the therapist</p> <p>Module 5. Kidney and urinary tract diseases in the practice of the district therapist.</p> <p>Module 6. Diseases of the internal organs in pregnant women and the elderly in the practice of the district therapist</p> <p>Module 7. Endocrinology</p>	<p>the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)</p>	<b>To know</b>	OQ-1 Interview	Exam questions 26-64
			<b>Be able to</b>	PW-1 Test	PW-1 Test
			<b>To master</b>	OQ-3 Report Presentation	YO-2 Colloquium
3	<p>Module I. General principles of organization of work of outpatient clinics.</p> <p>Module 2. Cardiology in the outpatient practice of the therapist</p> <p>Module 3. Diseases of the respiratory organs in the outpatient practice of the therapist</p> <p>Module 4. Diseases of the gastrointestinal organs in the outpatient practice of the therapist</p> <p>Module 5. Kidney and urinary tract diseases in the practice of the district therapist.</p> <p>Module 6. Diseases of the internal organs in pregnant women and the elderly in the practice of the district therapist</p> <p>Module 7. Endocrinology</p>	<p>the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)</p>	<b>To know</b>	OQ-1 Interview	Exam questions 64-100
			<b>Be able to</b>	PW-1 Test	PW-1 Test
			<b>To master</b>	OQ-3 Report Presentation	YO-2 Colloquium
4	<p>Module I. General principles of organization of work of outpatient clinics.</p> <p>Module 2. Cardiology in the outpatient practice of the therapist</p> <p>Module 3. Diseases of the respiratory organs in the outpatient practice of the therapist</p>	<p>readiness for the examination of temporary disability, participation in the conduction of medical and social expert</p>	<b>To know</b>	OQ-1 Interview	Exam questions 1-25
			<b>Be able to</b>	PW-1 Test	PW-1 Test

	Module 4. Diseases of the gastrointestinal organs in the outpatient practice of the therapist Module 5. Kidney and urinary tract diseases in the practice of the district therapist. Module 6. Diseases of the internal organs in pregnant women and the elderly in the practice of the district therapist Module 7. Endocrinology	reviews, detection of human biological death (PC – 7)	<b>To master</b>	OQ-3 Report Presentation	YO-2 Colloquium
5	Module I. General principles of organization of work of outpatient clinics. Module 2. Cardiology in the outpatient practice of the therapist Module 3. Diseases of the respiratory organs in the outpatient practice of the therapist Module 4. Diseases of the gastrointestinal organs in the outpatient practice of the therapist Module 5. Kidney and urinary tract diseases in the practice of the district therapist. Module 6. Diseases of the internal organs in pregnant women and the elderly in the practice of the district therapist Module 7. Endocrinology	the willingness to treat patients with different nosological entities in the outpatient settings and a day hospitals (PC – 9)	<b>To know</b>	OQ-1 Interview	Exam questions 26-64
			<b>Be able to</b>	PW-1 Test	PW-1 Test
			<b>To master</b>	OQ-3 Report Presentation	YO-2 Colloquium

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

Code and formulation of competence	Stages of competence formation		criteria	indicators	points
<b>PC 2</b> ability and readiness to conduct preventive medical examinations, clinical examination and dispensary monitoring of healthy and chronic patients	<b>To know</b>	fundamentals of preventive medicine, organization of preventive measures aimed at improvement of public health; organization of medical control over the health of population, principles of medical examination of population.	Knowledge of the basics of healthy lifestyle, regulatory framework and methods of clinical examination of healthy and chronic patients	Knows the main indicators of the effectiveness of medical examination	65-71
	<b>Be able to</b>	to participate in organization and provision of medical and preventive, sanitary and anti-epidemic assistance for population, taking into account its social and professional (including professional sports), its age and sex structure; develop a plan of therapeutic (surgical) actions taking into account the course of the disease	The ability to carry out therapeutic, preventive and sanitary-anti-epidemic measures to the population, taking into account its socio-professional factors (including professional	Able to assess the effectiveness of diagnostic, preventive, sanitary and anti-epidemic measures to the	71-84

		and its treatment.	sports) and age-sexual structure; develop a plan of therapeutic measures taking into account the course of the disease and its treatment	population	
	<b>To master</b>	interpretation of the laboratory and instrumental diagnostic methods results.	Knowledge of interpretation of results of laboratory, instrumental methods of diagnostics	knows the methods of evaluation of patient examination data	85-100
<b>PC 5</b> readiness for 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	<b>To know</b>	etiology, pathogenesis of the most common diseases; criteria for the diagnosis of various diseases.	Knowledge of risk factors and causes of diseases, criteria for their diagnosis	Knows the criteria for diagnosing diseases or conditions of internal organs	65-71
	<b>Be able to</b>	to determine the status of patient: to collect anamnesis, to conduct a questioning of a patient and/or his relatives, to conduct physical examination of the patient (examination, palpation, auscultation, measurement of blood pressure, determination of the arterial pulse properties, etc.); conduct a primary examination of systems and organs: nervous, endocrine, immune, respiratory, cardiovascular, blood and hematopoietic organs, digestive, urinary, reproductive, musculoskeletal and joints, eyes, ears, throat, nose; to make a preliminary diagnosis- to synthesize information about the patient in order to determine the pathology and causes of it.	The ability to conduct a survey and examination of patient, to conduct a primary examination of systems and organs: nervous, endocrine, immune, respiratory, cardiovascular, blood and hematopoietic organs, digestive, urinary, reproductive, musculoskeletal and joints, eyes, ears, throat, nose	Able to make a preliminary diagnosis- synthesize information about the patient in order to determine the pathology and causes of it	71-84
	<b>To master</b>	the algorithm of preliminary diagnostics followed by referral of the patient to the appropriate medical specialist.			
<b>PC 6</b> ability to determine patients' main pathological conditions,	<b>To know</b>	etiology, pathogenesis of the most common diseases; temporary classification of diseases; clinical picture, features of the course and possible complications of the most common diseases	Knows the etiology, pathogenesis, clinic of the most common diseases; modern	Knows the criteria for the diagnosis of the most common diseases	65-71

symptoms, disease syndromes, nosological forms in accordance with the International statistical classification of diseases and health-related problems (ICD)		occurring in a typical form in different age groups.	classification of diseases	occurring in a typical form in different age groups	
	<b>Be able to</b>	to outline the scope of additional studies in accordance with prognosis of disease, to clarify the diagnosis and obtain reliable results; to assess the patient condition for decision-making on necessity of rendering medical assistance; to formulate a clinical diagnosis.	Able to evaluate additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain reliable results; to assess the condition of the patient for decision-making on necessity of rendering medical assistance; to formulate a clinical diagnosis.	Able to assess the performance of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain reliable outcomes	71-84
	<b>To master</b>	methods of general clinical examination. algorithm of the developed clinical diagnosis.	Has the skills to develop a plan of General clinical examination	Masters the technique of setting up a detailed clinical diagnosis	85-100
<b>PC 7</b> readiness to carry out expert evaluation of temporary disability, participate in conduction of medico-social examination, the ascertaining of biological death of the person	<b>To know</b>	basics of legislation of the Russian Federation for protection of public health and normative documents for carrying out evaluation of working capacity; questioning for examination of working capacity and medical and legal assistance to the population.	Knows normative documents for the examination of temporary and permanent disability; statements of biological death of a person	Knows the methods of examination of temporary and permanent disability; ascertainment of biological death	65-71
	<b>Be able to</b>	fill in the medical history of an outpatient patient, issue standard medical documentation; apply legal and medical aspects of ascertaining a person's death, biological and clinical death.	issue standard medical documentation on evaluation of temporary and permanent disability; statements of biological death of the person	To carry out the evaluation of temporary and permanent disability; to ascertain the biological death of a person	71-84
	<b>To master</b>	proper maintenance of medical records.	Skill of registration of standard medical documentation	Skill of registration of standard medical documentation	85-100
<b>PC 9</b> readiness for management and treatment of	<b>To know</b>	features of organization and volume of the doctor work of outpatient and ambulatory units, modern diagnostic opportunities of ambulatory service, methods of	Knows normative documents on the organization and scope of work of the doctor of outpatient link,	Knows methods of inspection execution of the outpatient,	65-71

patients with different nosological forms in outpatient and day hospital conditions		carrying out urgent actions, indications for planned hospitalization of patients; diagnostic methods, diagnostic capabilities of methods of direct examination of the patient therapeutic, surgical and infectious profile, modern methods of clinical, laboratory, instrumental examination of patients.	diagnostic possibilities of polyclinic service, methods of carrying out urgent actions, indications for planned hospitalization of patients; modern methods of clinical, laboratory, instrumental examination of patients.	indications for hospitalization, methods of carrying out urgent actions	
	<b>Be able to</b>	set priorities for addressing the health problems of patient: critical (terminal) condition as pain and chronic disease, the condition with infectious disease; choose an individual type of care for the treatment of the patient in accordance with the situation: primary care, ambulance, hospitalization.	To solve the issues of stage-by-stage treatment of patients, to choose an individual type of care for the treatment of the patient in accordance with the situation: primary care, ambulance, hospitalization	to solve the patient's health problems: critical (terminal) state, state with pain syndrome, state with chronic disease, state with infectious disease; choose an individual type of assistance	71-84
	<b>To master</b>	algorithm of the detailed clinical diagnosis; the main medical diagnostic and therapeutic measures to provide qualified medical care.	Skill of making a detailed clinical diagnosis	The skill of using diagnostic and therapeutic measures to provide qualified medical care	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 INTERMEDIATE CERTIFICATION**

### **TESTS FOR INTERIM CERTIFICATION FOR OUTPATIENT THERAPY**

1. THE SCIENTIFIC BASIS FOR PREVENTION OF CHRONIC NONCOMMUNICABLE DISEASES IS THE CONCEPT OF
  - A) risk factors
  - B) healthy lifestyle
  - C) fight against bad habits
  - D) individual prevention
  
2. CLINICAL EXAMINATION IS TO BE CARRIED OUT
  - A) 1 every 3 years
  - B) every year
  - C) 1 time in 2 years
  - D) 1 time in half a year
  
3. BASED ON THE RESULTS OF CLINICAL EXAMINATION ARE FORMED
  - A) 3 groups
  - B) group 1
  - C) 2 groups
  - D) 4 groups
  
4. DISPENSARY OBSERVATION OF PATIENTS WITHOUT PROVEN CARDIOVASCULAR DISEASE WITH HIGH AND VERY HIGH TOTAL CARDIOVASCULAR RISK IS PROVIDED BY
  - A) the doctor of department of medical prevention, in the absence of the prevention office, for example, in rural areas-the therapist local
  - B) physician of district



- C) day doctor
- D) the doctor-cardiologist of outpatient care

5. BRIEF PREVENTIVE COUNSELING IN THE FINAL STAGE OF EXAMINATION CONDUCTS

- A) general practitioner
- B) doctor of the department of medical prevention
- C) day doctor
- D) doctor-cardiologist of outpatient care

6. BRIEF PREVENTION COUNSELING LASTS \_\_\_ MINUTES

- A) 10
- B) 30
- C) 60
- D) 5

7. MEDICAL-SOCIAL EXAMINATION IS CARRIED OUT IN

- A) federal institutions of medical and social expertise
- B) institutions of medical and social expertise of the subject of the Russian Federation
- C) city institutions of medical and social examination
- D) OMI funds

8. THE DISABILITY GROUP I IS SET ON

- A) 2 years
- B) 1 year
- C) 3 years
- D) indefinitely

9. DISABILITY GROUP II IS SET ON

- A) 1 year

- B) 3 years
- C) indefinitely
- D) 2 years

10. THE DEGREE OF INCAPACITY IS SET IN

- A) percentage
- B) shares of the whole
- C) decimals
- D) subjective characteristics

11. REGISTRATION FORM N 025/AT "MEDICAL CARD OF THE PATIENT RECEIVING CARE IN THE OUTPATIENT CARE»

- A) it is filled for each patient who for the first time applied for medical care in out-patient care
- B) is filled for the patients applying for medical care in out-patient conditions in the specialized medical organizations or their structural divisions
- C) is started separately by each doctor conducting treatment
- D) is filled only at the first and final visit of the patient

12. APPLYING TO A DIVISIONAL DOCTOR-THERAPIST, IN PARAGRAPH 19 OF THE REGISTRATION FORM N 025-1/AT "THE COUPON OF THE PATIENT RECEIVING MEDICAL CARE IN THE OUTPATIENT SETTING" SHOULD BE SELECTED

- A) primary health care
- B) primary pre-hospital health care
- C) primary specialized health care
- D) palliative care

13. IN N 025-1/"TALON OF THE PATIENT RECEIVING CARE IN THE OUTPATIENT SETTING" MUST BE TAKEN INTO ACCOUNT

- A) visits to doctors of all specialties, leading the reception in the outpatient setting including consultative reception
- B) cases of rendering medical care by medical workers of stations (departments) of emergency medical care

C) examinations in X-ray departments (offices), laboratories and other auxiliary departments (offices) of the medical organization

D) cases of rendering emergency medical care in the emergency form on occupations by physical culture, educational and sports actions

14. WHILE FILLING THE FORM 030 N/A "CONTROL CARD OF DISPENSARY SUPERVISION" THE CARD NUMBER SHOULD MATCH THE NUMBER OF

A) "the medical card of the patient receiving medical care in out-patient conditions" (the form N 025/u)

B) patient's medical insurance policy

C) the social security number of the patient

D) "the coupon of the patient receiving medical care in out-patient conditions" (the form N 025-1/u)

15. ACCOUNT FORM N 030-13 "MEDICAL PASSPORT OF THE PLOT OF THE CITIZENS HAVING THE RIGHT TO RECEIVE SOCIAL SERVICES" AT THE END OF THE REPORTING PERIOD IS SIGNED BY

A) the therapist the district police officer and the specialist of organizational and methodical office

B) chief physician

C) Chairman of the medical Commission

D) Deputy chief physician for organizational and methodical work

16. "WHERE TO GET VOUCHERS FOR SPA-RESORT TREATMENT" (FORM N 070/AT), ISSUED TO THE PERSON ENTITLED TO RECEIVE SOCIAL SERVICES, CERTIFIED BY THE SIGNATURE:

A) Chairman of the medical commission

B) attending physician

C) chief physician

D) Deputy chief physician for organizational and methodical work

17. THE OPPOSITE (CUTTING) COUPON "CERTIFICATE TO OBTAIN PERMITS ON SANATORNO-RESORT TREATMENT" (FORM N 070/AT) SHALL BE SIGNED BY

- A) attending physician and the chief physician of the health resort organization
- B) deputy chief physician for organizational and methodical work of the sanatorium and resort organization
- C) chairman of the medical Commission
- D) attending physician of the organization which sent the patient for treatment

18. CITIZENS ENTITLED TO RECEIVE SOCIAL SERVICES (ORDER OF MOH & SD OF THE RUSSIAN FEDERATION DATED 22.11.2004 NO. 255) IN THE SCHEMA, THE MANDATORY FOLLOW-UP MEDICAL EXAMINATION WITH PARTICIPATION OF SPECIALISTS IS NECESSARY \_\_\_\_\_ PER YEAR

- A) 1 time
- B) 2 times
- C) 3 times
- D) 4 times

Studying tests on outpatient therapy for 5th year students of medical faculty.

Theme 1. Broncho-obstructive syndrome: differential diagnostics.

Diagnostics and treatment of bronchial asthma and chronic obstructive pulmonary disease (COPD) in outpatient care, medical tactics, medical and social examination, medical examination, primary prevention. Emergency care when asthma attack start developing into status asthmaticus.

1. For relief of bronchial asthma attack should be used:

- 1. inhaled anticholinergic drugs cholinolytics and beta 2-agonists \*
- 2. Intal (sodium chromoglycate)
- 3. inhaled glucocorticoids
- 4. intravenous administration of eufillin, glucocorticoids \*

2. Basic drugs for the treatment of patients with chronic obstructive bronchitis are:

1. anticholinergic drugs (ipratropium bromide, atrovent) \*
2. beta2 - agonists (salbutamol, fenoterol - berotek, astmopent) \*
3. inhalation glucocorticoid drugs
4. derivatives of theophylline

3. Basic drugs for the treatment of bronchial asthma in the outpatient care unit are:

1. phenoterol (Berotec)
2. inhaled glucocorticoid drugs (beclamethasone, budesonide) \*
3. derivatives of methylxanthines (tiopc, teotard, theophylline)
4. sodium chromoglycate (Intal) \*

4. Bronchial asthma is characterized by:

1. nocturnal attacks of breathlessness with shallow rapid breathing can accompanied by foamy sputum
2. asthma attacks with shortness of breath, after the end of the attack stands out viscous glassy sputum \*
3. weakened vesicular breathing
4. outside the attack in the lower parts of the lungs fine moist rales are listened

5. The plan of examination of a patient with bronchial-obstructive syndrome in outpatient care conditions includes:

1. general blood test \*
2. spirometry \*
3. General sputum analysis + VC, + AC \*
4. X-rays of the chest \*

6. Which cells are mainly involved in development of inflammation in asthma:

1. eosinophils
2. mast cell

3. neutrophils
4. T-lymphocytes
5. platelets
6. all of the above\*

7. Allergic form of bronchial asthma is characterized by reactions:

1. cytotoxic type
2. reagin type \*
3. all kinds of allergic reactions
4. delayed allergy
5. damage by immune complexes

8. What statements are correct for asthma?

1. requires constant treatment
2. hyperreactivity of the bronchi is a mandatory feature of bronchial asthma
3. even in remission, there are signs of inflammation in the bronchi
4. all of the above\*

9. Name condition relating to primary bronchial hyperresponsiveness:

1. asthma of physical effort \*
2. aspirin asthma \*
3. adrenergic variant
4. vagus dependent asthma

10. What are the main clinical manifestations of asthma:

1. choking attack \*
2. coughing attack\*
3. attack of shortness of breath \*
4. attack of loss of consciousness

11. The appearance of shortness of breath in chronic obstructive bronchitis due to the damage of:

1. tracheae
2. large bronchi
3. bronchi of medium caliber
4. small bronchi
5. bronchioles' \*

12. For the treatment of a patient in asthmatic status, all of the above is used, except for:

1. oxygen therapy
2. euphyllinum
3. corticosteroids'
4. intal \*
5. vibratory massage

13. Factors predisposing the development of asthmatic status are:

1. exacerbation of chronic bronchitis
2. diagnostic scratch tests
3. cancellation of hormone therapy
4. acute respiratory viral infection
5. all of the above\*

14. Bronchial obstruction syndrome is characteristic of:

1. distal acute bronchitis
2. tracheobronchitis
3. proximal acute bronchitis
4. acute bronchiolitis\*

15. The inhalation drug for the relief of bronchial asthma does not apply for:

1. berotec
2. salbutamol
3. berodual
4. theophedrine.\*

### **Test evaluation criteria**

Evaluation is conducted in an e-learning session on a scale. The test includes 100 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 CASE STUDY TASKS ON OUTPATIENT THERAPY FOR INTERMEDIATE CERTIFICATION**

### **Case study task № 1.**

Woman 26 years. 2 days since two of her employees got sick with ARVI, there were sharpness in the eyes in the evening, watery discharge from nose, muscle weakness, pain in the lower back and limbs, headache, cognition. At 23.00 body temperature rose to 37.8°C. Next morning had noted the hoarseness, cough, rough, paroxysmal, accompanied by soreness in the chest. The doctor, who came in the evening of the same day, noted hyperemia of the conjunctiva of the eyes, injection of sclera vessels, bright hyperemia of the pharynx, and in the lungs — hard breathing and scattered buzzing rales. The number of breaths 20 in 1 min., heart rate - 92 BPM. Auscultation: heart rhythm is correct with small tones muted. Body temperature during examination 37,6°C. Cough by this time became more frequent, but less rough, with crackling and whistling components in the cough sound. Prescribing treatment, the doctor with an active visit to the patient the next day (day 3 of the disease) noted free nasal breathing with discharging of small amount of mucus, reduced conjunctival hyperemia and pharynx, cough reduction.



At the same time there was a meager separation of sputum in the form of lumps of mucus, in the lungs the number of dry buzzing rales increased. Body temperature decreased to 37.1°C. Palpation and percussion of the chest did not revealed pathology, the breath rate 18 in 1 min.

Questions:

1. Formulate diagnosis and justify it.

ARVI. Adenovirus infection. Acute tracheitis, acute obstructive catarrhal bronchitis. RF 1 degree.

2. Specify possible etiology and methods of the disease verification.

Adenovirus. Cultivation of the pathogen on chicken embryos. ELISA, serodiagnostics.

3. Run a differential diagnosis. Schedule an additional examination.

FLU. Spirography.

4. Assign and justify treatment. Symptomatic drugs, bronchomunal.

5. Forecast. Favorable.

6. Average duration of temporary disability. 10-14 days.

### **Case study task № 2.**

Male, 32 years old. Within 1 year had been complaints of "hungry" pain in the epigastric region, pain appears in the morning on an empty stomach, 1.5-2 hours after eating, at night, stopped right after eating. Worried acid regurgitation, stool regular, feature. The father and the paternal grandfather have peptic ulcer of the duodenum. Smokes from 18 to 30 cigarettes a day.

Objective examination: asthenic physique, moderate nutrition. Skin is clean. From the part of the respiratory and cardiovascular system pathology is not revealed. Heart rate is 64 beats per min. BP 125/75 mm Hg. with superficial palpation of the abdomen, a small muscular defiance and soreness in the epigastric and pyloroduodenal region, soreness at the point of Dejardin and Mayo-Robson are determined. The liver is not enlarged, painless with palpation. healthy bladder and bowel habits.

Clinical blood test: HB-128 g/l, color index – 0.91, red blood cells –  $4,2 \cdot 10^{12}/l$ ; leukocytes –  $7,2 \cdot 10^9/l$ ; p/In – 3%, s/n – 51%, e – 3%, l – 36%, m – 7%, ESR – 6 mm / h.

Esophagogastroduodenoscopy: muddy mucus in the stomach, mucosa with focal hyperemia in the antrum on the walls of multiple different-caliber swelling. The mucous follicles of the duodenum - the foci of hyperemia, swelling, on the back wall of ulcerative defect 0,8x0,6 cm, rounded in shape with congested roller, the bottom is covered with fibrin. Biopsy's taken.

Ultrasound of the abdominal cavity: the liver is not enlarged, the parenchyma is homogeneous, echogenicity is not changed, the vascular network is not expanded. Gall bladder is pear shaped 73x35 mm with a bend at the bottom, its content homogeneous, walls 4 mm. In the stomach of a large number of heterogeneous content, its walls are thickened. Pancreas: head 35 mm (norm 28), the glands can be seen extended to 5 mm (norm 2), Virunga duct, the body and tail are not enlarged, the echogenicity of the head and the tail lowered.

pH-metry of stomach: on an empty stomach, the pH in the body is 2.4; in the antrum – 4.2. after 30 minutes after stimulation 0.1% histamine solution at a dose of 0.008 mg / kg - pH in the body 1,4; in antrum-2,8.

Respiratory urease test: positive.

Biopsy test for HP-infection: positive (++)

Questions:

1. Clinical diagnosis and justification.

Ulcer. Duodenal ulcer. Exacerbation of moderate severity, associated with H. Pylori.

2. List the main methods and methods of diagnosis of HP-infection

Smears-prints from biopsy-dried and painted on Romanovsky-gimze. Urease test biopsy is placed in the medium of express kit with urea, if the bacterial flora is alive the color changes, as urea disintegrates to form ammonia, which increases the pH of the medium. Microbiology (sowing). Respiratory urease test with C13. Immunology (antibodies of classes A, M, G).

### 3. Treatment.

Diet №1, three-component eradication regimen: famotidine 20 mg 2 times a day, amoxicillin 0.5 4 times a day, metronidazole 250 mg 4 times. Famotidine can be replaced with omez 20 mg 2 times. The course of treatment - 7 days, sedation, antacids, gastrotsepin (M-cholinolytic), de-nol, venter.

### 4. Prognosis, medical examination, disease prevention.

The prognosis is favorable. Prevention: continuous-antisecretory drug  $\frac{1}{2}$  dose, preventive therapy "on demand", with the appearance of symptoms of exacerbation for 2-3 days – antisecretory drug in the full daily dose, and then 2 weeks. –  $\frac{1}{2}$  Dose if the symptoms are gone – stop reception.

Medical examination: 2 times a year. EGD annually. SRT-local sanatoria.

### **Case study task № 3.**

The patient 54 years old visited a doctor of the clinic with complaints of cough in the morning with the release of a moderate amount of purulent sputum, shortness of breath, fatigue, general weakness, malaise temperature rising to subfebrile numbers. The patient is an "avid " smoker, smokes up to 30 cigarettes a day for 25 years. For many years, there was a cough in the morning with the release of a small amount of mucosal sputum, to which the patient did not pay attention. Over the years, the cough became more constant, bothered not only in the morning but also at night and sometimes during the day, especially in cold weather. Sputum began to go out more, it has become mucopurulent. 2 years ago, these symptoms were joined by shortness of breath, which occurs due to a little physical activity. 3 days ago after hypothermia had noted weakness, low-grade fever, expectoration has acquired a purulent character. Objective examination: state of moderate severity, the breath rate 22 per minute. In the lungs: a boxy shade of percussion sound over the entire surface, a lot of wheezing on the background of weakened vesicular breathing, the exhalation is elongated. Heart rate 80 per minute, BP 140/70 mm Hg. On the X-ray of the respiratory system, no focal-infiltrative shadows were revealed, there is a strengthening and deformation of the pulmonary pattern in the

lower parts, an uneven increase in the transparency of the pulmonary fields. Blood count total: red blood cells  $5,5 \times 10^{12}/l$ , leukocytes- $8,6 \times 10^9 / l$ , ESR-8 mm/h. Indicators of respiratory function: VC — 85% of proper volume forced exhalation for the first second (FEV1)of 49% from the proper, Tiffeneau-Pinelli index — 60% from the proper.

Questions:

1. Formulate a diagnosis. COPD, moderate severity, severe exacerbation, pulmonary fibrosis, emphysema, III degree.
2. Evaluate the indicators of respiratory function. YEL – norm, Tiffno – norm 75-83, FEV1 (rule 84 and  $>$ ) – a heavy degree of bronchial obstruction.
3. What are the etiological factors that can provoke an exacerbation of the disease? Smoking, air pollution, industrial hazards,  $\alpha$ 1-antitrypsin deficiency. Provoking factor – ARVI.
4. Make a plan of treatment of the patient, give a description of the prescribed drugs. Elimination of the etiological factor, inpatient treatment. Treatment, antibacterial therapy, improvement of drainage function (expectorant), bronchodilators, chest massage, positional drainage, phytotherapy, detoxification, long-term low-flow oxygenotherapy, treatment of pulmonary hypertension, exercise therapy.
5. What are the indications for antibiotic therapy? Within 7-10 days of exacerbation, with the addition of pneumonia. Modes of administration of antibiotics - an aerosol, orally, parenterally, endotracheal, endobronchial.
6. The period of temporary disability. 18-21 days.
7. Prophylactic medical examination: 2 times a year. Spirography with bronchodilation tests, ECG.
8. SRT. Local sanatorium.

#### **Case study task № 4.**

The patient is 64 years old. Complaints of cough with mucopurulent sputum, shortness of breath with little exercise, fatigue, general weakness, malaise, irritability, sleep disturbance (insomnia at night, drowsiness in the daytime),

swelling of the shins. Smokes 20 cigarettes a day for more than 45 years. For many years, had noted a cough in the morning with mucous sputum. Over the years, the cough became more constant, bothered not only in the morning but also in the daytime and at night. Increased the number of sputum, it has acquired mucopurulent character. About 9 years ago to these symptoms were joined by shortness of breath on exertion. Over the past year, have been noting the increased shortness of breath, which began to occur with little exercise, swelling began to appear on the legs. In an objective study: the general state of moderate severity, the number of breaths 28 per minute. Warm diffuse cyanosis, swelling of the shins. The swelling of the neck veins remains in the standing position. In lungs: a boxy shade of percussion sound over the entire surface, with the weakened vesicular breathing in background, single dry wheezing, exhalation is elongated. The heart sounds are muffled, rhythm is correct, systolic murmur at the base of the sternum, heart rate 92 V min., blood pressure 140/80 mm Hg. Liver – dimensions by Kurlow – 13x11x10 cm, positive Plesh's symptom.

Blood analysis: red blood cells  $5.5 \times 10^{12} / l$ , Hb-187 g /l, leukocytes — 7, 6 x  $10^9/l$ , ESR — 2 mm / h.

On X-ray of respiratory organs - strengthening and deformation of the pulmonary pattern in lower zones, uneven increase in the transparency of pulmonary fields, swelling of conus pulmonale.

Indicators of respiratory function: VC — 87% from the proper, FEV1 38% from the proper, Tiffeneau-Pinelli index 52% from the proper.

#### Questions

1. Formulate a diagnosis and justify it.

COPD, moderate severity. Pulmonary fibrosis, emphysema. Respiratory failure III degree. Pulmonary heart, CHF IIIB stage III RF.

2. Rate data of haemogram and indicators of external respiration function.

Erythrocytosis is caused by hypoxia. Obstructive type of respiratory failure - FEV1 (N - 84%, alloy tiffno - norm 75-83%) for these indicators, the patient obstruction severe.

3. What are the ECG signs characteristic of the disease.

Right atrial hypertrophy-P-pulmonale: increase in 2.3 aVF, V1,V2,increase in R in V1, V2, shift of the transition zone to the right thoracic leads. P pointed, not widened. In the right chest leads can be two-phase, with an increased first positive phase. Right ventricular hypertrophy: a sharp deviation of the electrical axis of the heart to the right or S-type. In the right chest leads-high R or the appearance of a tooth Q.

5. List the clinical signs of right ventricular failure. Stagnation in a large circle of blood circulation, enlarged liver, swelling on the legs. (The symptom of the bald spot is swelling of the neck veins when pressing the palm on the enlarged liver. Circulatory failure of the right ventricular type).

6. Whether there are indications for admission. Yes. Severity of decompensation of CHF and respiratory failure.

5.Make a plan for the treatment of the patient. Elimination of the etiological factor, inpatient treatment. Antibacterial therapy, improvement of drainage function (expectorant), bronchodilators, diuretics. Chest massage, positional drainage, detoxification, long-term low-flow oxygenotherapy, treatment of pulmonary hypertension, exercise therapy.

6. Average duration of temporary disability - 4 months. Referral to MSE due to a marked decrease in the functions of the heart and respiratory systems.

7. Prophylactic medical examination. Group 3. Appoinemtns - 1 time per month. Control of symptoms of CHF, correction of the dose of diuretics, symptomatic therapy (expectorants, bronchodilators), diuretics. Oxygen therapy, treatment of pulmonary hypertension.

### **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.

### **Tests for current assessment**

#### **Tasks in the test form for the FOS practical classes to the topics of practical classes on the discipline "Polyclinic therapy"**

#### **Examples of evaluation tools on the theme "Anemic syndrome":**

1. Specify clinical manifestations of sideropenic syndrome (choose one or more correct answers):
  - a) perversions of taste, smell;
  - b) dystrophic changes the skin and its appendages;
  - c) angular stomatitis;
  - d) glossit;
  - e) decrease in mental capacity, memory.
  
2. In the diagnosis of latent iron deficiency, the determining factor is the detection of (choose one or more correct answers):
  - a) reduction of HB below 110 g/l;
  - b) decreased ferritin levels;
  - c) increased LFS;
  - d) detection of anemic syndrome signs;
  - e) reticulocytosis.
  
3. What are the correct statements about the treatment of IDA (choose one or more correct answers):
  - a) the most optimal use of trivalent iron preparations;
  - b) the maximum daily dose should not exceed 300 mg of iron;

- c) treatment with iron preparations should last at least 3 weeks;
- d) diet correction may eliminate a light degree IDA;
- e) the minimum daily dose of iron should be at least 100 mg.

4. What indicator allows you to differentiate IDA from acquired anemia associated with impaired heme synthesis (select one or more correct answers):

- a) colour index;
- b) the number of reticulocytes in the blood;
- c) total iron binding capacity of serum;
- d) severity of anemia;
- e) level of total bilirubin.

5. Specify the diagnostic criteria for iron redistribution anemia (choose one or more correct answers):

- a) usually, the normal level of serum iron;
- b) most often normochromic anemia;
- c) the presence of clinical and laboratory signs of active inflammatory (infectious or non-infectious) process;
- d) the presence of manifestations of sideropenic syndrome;
- e) increased level of ferritin in the blood.

6. The presence of any signs confirms the diagnosis of hemolytic anemia (choose one or more correct answers):

- a) normal or low levels of reticulocytes;
- b) serum iron enhancement;
- c) normal blood levels of non-conjugated bilirubin;
- d) dark feces (pleochroics);
- e) predominantly hypochromic anemia.



7. Which statements about hypoproliferative anemia are correct (choose one or more correct answers):

- a) inability of the red blood-forming germ to hyperplasia commensurate with the severity of anemia;
- b) characterized by insufficient production of erythropoietin in the kidneys;
- c) kidney disease is the most often observed disorder in acute glomerulonephritis;
- d) anemia is usually normochromic normocytic;
- e) is characterized by an inadequate response of the red blood sprout on erythropoietin.

8. Diagnosis of aplastic anemia is likely to be detected (choose one or more correct answers):

- a) leukocytopenia and reticulocytosis;
- b) thrombocytopenia and leukopenia;
- c) normochromic normocytic anemia;
- d) hemorrhagic syndrome;
- e) the presence in the history of infectious diseases.

9. What statements about the treatment of anemia are correct (choose one or more correct answers):

- a) if hypo - or aplastic anemia is caused by autoimmune mechanisms, the most effective is glucocorticoid therapy;
- b) treatment of B12-deficiency anemia with vitamin B12 can be carried out only after confirmation of the diagnosis in the study of myelogram;
- c) hematological control in the treatment of IDA is most informative for 4-5 days from the beginning of therapy with iron preparations;
- d) gastrectomy is an indication for parenteral iron supplementation in IDA;
- e) simultaneous administration of ascorbic acid with iron slows the absorption of the latter.

10. Which statement regarding folio-deficiency anemia (FDA) is true (choose one or more correct answers):

- a) folic acid deficiency correlates with alcohol abuse;
- b) weakness, paresthesias, pain and burning in the tongue, are the characteristic diagnostic triad;
- c) long-term diet of infants with nutrient mixtures and goat's milk is a risk factor for the development of folic acid deficiency;
- d) meat and dairy products are the most abundant folate-rich food;
- e) FDA is not characterized by the development of atrophic glossitis and gastritis.

### **Case study task 1**

A man 55 years old, visited a district doctor with complaints of fever to 38°C, weakness, sweating. Noted increased temperature for 2 weeks, following the advice of his wife took ampicillin - without effect. For 3 months was bothered by pain in the right lumbar region, twice noted the dark color of urine. Lost weight for 3 months at 8 kg. Examination: condition of moderate severity, skin pale, body temperature of 38.2°C, there was no edema. The breath in the lungs is vesicular, no rales, percussion – pulmonary sound. Heart tones weakened, rhythmic, pulse 86 beats / min., blood pressure 120/75 mm Hg. The abdomen is soft, painless, liver, spleen, kidneys are not palpable, the symptom of concussion is weakly positive on the right. The following studies were conducted:

General analysis of blood: hemoglobin-86 g/l, erythrocytes –  $3,6 \times 10^{12}/l$ , leukocytes –  $7,9 \times 10^9/l$ , erythrocyte sedimentation rate 44 mm/h.

Urinalysis: specific gravity 1.020, protein 0.033 g/l, leukocytes 12-15 in vision field., red blood cells cover whole vision field.

Chest X-ray and ECG are without pathology.

1. What is the most likely diagnosis of this patient? What diseases should be differentiated?
2. What studies are appropriate to confirm the diagnosis?

3. What is the further tactics of district physician?

### **Case study task 2**

Woman 43 years old, a caregiver, visited a doctor with complaints of disturbances of stool: constipation alternating with diarrhea (stool 3 to 4 times a day), feeling of incomplete emptying of the intestines, increased flatulence. Bothered by dull aching pain in the mesogastrium, increasing before defecation and subsiding after it, vomiting, unpleasant taste in the mouth in the morning. She was sick for 1.5-2 years; within the last 2 months had noted increased complaints after suffering ARVI, when she took a large number of Bisepitol. The doctor visited for the first time.

Examination: the condition is satisfactory. The patient is of a large physique. Skin and mucous membranes of normal color. Peripheral lymph nodes and thyroid gland are not enlarged, mammary glands are without pathological changes. Respiratory rate 16 per minute, vesicular breathing, no wheezing. The area of the heart and large blood vessels is not changed. Heart sounds clear, no noise. BP- 110/65 mm Hg., heart rate - 60 per minute. Abdomen is of correct shape, enlarged due to excess of subcutaneous fat. With palpation, there is a pronounced pain during the course of the colon. Liver is not enlarged, spleen is not palpable.

Blood test: HB-120 g / l; er. -  $4,5 \cdot 10^{12}$  / l; CV. pok. - 0,97; l. -  $8 \cdot 10^9$  / l; p. - 5%, p. - 62%, e. - 1%, lymph. - 27%, mon. - 5%; ESR-12 mm. per hour.

Urine analysis without pathological changes. In feces is found a large number of undigested fiber.

Chest X-ray: pulmonary fields are transparent, focal and infiltrative are not changed. The roots of the lungs are structural, not dilated. The heart is not enlarged, the aorta is not dilated.

ECG: no pathological changes.

X-ray examination of the stomach: the folds of the mucous membrane are not thickened, peristalsis can be traced in all departments. Pathological changes in the duodenal bulb and postbulbar parts are not revealed.

### **Samples of gastroenterology tests:**

1. The most likely diagnosis?
  - a) gastric ulcer;
  - b) chronic cholecystitis;
  - c) chronic pancreatitis;
  - d) irritable bowel syndrome;
  - e) dysbacteriosis.
  
2. What studies should be conducted to clarify the diagnosis?
  - a) esophagogastroduodenoscopy (EGDS);
  - b) cholecystography;
  - c) ultrasound of the abdominal cavity;
  - d) the analysis of feces for dysbacteriosis.
  
3. What organ damage leads to the development of the underlying disease?
  - a) gallbladder;
  - b) pancreas;
  - c) spleen.
  
4. What is the cause of the underlying disease?
  - a) infection;
  - b) eating disorders;
  - c) intoxication;
  - d) Allergy;
  - e) drug abuse.

## **SAMPLES OF TASKS FOR INTERIM CERTIFICATION**

### **Task 1.**

1. Organization of work of the district physician-therapist. Features of management of patients in outpatient care. The main sections of the work. Assessment of the quality of work of the district therapist.
2. Features of the hypertension course in certain categories of patients: elderly and old patients, pregnant women.
3. Task: a woman of 60 years, complains of aching pain in the epigastric region with radiation in the back, suffering for 4 months, which have recently become permanent. There is no obvious dyspepsia, but lost weight is noted. No jaundice or fever. Palpatory tenderness in the epigastric region, obvious tumors are not detected. Endoscopy – pathology was found. Ultrasound the cystic formation is determined in the projection of the body and tail of the pancreas with an internal structure up to 60 mm in diameter, which does not give a Doppler effect, the pancreatic duct is not expanded; there is no pathology of the hepatobiliary system
  1. That history is essential for diagnosis
  2. What method will be crucial for the verification process?
  3. Is it necessary to consult a surgeon?

### **Task 2.**

1. Prevention: definition, classification, main objectives, main directions. Formation of healthy lifestyle. The concept of risk factors for noncommunicable diseases.
2. Differential diagnostics of major diseases associated with abdominal pain and dyspeptic disorders.
3. Task. Patient G., 24 years, for 3 years have worried about pain in the epigastric region, arising in 1-1.5 hours after meals and at night, heartburn. 3 hours ago

patient noted the appearance of acute pain in the epigastric region, which spread throughout the abdomen, difficulty breathing in an upright position. At hospitalization: the patient condition is of moderate severity, in a position on the right side with bent knees; body temperature 36.8°C, tachycardia up to 90 per minute.

1. Make a preliminary diagnosis
2. The most characteristic objective symptoms of this disease are?
3. The most informative methods of analysis determining the therapeutic tactics.
4. Your therapeutic tactics in confirming the diagnosis?

### Task 3.

1. Clinical and expert work in medical and preventive institution. Medical commission: members, functions, objectives.
2. Fever syndrome in the practice of district physician (thermoregulation mechanisms, classification of fever). Causes of possible long-term increase of the body temperature. Methods of examination to clarify the diagnosis of the long-term feverish syndrome. Tactics of district physician in identifying the cause of fever.
3. Task. The district doctor is called home to the patient 54 years old. The patient complains of severe pulsating pain in the head, especially in the occipital area, dizziness, nausea, vomiting, visual impairment, tinnitus, numbness and weakness of the right hand, pressing pain in the heart, heart failure, shortness of breath during exercise. Seven years ago, during perimenopause for the first time recorded increased blood pressure. Deterioration is associated with acute respiratory disease. Objective examination: a patient with high obesity, inhibited, slurred speech, pale skin. Respiratory rate 20 per min., vesicular breathing. Pulse - 60 beats per minute, rhythmic. The heart limits are extended to the left by 2 cm, tones are muted, the accent is 2 tones on the aorta, the tones are rhythmic, systolic noise on the top. BP- 250/140 mm Hg.

Questions:

1. Formulate a preliminary diagnosis.
2. What are the emergency measures necessary to relieve the patient condition?

### **Questions for intermediate certification (exam)**

1. Primary health care: basic principles, types, conditions and forms of delivery.  
Organization of medical care for adults on the profile of "therapy".
2. Organization of therapeutic services in clinic: medical structure of the site, functional responsibilities of a general practitioner of a district/general practitioner, the equipment cabinet of the general practitioner of the district/general practitioner.
3. The concept of outpatient care and primary medical and social care: first aid, primary medical care, emergency and emergency care, the concept of specialized, high-tech, palliative care.
4. The order of registration and medical card maintenance of the patient receiving primary health care in out-patient unit.
5. The concept of indications for planned and emergency hospital admission of patients.
6. The procedure for providing assistance to patients entitled to a get social services. Features of drug provision of citizens entitled to a get social services.  
Rules of registration of the recipes containing prescription of drugs or psychotropic substances
7. Evaluation of temporary disability: definition, types of temporary disability.  
Documents certifying temporary disability.
8. Basic provisions on the procedure for issuing documents certifying temporary disability of people. Responsibility for violation of the procedure for issuing certificates of working disability. Functions of certificate of disability.
9. Medical institutions and medical personnel: who have and do not have the right to issue documents certifying temporary disability. Methods of studying morbidity with temporary disability.
10. Working organization of the medical commission in medical institution.  
Structure and functions of the medical commission.

11. The procedure for issuing a certificate of disability associated with the disease and injury.
12. The procedure for issuing temporary disability records for caring for sick adult family member.
13. The order of issue of the temporary disability forms for the period of sanatorium treatment and medical rehabilitation.
- 14 Evaluation of permanent disability (medical and social expertise): definition, concept of MSE, levels of expertise.
- 15 Criteria used in the medical and social expertise (MSE). The degree of dysfunction of organs and systems. Stages of restriction of vital activity of the body.
16. The concept of disability. Causes of disability. Criteria for determining 1, 2 and 3 groups of disability. Rehabilitation of disabled persons.
- 17 The procedure for registration of patients for medical and social examination. Submission guidelines "the Direction on medico-social examination" f 088/at-06.
18. Prevention as a basis for the preservation and promotion of public health (issues of primary, secondary and tertiary prevention). Preventive activities of the therapist at the medical site. Indicators of the health of the population. Factors shaping human health.
19. General principles of preventive counseling in the framework of clinical examination of adult persons. Brief and in-depth preventive counseling in the framework of clinical examination of the adult persons: algorithm, recommendations for the correction of risk factors.
20. Health center. Structure, personnel, equipment, tasks and principles of activity.
21. Methodological principles for a group prophylactic consultation (patient education). Objectives and principles of activity. The role of district therapist.
22. Objectives and procedure of preventive medical examination. Organization of medical control over the health of the population. Determination of risk factors. Target levels of the main modifiable risk factors.



23. Department of prophylaxis in the clinic: structure, organization of preventive work. The study of morbidity according to preventive examinations.
24. The order of execution of the preliminary and periodic medical examinations of workers engaged in heavy work and work with harmful and (or) dangerous working conditions.
25. Organization of SPA-resort treatment, indications, contraindications. Types of resorts.
26. The procedure for document registration for SPA treatment.
27. Modern methods of sanitary and educational work in ambulatory, the fight against bad habits, alcoholism, drug addiction, promotion of healthy lifestyles.
28. Vascular disease. Persons subjected to dispensary observation; the goals, objectives, timelines, scope of examination, criteria of efficiency.
29. Dispensary observation of persons with acute diseases. Diseases subjected to dispensary observation by the district therapist; goals, objectives, terms, scope of examination, criteria of effectiveness.
30. Frequency, duration, determination of the scope of examination and treatment at dispensary supervision of patients with chronic noninfectious diseases. Grounds for termination of the follow-up.
31. The algorithm and organization of accounting dispensary observation of patients with chronic noncommunicable diseases. Analysis of results and criteria of efficiency of dispensary supervision.
32. Algorithm of dispensary observation of patients with high and very high total cardiovascular risk.
33. Features of management of elderly and senile patients with somatic diseases, the role of the physician district. The definition of "Geriatrics", "Gerontology", "Aging". Issues of the diet therapy, psychotherapy, physical therapy in geriatrics.
34. Features of the clinical pharmacology of medicines, and the appointment of drug therapy for older patients in the outpatient unit.

35. Features of somatic pathology during pregnancy. The necessary minimum analysis of the women before the planned pregnancy. The main objectives of the therapist in the examination of pregnant women with heart defects, hypertension.
36. Features of somatic pathology during pregnancy. The necessary minimum research for women before the planned pregnancy. The main objectives of the therapist in the examination of pregnant women with thyroid disease, anemia in an outpatient unit.
37. Palliative care: principles, indications, features (at the level of outpatient care). Symptoms requiring medical control in the terminal period. Equipment and functions of the palliative care unit.
38. The main causes and characteristics of cough. Localization of cough receptors. Complications of cough. Diagnostic program for the management of a patient with a cough. Basic diagnostic algorithms for acute and chronic cough. Therapeutic approaches to the management of the patient with cough. Medicines for the treatment of cough.
39. Diagnostic search for chest pain. Diseases that need to be excluded / confirmed in the first place in the chest pain syndrome. Characteristics of pain in cardialgia of different etiology.
40. Non-coronary myocardial lesions. Tactics of management and treatment in clinic.
41. The differential diagnostics of diseases that occur with fever - "long low-grade fever", "fever of unknown origin", "hyperthermia". Causes prolonged low-grade fever.
42. Acute respiratory viral infections (ARVI): etiology, clinical symptoms (general and local), diagnostics and treatment in ambulatory. Evaluation of working capacity.
43. Flu serotypes, the peculiarities of clinical manifestations. Diagnosis and treatment in outpatient care. Complications.

44. Complications of ARVI. Indications for hospital admission. Influenza vaccination. Population groups subject to mandatory vaccination. Types of influenza vaccines.
45. Health center. Principles of healthy lifestyle. Functional changes in the cardiovascular system in smokers. Principles of treatment of nicotine dependence.
46. Medical examination of the population. Types and stages of medical examination. Groups of dispensary observation. Working therapist with the medical groups. Criteria of efficiency of medical examination.
47. Prevention departments. Day hospital. Groups of patients to be referred to the day hospital of the polyclinic.
48. Organization of examination of temporary disability in the clinic. Rules of issuance, registration and extension of the certificate of disability. Tasks and functions of the medical Commission of the polyclinic.
49. The concept of permanent disability. Criteria for establishing disability groups. Objectives and functions of the bureau of medical and social expertise.
50. COPD: definition, causes, classification, phenotypes, symptoms, diagnosis.
51. The treatment of COPD. Characteristics of drugs used in the treatment (bronchodilators, inhalation glucocorticoids and others). Basic drug therapy schemes. Indications for hospitalization.
52. Algorithm of management of patient with COPD. Criteria of COPD exacerbation, treatment of exacerbations. Dispensary observation of patients with COPD. Vaccination.
53. Bronchial asthma: definition, classification, diagnosis, differential diagnostics.
54. Bronchial asthma: phenotypes of bronchial asthma. Treatment of bronchial asthma (characteristics of drugs used for treatment). Principles of step therapy. Indications for allergen-specific immunotherapy.
55. Bronchial asthma: definition, risk factors. Diagnostic criteria. Secondary prevention. Dispensary observation. School for BA patients.

56. Community-acquired pneumonia: etiology, clinical picture, diagnostics. Principles of empirical therapy; criteria for the effectiveness of antibiotic therapy. Indications for hospitalization.
57. Community-acquired pneumonia: differential diagnostics. Features of the course and treatment of mycoplasma and chlamydial induced pneumonia.
58. Tactics of management and treatment of community-acquired pneumonia in outpatient unit. Prophylactic medical examination.
59. Anemic syndrome: hypochromic, normochromic, hyperchromic anemia. Algorithm of diagnostic search.
60. Hypochromic microcytic anemia: diagnostic criteria, differential diagnosis. Chronic iron deficiency anemia (IDA). Treatment of IDA. Secondary prevention.
61. Hyperchromic macrocytic anemia. Clinical implications. Differential diagnostics of B12-deficiency anemia and folio-deficiency anemia. Principle of treatment. Secondary prevention.
62. Syncope disorders in the practice of therapist. Differential diagnostics of syncopal conditions in elderly patients. Tactics in clinic.
63. Syncope disorders in the practice of therapist. Differential diagnostics of syncopal conditions in young patients. Tactics in clinic.
64. Chronic pancreatitis: risk factors and causes, classification. Clinical picture. Complications. Chronic pancreatitis: diagnostics, treatment. Prophylactic medical examination. Secondary prevention.
65. Diseases of the biliary tract: risk factors, classification. Symptoms, diagnostics and treatment of biliary tract dysfunction.
66. Chronic non-calculous cholecystitis: causes, clinical manifestations (including atypical). Treatment. Secondary prevention.
67. Chronic hepatitis in the practice of outpatient care therapist. Classification. Main clinical syndromes.
68. Fatty liver disease in the practice of outpatient care therapist: diagnosis, differential diagnostics. Tactics of management and treatment of patients in the clinic.

69. Liver cirrhosis in the practice of outpatient care therapist: tactics of management and treatment of chronic viral hepatitis. Secondary prevention.
70. Urinary syndrome. Differential diagnostics in proteinuria, hematuria, leukocyturia.
71. Urinary tract infection. Pyelonephritis.
72. CKD. Risk factors, screening, diagnostics.
73. Diagnostic criteria for CKD. The algorithm for diagnosis of CKD. Classification of CKD.
74. CKD. Prevention and basic approaches to treatment of CKD. Principles of nephro- and cardioprotective therapy.
75. Hypertensive crises: definition, classification, clinical picture, treatment.
76. Hypertensive crises: features of the course in the elderly. Complications. Emergency medical care at the prehospital stage. Indications for hospitalization.
77. Elderly patient. Comorbidity. Patients' adherence to treatment. Factors affecting treatment adherence. Ways to assess treatment adherence in the outpatient phase.
78. Senile asthenia. Factors of formation, clinical picture, "target organs", plan of prevention of senile asthenia.
79. Influenza in pregnant women. Risk factors for severe influenza. Principles of diagnostics, treatment and prevention.
80. Asymptomatic bacteriuria in women during pregnancy. Diagnostic criteria, treatment.
81. Hypertension during pregnancy: classification, criteria for diagnosis and initiation of therapy. The main groups of drugs used to treat hypertension during pregnancy.
82. Acute coronary syndrome: clinical picture, diagnosis, tactics of management of the patient with ACS.
83. Risk factors for coronary heart disease. Prevention of coronary events (drugs that improve prognosis).

84. Heart attack. Dispensary observation and treatment of patients with myocardial infarction. Examination of working capacity.
85. Criteria for the diagnosis of type 2 diabetes. Features of the course and treatment of coronary artery disease in patients with diabetes. Methods of correction of dyslipidemia.
86. CHD: classification, methods of diagnostics, tactics of management of patients in a clinic. Secondary prevention.
87. Drug therapy of angina pectoris. Anti-ischemic agents (drugs that improve the symptoms of the disease)
88. Cardiac rehabilitation: goals, stages and methods (medical, physical, psychological).
89. Heart rhythm disturbances. Classification of tachyarrhythmias. Tactics of management of patients with arrhythmias.
90. Cardiac conduction disorders. Classification of bradyarrhythmias. Tactics of management of patients with conduction disorders.
91. Atrial fibrillation. Classification. Treatment and management tactics of patients with atrial fibrillation in outpatient care department.
92. PE. Classification. Diagnostics. Prevention of pulmonary embolism. Management of patients who have undergone PE in a polyclinic.
93. Edematous syndrome in the practice of a polyclinic doctor, causes. Differential diagnosis (general and local edema).
94. Joint syndrome in practice of outpatient care doctor. Differential diagnostics. Tactics of management and treatment.
95. Functional diseases of gastrointestinal tract. Diagnostics. Treatment and tactics of management of patients with functional diseases of the gastrointestinal tract.
96. GERD: etiology, clinical picture, diagnosis, treatment. Secondary prevention.
97. Gastric ulcer: causes, diagnostics, treatment. Secondary prevention.
98. Duodenal ulcer: causes, diagnostics, treatment. Secondary prevention.

99. Classification of hypertension (stage, degree). Differential diagnostics. Tactics of management of patients with essential hypertension. Primary and secondary prevention.

100. Treatment of arterial hypertension. The main groups of drugs for the treatment of hypertension. Features of treatment of patients with arterial hypertension in combination with coronary artery disease, COPD, diabetes.

101. Metabolic syndrome: diagnostic criteria, treatment of patients with metabolic syndrome. Secondary prevention.

102. Dilated cardiomyopathy. Diagnostics. Clinical features. Management of patients in the clinic.

103. Hypertrophic cardiomyopathy. Diagnostics. Clinical features. Management of patients in the clinic.

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

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