

Approved by  
Deputy Rector for Academic Affairs  
\_\_\_\_\_ E.V. Konovalova

"16" June 2022, Record No.6

## Phthisiatry

### Syllabus

Department	Multidisciplinary Clinical Training
Curriculum	s310501-ЛечДелоИн-21-1.pli.xml Specialty 31.05.01 General Medicine
Qualification	<b>General Practitioner</b>
Form of education	<b>Full-time</b>
Total (in credits)	<b>5</b>

Total academic hours	180	Control:
including:		Exam ( 9 <sup>rd</sup> term), credit (8 <sup>th</sup> term)
Classes	128	
Self-study	25	
Control hours	27	

#### Course outline in terms

Academic year (Term)	4 (4.8)		5 (5.9)		Total	
	Cur	Syl	Cur	Syl		
Weeks	17,3		17,3			
Types of classes	Cur	Syl	Cur	Syl	Cur	Syl
Lectures	16	16	16	16	32	32
Practical	48	48	48	48	96	96
Contact	64	64	64	64	128	128
Self-study	8	8	17	17	25	25
Control hours	-	-	27	27	27	27
Total	72	72	108	108	180	180

The Syllabus is compiled by:

*PhD in Medical Sciences (Medicine), Associate Professor Nelidova N.V.*\_\_\_\_\_

The Syllabus

**Phthisiatry**

Developed in accordance with Federal State Educational Standard:

Federal State Educational Standard of higher education in the specialty 31.05.01 General medicine (Order of the Ministry of Education and Science of the Russian Federation on August, 12, 2020 №988)

Based on the Curriculum:

31.05.01 GENERAL MEDICINE

Specialization: General Medicine

Approved by the Academic Council of Surgut State University, “16” June 2022, Record No.6

The Syllabus was approved by the department

Multidisciplinary Clinical Training

Head of Department, Doctor of Medicine, Professor Klimova N.V.

1. COURSE OBJECTIVES	
1.1	The <b>objectives</b> of mastering Phthisiatry are to acquire knowledge and practical skills in the detection, diagnosing, performing differential diagnosis of tuberculosis, extrapulmonary tuberculosis and other respiratory diseases, as well as prevention and treatment of tuberculosis.

2. COURSE OVERVIEW	
Course code (in curriculum)	B1.O.04.22

<b>2.1</b>	<b>Assumed background:</b>
	Topographic Anatomy and Operative Surgery Adaptive and Age-related Physiology Immunology and Allergology General Surgery Pathologic Anatomy Pathologic Syndromes in Clinical Medicine Pathophysiology Pharmacology Internal Diseases Propaedeutics X-Ray Diagnostics Clinical Pathophysiology

<b>2.2</b>	<b>Post-requisite courses and practice:</b>
	Clinical Pathologic Anatomy Otorhinolaryngology Ophthalmology Hospital Therapy (the 6th year) Hospital Surgery, Paediatric Surgery Dermatovenerology Infectious Diseases Outpatient Therapy Public Health and Healthcare. Economy of Public Healthcare Epidemiology Clinical Pharmacology Anaesthesiology, Resuscitation, Intensive Care Medical Rehabilitation Emergency Medicine

3. COMPETENCES UPON COMPLETION OF THE COURSE (MODULE)	
<b>PC-1.1:</b>	Demonstrates knowledge in etiology, pathogenesis, diagnostic criteria (clinical - subjective, physical, laboratory, instrumental, identifies the patient's common pathological conditions, symptoms, disease syndromes and diagnoses nosological forms according to the International Statistical Classification of Diseases and Related Health Problems, X - XI revisions
<b>PC-1.2:</b>	Carries out diagnostics, evaluates the prognosis (short-, medium- and long-term course) of the disease, identifies acute complications and complications of chronic diseases
<b>PC-2.1:</b>	Assesses the condition of a patient requiring emergency or urgent medical care, E950, including a state of clinical death
<b>PC-3.1:</b>	Examines the patient (handle the patient's complaints, anamnesis, physical data based on the examination results, determines the necessary examination plan, evaluates the parameters of laboratory, instrumental, pathological and anatomical and other methods in order to diagnose diseases, assesses the prognosis (short-, medium- , long-term) of its course and outcomes
<b>PC-3.2:</b>	Makes an initial and clinical diagnosis in accordance with the International Statistical Classification of Diseases and Health Problems X - XI revisions and current clinical classifications
<b>PC-3.3:</b>	Carries out early and differential diagnostics of diseases
<b>PC-3.4:</b>	Provides routing and management of patients based on the current legislation (standards, procedures for the provision of medical care, Clinical guidelines)
<b>PC-5.2:</b>	Provides various categories of patients with outpatient treatment, treatment in hospitals and high-tech medical care (HMC) centers applying drugs, medical devices and medical nutrition, according to clinical pattern and current procedures, standards of medical care, Clinical guidelines (treatment protocols)

**PC-7.2:** Organizes and controls the immunization against infectious diseases in the adult population in accordance with the current procedures for the provision of medical care, Clinical guidelines (treatment protocols) on the provision of medical care, taking into account the standards of medical care and determine medical indications for the introduction of restrictive measures (quarantine) and indications for referral to a specialist doctor in the event of infectious (parasitic) diseases

**PC-7.4:** Draws up and sends to the territorial body of the Federal Service for Supervision of Consumer Rights Protection and Human Wellbeing of an emergency notification when an infectious or occupational disease is detected and to take anti-epidemic measures in the event of a focus of infection, including quarantine measures when detecting especially dangerous (quarantine) infectious diseases

**PC-8.1:** Demonstrates the ability and readiness to organize planning and reporting of medical personnel, to analyze the performance indicators of a medical institution and its departments, present the analysis results

**PC-8.2:** Keeps medical records, including the electronic format

**By the end of the course students must:**

<b>3.1 Know:</b>
3.1.1 - the modern definition of tuberculosis, reflecting the etiology, pathogenesis, clinical and morphological characteristics, indicating the leading clinical syndrome of one form or another;
3.1.2 - the full content of the theoretical foundations of the subject;
3.1.3 - correct interpretation of the basic concepts of immunology, needs for clinical and immunological examination, differential diagnosis of diseases of the immune system, the importance of immunogenic factors in the pathogenesis and diagnosis of human immuno-mediated diseases, in organ and tissue transplantation;
3.1.4 - the mandatory set of diagnostic methods used in the examination of tuberculosis in adults and children, clinical symptoms, physical, microbiological, radiological, immunological signs and characteristics of tuberculosis in adults
3.1.5 - methods of detection of tuberculosis patients among adults, children and adolescents;
3.1.6 - methods of specific and sanitary prevention of tuberculosis in adults and children;
3.1.7 - organizational forms of tuberculosis patients treatment, the list of anti-tuberculosis drugs, indications for their
3.1.8 - the necessary set of therapeutic measures for complications of tuberculosis pulmonary bleeding, spontaneous pneumothorax, in the event of adverse reactions to anti-tuberculosis drugs.
<b>3.2 Be able to:</b>
3.2.1 - make an examination plan of the patient suspected of having tuberculosis;
3.2.2 - interview the patient and his / her relatives, conduct a physical examination of the patient, formulate a preliminary diagnosis, formulate an opinion on the patient's health and draw up medical documentation on the results of the
3.2.3 - examine sputum smears under a light microscope to detect MBT and evaluate the results of bacterioscopic and bacteriological examination;
3.2.4 - detect, evaluate and describe pathological changes detected by radiation methods in patients with tuberculosis;
3.2.5 - determine the indications and evaluate the result of skin-allergic Mantoux test and provocative Koch test;
3.2.6 - determine the indications and contraindications for TB vaccination, revaccination and assess the course of vaccination reaction with intradermal administration of BCG vaccine; determine the indications for the chemotherapy
3.2.7 - determine the indications for antibiotic therapy, assess its tolerability and, if necessary, make prescriptions to eliminate adverse reactions of drugs;
3.2.8 - diagnose emergency conditions in tuberculosis patients and provide them with first aid;
3.2.9 - establish the type of focus of tuberculosis infection and make a plan of measures for its recovery;
3.2.10 - give recommendations for preventive measures specifically for the patient and the team in the Far North;
3.2.11 - solve general deontological issues related to the examination and treatment of a patient with tuberculosis;
3.2.12 - identify the nearest and remote forecast for supervised patient in relation to life, healing and disability.
<b>3.3 Have skills of:</b>
3.3.1 - keeping medical records;
3.3.2 - using methods of General Clinical Examination;
3.3.3 - interpreting the results of laboratory and instrumental diagnostic methods;
3.3.4 - using the algorithm of detailed clinical diagnosis;
3.3.5 - using the algorithm of preliminary diagnosis followed by referral of the patient to the appropriate medical specialist;
3.3.6 - the main medical diagnostic and therapeutic measures to provide first aid in emergency and life-threatening

#### 4. STRUCTURE AND CONTENTS OF THE COURSE (MODULE)

Class Code	Topics /Class type	Term / Academic	Academic hours	Competences	Literature	Interactive	Notes
	<b>Section 1. Theoretical foundations of</b>						

1.1	Introduction to the subject of Phthisiatry /Lecture /	8	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, PC-7.4 PC-8.1		0	
1.2	Pathogenesis and Pathological Anatomy of tuberculosis. Immunity and Allergy in tuberculosis. Pathomorphosis of tuberculosis	8	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, PC-7.4 PC-8.1		0	Oral quiz, tests
1.3	Pathogenesis and Pathological Anatomy of tuberculosis. Immunity and Allergy in tuberculosis. Pathomorphosis of tuberculosis /Lecture	8	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1 PC-		0	
1.4	Pathogenesis and Pathological Anatomy of tuberculosis. Immunity and Allergy in tuberculosis. Pathomorphosis of tuberculosis	8	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1 PC-		0	Oral quiz, tests
1.5	Epidemiology, etiology of tuberculosis /Self-study /	8	1	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-7.2, PC-		0	Essay
1.6	Immunity and Allergy in tuberculosis /Self-study/	8	1	PC-7.2, C-7.4 PC-8.1, PC-8.2		0	Essay
	<b>Section 2. Tuberculosis dispensary (clinic)</b>					0	
2.1	Organization and system of anti-tuberculosis care /Lecture /	8	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	
2.2	Methods and organization of early detection of tuberculosis /Practical /	8	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Oral quiz, tests
2.3	Methods and organization of early detection of tuberculosis /Lecture /	8	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	

2.4	The value of the X-ray chest examination for the detection of focal pulmonary tuberculosis /Self-study/	8	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Essay
2.5	Prevention of tuberculosis /Practical /	8	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Oral quiz, tests
2.6	Prevention of tuberculosis /Lecture /	8	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	
2.7	Prevention of tuberculosis /Practical/	8	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Oral quiz, tests
	<b>Section 3. Diagnosing tuberculosis</b>					0	
3.1	Features of clinical examination of patients with tuberculosis /Lecture /	8	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	
3.2	Features of clinical examination of patients with tuberculosis /Practical/	8	8	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Oral quiz, tests, reports
3.3	Radiation diagnostics of tuberculosis /Practical/	8	8	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Oral quiz, tests
3.4	Immunodiagnosis /Practical /	8	8	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Oral quiz, tests
3.5	Immunodiagnosis /Lecture /	8	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	

3.6	Immunodiagnosis /Self-study /	8	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Essay
3.7	Credit	8	0	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Oral quiz
	<b>Section 4. The clinical course of tuberculosis</b>					0	
4.1	Clinical classification of tuberculosis /Lecture /	9	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	
4.2	Primary tuberculosis /Lecture /	9	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	
4.3	Primary tuberculosis /Practical /	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Oral quiz, tests
4.4	Primary tuberculosis /Self-study /	9	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Essay
4.5	Miliary and disseminated pulmonary tuberculosis. Tuberculous	9	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	
4.6	Solving clinical problems /Self-study/	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Essay
4.7	Miliary and disseminated pulmonary tuberculosis. Tuberculous	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Oral quiz, tests
4.8	Focal pulmonary tuberculosis. Infiltrative pulmonary tuberculosis. Pulmonary	9	2	PC-7.2, C-7.4 PC-8.1, PC-8.2		0	

4.9	Focal pulmonary tuberculosis. Infiltrative pulmonary tuberculosis. Pulmonary	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-		0	Oral quiz, tests
4.10	Differential diagnosis of tuberculosis and lung cancer (peripheral) /Self-study /	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-		0	Essay
4.11	Cavernous, fibrous-cavernous and cirrhotic pulmonary tuberculosis. Complications of tuberculosis. The state of emergency in Phthisiology /Lecture /	9	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2		0	
4.12	Cavernous, fibrous-cavernous and cirrhotic pulmonary tuberculosis. Complications of tuberculosis. The state of emergency in Phthisiology /Practical /	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2		0	Oral quiz, tests
4.13	Differential diagnosis of destructive pulmonary tuberculosis /Self-study/	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-		0	Essay
4.14	Tuberculous pleurisy /Lecture /	9	2	PC-7.2, C-7.4 PC-8.1,PC-8.2		0	
4.15	Tuberculous pleurisy. Pulmonary tuberculosis and diseases of other organs and systems /Practical /	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2		0	Oral quiz, tests
4.16	Fibrinous pleurisy as a complication of pulmonary tuberculosis and its treatment	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-		0	Essay
4.17	Extrapulmonary tuberculosis /Practical /	9	4	PC-7.2, C-7.4 PC-8.1,PC-8.2		0	Oral quiz, tests
4.18	Extrapulmonary tuberculosis /Lecture /	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-		0	
4.19	Differential diagnosis of tuberculous meningitis. Treatment of patients with tuberculosis	9	1	PC-7.2, C-7.4 PC-8.1,PC-8.2		0	Essay
4.20	Tuberculosis and related diseases /Practical/	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-		0	Oral quiz, tests



	<b>Section 5. Treatment of tuberculosis.</b>						
5.1	General principles and methods of tuberculosis treatment /Lecture /	9	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-7.2, C-7.4		0	
5.2	General principles and methods of tuberculosis treatment	9	8	PC-7.2, C-7.4 PC-8.1, PC-8.2		0	Oral quiz, tests
5.3	Collapse therapy. Indications and efficiency /Practical /	9	4	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-7.2, C-7.4		0	Essay
5.4.	Test Control /Practical /	2	2	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-7.2, C-7.4		0	Case history
	<b>Section 6. Exam</b>						
6.1	/Exam/	9	27	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4		0	Oral quiz
<b>5. ASSESSMENT TOOLS</b>							
<b>5.1. Tests and tasks</b>							
Supplement 1.							
<b>5.2. Topics for written papers</b>							
Supplement 1.							
<b>5.3. Assessment tools</b>							
Supplement 1.							
<b>5.4. List of assessment tools</b>							
Oral quiz, tests, essay, the case history assessment Credit: Oral quiz Exam: Oral quiz, tests							
<b>6. COURSE (MODULE) RESOURCES</b>							
<b>6.1. Recommended Literature</b>							
<b>6.1.1. Core</b>							
	Authors	Title			Publish., year	Quantity	
	Koshechkin V.A.	Phthisiatry			Moscow: GEOTAR-Media, 2019, <a href="https://www.studentlibrary.ru/book/ISBN9785970453025.html">https://www.studentlibrary.ru/book/ISBN9785970453025.html</a>		
<b>6.1.2. Supplementary</b>							
	Authors	Title			Publish., year	Quantity	
	Artamonova M.N., Potaturkina-Nesterova N.I., Ilyina N.A.,	Medical Microbiology, Virology and Immunology. Lecture Notes			Moscow: GEOTAR-Media, 2020, <a href="https://www.studentlibrary.ru/book/ISBN9785970455289.html">https://www.studentlibrary.ru/book/ISBN9785970455289.html</a>		
<b>6.1.3. Methodical development</b>							
	Authors	Title			Publish., year	Quantity	
<b>6.2. Internet resources</b>							
E1	FreeMedicalJournals						
<b>6.2. Internet resources</b>							

FreeMedicalJournals	
<b>6.3.1 Software</b>	
6.3.1.1	Operational system Microsoft, applied programs pack Microsoft Office
6.3.1.2	Internet access ( Wi-Fi)
<b>6.3.2 Information Referral systems</b>	
6.3.2.1	E-data bases: RSL, Orbicon, Medline.
6.3.2.2	Student Consultant <a href="http://www.studmedlib.ru">http://www.studmedlib.ru</a>
<b>7. MATERIAL AND TECHNICAL SUPPORT OF DISCIPLINE (MODULE)</b>	
Classrooms for practical classes, group and individual consultations, monitoring and intermediate certification are equipped with: typical classroom furniture, technical teaching aids, employees for the presentation of educational information.	
Teaching aids: computer with licensed software; CD-, DVD-, MP3-players, computers, TV, projector.	
<b>8. Course manuals</b>	
Supplement 2.	

Syllabus

# Phthisiatry

Qualification

Specialist

**Specialty**

31.05.01 General Medicine

Form of education

Full-time

Designer Department

Multidisciplinary Clinical Training

Graduate Department

Internal diseases

## Sample tasks and tests

### Stage I: Formative assessment.

#### 1.1 Topics 1-5. Points for oral quiz.

##### Topic 1. Theoretical foundations of Phthisiatry:

###### Points for discussion

1. Introduction to the subject of Phthisiatry.
2. Sanitary epidemiological regime in the Clinical Phthisiology and Pulmonology.
3. Deontology in Phthisiology.
4. Biological properties of a causative agent of tuberculosis, means of identification and cultivation.
5. Morphology of lungs and mechanisms of respiratory apparatus protection from damaging factors, pathogenesis and pathomorphology of tuberculosis.
6. The state of the immune system in tuberculosis.
7. Pathophysiology of breathing and pathophysiological disorders that occur in the body with a specific infectious process.
8. Modern definition of tuberculosis, reflecting the etiology, pathogenesis, clinical and morphological characteristics, indicating the leading clinical syndrome of one form or another.

##### Topic 2. Tuberculosis dispensary (clinic)

###### Points for discussion

1. Tuberculosis dispensary.
2. Tasks of medical check-ups for the timely detection of tuberculosis and its prevention.
3. Measures for the diagnosis of tuberculosis, treatment and follow-up of patients.
4. The cure for tuberculosis.
5. Small and large residual changes after recovery of tuberculosis.
6. Temporary and permanent disability of patients with pulmonary tuberculosis.
7. The work of the institutions of General medical network for the tuberculosis prevention.
8. BCG and BCG-M vaccinations.

##### Topic 3. Diagnosing tuberculosis

###### Points for discussion

1. The main methods of tuberculosis patients detection. The importance of early and timely detection of tuberculosis.
2. Groups of people at increased risk of tuberculosis. Methods of clinical examination of persons at increased risk of tuberculosis.
  3. Clinical classification of tuberculosis.
  4. The main clinical symptoms of tuberculosis.
  5. Laboratory, instrumental diagnostics of tuberculosis.
  6. Methods of X-ray examination.

##### Topic 4. The clinical course of tuberculosis

###### Points for discussion

1. Primary tuberculosis.
2. Tuberculosis of intrathoracic lymph nodes, pathogenesis, diagnosis, clinical picture, treatment, differential diagnosis.
  3. Primary tuberculosis complex.
  4. Miliary tuberculosis of lungs.
  5. Disseminated tuberculosis of lungs.
  6. Tuberculous meningitis.
  7. Focal pulmonary tuberculosis.
  8. The pathogenesis of the formation of tubercles.
  9. Infiltrative pulmonary tuberculosis.
  10. Caseous pneumonia.

##### Topic 5. Tuberculosis treatment.

###### Points for discussion

1. Treatment of tuberculosis. Antituberculous drug.
2. General principles and methods of chemotherapy of tuberculosis.

3. Combinations of drugs and drug regimens.
4. Indications for chemotherapy in hospitals and outpatient clinics.
5. Methods of surgical treatment of patients with respiratory tuberculosis.

### 1.2 Topics 1-5. Topics for Essay (for self-study).

1. Principles for assessing the epidemiological situation in the region
2. Principles of evaluation of the epidemiological situation in the region.
3. Historical background of TB vaccination.
4. Preventive measures for the transmission of tuberculosis infection.
5. Differential diagnosis of tuberculosis and lung cancer (peripheral).
6. The importance of X-ray methods in the detection of pulmonary tuberculosis.
7. The importance of surgery in the treatment of pulmonary tuberculosis.
8. Differential diagnosis of infiltrative tuberculosis and pneumonia.
9. Pathomorphological features of caseous pneumonia.

### 1.3 Sample tests for formative assessment (with keys).

1. Hemogram in patients with a newly diagnosed focal pulmonary tuberculosis is more often characterized by all of the above, except

- a) **pronounced pathological changes and sharply accelerated ESR;**
- b) moderate pathological changes and slightly accelerated ESR;
- c) absence of pathological changes and normal ESR.

2. The size of the decay cavity in focal pulmonary tuberculosis is characterized by

- a) **a small size;**
- b) a medium size;
- c) a significant size;
- d) any of the following.

3. In case of timely detection and effective treatment in most patients with focal pulmonary tuberculosis ..... is /are observed.

- a) full resorption changes in the lungs;
- b) **formation of small residual changes;**
- c) formation of large residual changes.

4. The causes of the disease recurrence in patients with focal pulmonary tuberculosis may be the following:

- (a) the nature of residual changes in the lungs;
- b) inadequate nature of the main course of chemotherapy;
- c) drug resistance of *Mycobacterium tuberculosis*;
- d) **presence of concomitant diseases;**
- e) all of the above.

5. The most characteristic radiological signs are ...

- a) a heterogeneous irregular focus with the foci;
- b) **uneven land dimmable with pockets;**
- c) heterogeneous triangular shaped plot with pockets;
- d) a homogeneous phase dimmable with pockets;
- e) uniform triangular shape darkening area with foci.

### 1.4. The case history assessment (Test Control)

The main stages of writing a clinical history:

Title page (separate page)

1. Passport part.
2. Complaints: basic and found during the survey on organ systems.
3. Anamnesis of the underlying and concomitant diseases.
4. Anamnesis of life.
5. Data of an objective study of the patient.
6. Justification of the preliminary diagnosis and its formulation.

7. Survey plan.
8. Data of laboratory and instrumental studies, conclusions of consultants.
9. Final clinical diagnosis (justification and formulation).
10. Differential diagnosis.
11. Treatment of the patient and its rationale.
12. Forecast.
13. Prevention (primary and secondary).
14. Epicrisis.
15. Diary of supervision.
16. List of used literature.

Medical history is assessed according to the following criteria:

1. Subjective research of the patient (collection of complaints, anamnesis).
2. Objective examination of the patient.
3. Planning and interpretation of additional research methods.
4. Differential diagnosis, clinical diagnosis, its rationale.
5. Prescribing treatment.
6. Epicrisis.

**Stage: Midterm assessment (credit) 8th term.**

Midterm assessment is carried out in the form of credit. Tasks for the credit include two theoretical points for oral quiz.

Tasks for competence assessment «Knowledge»	Task type
<p>List of theoretical points for oral quiz:</p> <ol style="list-style-type: none"> <li>1. Deontology in Phthisiology.</li> <li>2. Biological properties of the causative agent of tuberculosis, means of identification and cultivation.</li> <li>3. Morphology of lungs and mechanisms of respiratory apparatus protection from damaging factors.</li> <li>4. The state of the immune system in tuberculosis.</li> <li>5. Modern definition of tuberculosis, reflecting the etiology, pathogenesis, clinical and morphological characteristics, indicating the leading clinical syndrome of one form or another.</li> <li>6. Tuberculosis dispensary.</li> <li>7. Tasks of medical check-ups for the timely detection of tuberculosis and its prevention.</li> <li>8. BCG and BCG-M vaccinations.</li> <li>9. The main methods of tuberculosis patient's detection. The importance of early and timely detection of tuberculosis.</li> <li>10. Groups of people at increased risk of tuberculosis. Methods of clinical examination of persons at increased risk of tuberculosis.</li> <li>11. Clinical classification of tuberculosis.</li> <li>12. The main clinical symptoms of tuberculosis.</li> <li>13. Laboratory, instrumental diagnostics of tuberculosis.</li> <li>14. Methods of X-ray examination.</li> <li>15. Primary tuberculosis.</li> <li>16. Tuberculosis of intrathoracic lymph nodes, pathogenesis, diagnosis, clinical picture, treatment, differential diagnosis.</li> <li>17. Primary tuberculosis complex.</li> <li>18. Miliary tuberculosis of lungs.</li> <li>19. Disseminated tuberculosis of lungs.</li> <li>20. Tuberculous meningitis.</li> <li>21. Focal pulmonary tuberculosis.</li> <li>22. The pathogenesis of the tubercules formation.</li> <li>23. Infiltrative pulmonary tuberculosis.</li> <li>24. Caseous pneumonia.</li> </ol>	<p><b>-theoretical</b></p>

<ul style="list-style-type: none"> <li>25. Treatment of tuberculosis. Antituberculous drug.</li> <li>26. General principles and methods of chemotherapy of tuberculosis.</li> <li>27. Combinations of drugs and drug regimens.</li> <li>28. Indications for chemotherapy in hospitals and outpatient clinics.</li> <li>29. Methods of surgical treatment of patients with respiratory tuberculosis.</li> </ul>	
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### Midterm assessment (exam) 9th term.

Midterm assessment is carried out in the form of an exam. Tasks for the exam include two theoretical points **for oral quiz and tests**

<b>Tasks for competence assessment «Knowledge»</b>	<b>Task type</b>
<p>List of theoretical points <b>for the oral quiz:</b></p> <ul style="list-style-type: none"> <li>1. Primary tuberculosis.</li> <li>2. Tuberculosis of intrathoracic lymph nodes, pathogenesis, diagnosis, clinical picture, treatment, differential diagnosis.</li> <li>3. Primary tuberculosis complex.</li> <li>4. Miliary tuberculosis of lungs.</li> <li>5. Disseminated tuberculosis of lungs.</li> <li>6. Tuberculous meningitis.</li> <li>7. Focal pulmonary tuberculosis.</li> <li>8. The main methods of tuberculosis patient's detection. The importance of early and timely detection of tuberculosis.</li> <li>9. Groups of people at increased risk of tuberculosis. Methods of clinical examination of persons at increased risk of tuberculosis.</li> <li>10. Clinical classification of tuberculosis.</li> <li>11. The main clinical symptoms of tuberculosis.</li> <li>12. Laboratory, instrumental diagnostics of tuberculosis.</li> <li>13. Methods of X-ray examination.</li> <li>14. Primary tuberculosis.</li> <li>15. Tuberculosis of intrathoracic lymph nodes, pathogenesis, diagnosis, clinical picture, treatment, differential diagnosis.</li> <li>16. Primary tuberculosis complex.</li> <li>17. Miliary tuberculosis of lungs.</li> <li>18. Disseminated tuberculosis of lungs.</li> <li>19. Tuberculous meningitis.</li> <li>20. Focal pulmonary tuberculosis.</li> <li>21. The pathogenesis of the formation of tubercles.</li> <li>22. Infiltrative pulmonary tuberculosis.</li> <li>24. Caseous pneumonia.</li> <li>25. Treatment of tuberculosis. Antituberculous drug.</li> <li>26. General principles and methods of chemotherapy of tuberculosis.</li> <li>27. Combinations of drugs and drug regimens.</li> <li>28. Indications for chemotherapy in hospitals and outpatient clinics.</li> <li>29. Methods of surgical treatment of patients with respiratory tuberculosis.</li> <li>30. Preventive measures for the transmission of tuberculosis infection</li> </ul>	<b>-theoretical</b>
<b>Tasks for competence assessment «Abilities»</b>	<b>Task type</b>
<p><b>List of Tests:</b></p> <ul style="list-style-type: none"> <li>1. Hemogram in patients with a newly diagnosed focal pulmonary tuberculosis is more often characterized by all of the above, except <ul style="list-style-type: none"> <li>a) pronounced pathological changes and sharply accelerated ESR;</li> <li>b) moderate pathological changes and slightly accelerated ESR;</li> <li>c) absence of pathological changes and normal ESR.</li> </ul> </li> <li>2. The size of the decay cavity in focal pulmonary tuberculosis is characterized by</li> </ul>	<b>-practical</b>

<p><b>a) a small size;</b>  b) a medium size;  c) a significant size;  d) any of the following.</p> <p>3. In case of timely detection and effective treatment in most patients with focal pulmonary tuberculosis ..... is /are observed.</p> <p>a) full resorption changes in the lungs;  <b>b) formation of small residual changes;</b>  c) formation of large residual changes.</p> <p>4. The causes of the disease recurrence in patients with focal pulmonary tuberculosis may be the following:  (a) the nature of residual changes in the lungs;  b) inadequate nature of the main course of chemotherapy;  c) drug resistance of Mycobacterium tuberculosis;  <b>d) presence of concomitant diseases;</b>  e) all of the above.</p> <p>5. The most characteristic radiological signs are ...  a) a heterogeneous irregular focus with the foci;  <b>b) uneven land dimmable with pockets;</b>  c) heterogeneous triangular shaped plot with pockets;  d) a homogeneous phase dimmable with pockets;  e) uniform triangular shape darkening area with foci.</p>	
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#### METHODOLOGICAL GUIDELINES FOR LEARNING OUTCOMES ASSESSMENT

##### Stage: Formative assessment

Formative assessment is a regular checking of student academic progress during the academic term. It is performed in various oral and written forms (quizzes, essays, checking of home assignments, compilation of cases, self-study, colloquiums, and testing). During formative assessment, the teacher monitors the level of student's academic progress according to the curriculum identifying lack of knowledge, or misunderstanding.

The tasks of formative assessment are aligned with the Curriculum and Syllabus.

### 1. Guidelines for assessing the oral quiz:

In assessing the teacher takes into account:

- knowledge and understanding of the subject matter;
- activity during the class;
- consistency of presentation;
- argumentation of the answer, the level of independent thinking;
- ability to link theoretical and practical principles with future professional activity.

##### Assessment criteria:

The results are assessed in a four-grading scale: "excellent", "good", "satisfactory", "unsatisfactory".

Type of the task	Assessed competences	Assessment criteria	Grade
oral quiz:	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4,	The student demonstrates a	Excellent



PC-5.2 PC-7.2, C-7.4 PC-8.1, PC-8.2	comprehensive, systematic and in-depth knowledge of the academic material; has learned the required and additional resources. The student demonstrates a consistent and thorough understanding of the required knowledge, concepts, skills of the material learned, and their significance for future profession.	
PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1, PC-8.2	The student demonstrates a comprehensive knowledge of the academic material; has learned the required and additional resources. The student demonstrates a consistent understanding of the required knowledge, concepts, and skills of the material learned, but makes minor errors.	Good
PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1, PC-8.2	The student demonstrates basic knowledge necessary for further study; has learned basic recommended literature. The student operates with inaccurate formulating, has difficulties in the independent answers, makes significant mistakes but is able to correct them under the guidance of a teacher.	Satisfactory
PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1, PC-8.2	The student does not know the obligatory minimum or demonstrates gaps in knowledge of the academic material, makes major mistakes or gives completely wrong answers.	Unsatisfactory

## 2. Guidelines for test assessment.

### Assessment criteria:

The results are assessed in a four-grading scale: "excellent", "good", "satisfactory", "unsatisfactory".

Type of the task	Assessed competences	Assessment criteria	Grade
Test	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1, PC-8.2	80 – 100%	Excellent
		66 – 80%	Good
		46 – 65%	Satisfactory
		Less Than 46%	Unsatisfactory

## 3. Guidelines for the case history assessment:

### In assessing the teacher takes into account:

1. knowledge and understanding of the subject matter;
2. compliance of the case history with the methodological requirements of the department;
3. literacy, logic, and style of writing;
4. reasoning and interpretation of additional survey data;
5. differential diagnosis and/or its rationale, choice of treatment, practical recommendations;
6. level of independent thinking;
7. ability to link theory and practice.

### The criteria for case history assessment:

1. The subjective examination of the patient (complaints, anamnesis).

2. The objective examination of the patient.
3. Planning and interpreting additional methods of the examination.
4. Differential diagnosis, clinical diagnosis, its rationale.
5. Purpose of treatment.
6. Epicrisis.

**Assessment criteria:**

The results are assessed in a four-grading scale: “excellent”, “good”, “satisfactory”, “unsatisfactory”.

Type of the task	Assessed competences	Assessment criteria	Grade
Case history	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The student demonstrates a comprehensive, systematic and deep knowledge of material, the ability to gather complaints, anamnesis, to conduct an objective examination of the patient, to assign additional methods of examination for this pathology, to conduct a differential diagnosis and define diagnosis, prescribe treatment in accordance with modern concepts of medical science, use the main and additional literature.	Excellent
	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The student demonstrates a comprehensive and systematic knowledge of material, the ability to gather complaints, anamnesis, to conduct an objective examination of the patient, to assign additional methods of examination for this pathology, to conduct a differential diagnosis and define diagnosis, prescribe treatment in accordance with modern concepts of medical science, use the main and additional literature. The student makes single mistakes in medical terminology, single stylistic mistakes and inconsistencies in the text, inaccuracies of subjective or objective examination of the patient. The student demonstrates insufficient ability to use the data of objective examination in the formulation and solving therapeutic and diagnostic problems.	Good
	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The student demonstrates a basic knowledge required for further study, the ability to gather complaints, anamnesis, to conduct an objective examination of the patient, to assign additional methods of examination for this pathology, to conduct a differential diagnosis and define diagnosis, prescribe treatment in accordance with modern concepts of medical science, use the main and additional literature. The student makes multiple mistakes in medical terminology, multiple stylistic mistakes and inconsistencies in the text,	Satisfactory

		errors of subjective or objective examination of the patient. The student demonstrates insufficient ability to use the data of objective examination in the formulation and solving therapeutic and diagnostic problems, but has abilities to eliminate the mistakes under the guidance of a teacher.	
	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The student has significant gaps in knowledge of the basic material, has made fundamental mistakes in examining a patient, is not able to make a differential diagnosis, assign diagnostic and therapeutic measures for the pathology.	Unsatisfactory

### 5. Essay requirements:

1) Volume: 1500-300 words,

2) Contents structure:

- Introduction
  - prove the relevance of the chosen topic
  - point out the purpose of the essay
  - give a summary of the main points
- Body
  - use information obtained from different sources during the research
  - show inaccuracy of the opposite points of view
- Conclusion
- List of references

The essay assumes usage of several specialized sources (at least 8-10 publications, monographs, the reference media, manuals). Preference is given to the publications in specialized medical journal and monographs including foreign databases.

### Assessment criteria:

The results are assessed in a four-grading scale: "excellent", "good", "satisfactory", "unsatisfactory".

Type of the task	Assessed competences	Assessment criteria	Grade
Essay	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The requirements are fulfilled: <ul style="list-style-type: none"> <li>- the problem is formulated and its relevance is proved;</li> <li>- the various approaches to problem are presented;</li> <li>- conclusions are formulated;</li> <li>- the subject is thoroughly studied;</li> <li>- volume is observed;</li> <li>- design requirements are observed;</li> <li>- correct answers to additional questions are given.</li> </ul>	Excellent
	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The main are fulfilled with some mistakes: <ul style="list-style-type: none"> <li>- inaccuracies in material statement;</li> <li>- no logical sequence in judgments;</li> <li>- volume is not observed;</li> <li>- errors in design requirements;</li> <li>- incomplete answers are given to additional questions in the process of defense.</li> </ul>	Good
		There are significant deviations from	Satisfactory

		requirements: - topic is only partially explored; - mistakes in contents of the paper; - mistakes in answers to additional questions; - no conclusion is given at the process of defense.	
	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The essay is not prepared at all. The subject of the essay is not explored, significant misunderstanding of a topic.	Unsatisfactory

### Stage: midterm assessment (credit)

Midterm assessment is carried out in the form of credit. Tasks for the credit include theoretical points

#### Methodological guidelines for preparation of credit

##### Requirements for the student:

- to attend classroom classes regularly; skipping classes is not allowed without a good reason;
- in case of missing the lesson, the student must be ready to answer the questions of the teacher on the topic of the class he/she missed;
- to hand over written papers on time and to make sure they are credited;
- preparing for the next class, the student must read the relevant textbooks, manuals, monographs, etc., and be ready to demonstrate their knowledge; student's participation in the discussion is taken into account and assessed;
- in case the student has not mastered the necessary material or has not understood something, he/she should attend consultation sessions;
- preparation for one theoretical question is 5-7 minutes;
- the second stage is the demonstration of a practical skill. The student has to describe indications and conditions and demonstrate technique on the model.

#### Midterm assessment (credit) are assessed in a two-grading scale

1. «passed»;
2. «failed»

Type of the task	Assessed competences	Assessment criteria	Grade
Oral quiz	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The student answers all the questions correctly, clearly, logically and completely. The student closely applies theory and practice and correctly solves the problems of higher complexity with the professional content.	Passed
	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The student is not able to give logical answer, gives no answer to additional questions and does not understand the topic. He/she makes significant and serious mistakes in answers.	Failed

### Stage: midterm assessment (exam)

#### Methodological guidelines for summative assessment (exam)

Examination is held in the oral form and includes several stages:

- oral quiz (the card includes two questions);

- tests;

**Requirements for the student:**

- 1) regularly attend classes; the absence from classes is not allowed without good reason;
- 2) in case of absence from classes the student has to work out passed classes;
- 3) the student has to hand over written papers on time;
- 4) the student has successfully passed all colloquiums provided by the plan;
- 5) in case the student has been negatively assessed on the colloquium, he/she should try to pass it again;
- 6) during the test week the student has to hand over all the tasks (clinical case).

The students are allowed to take examinations in case of all the tests passed and no academic debts (on the basis of the academic records).

The students are not allowed to take examination:

- with unpassed tests on the discipline;
- with missed classes, debts on the discipline;
- with 5 (five) and more debts for the previous term;
- with one debt for earlier terms for more than a year.

**Recommendations for the examination assessment:**

Type of the task	Assessed competences	Assessment criteria	Grade
Oral quiz	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The student demonstrates comprehensive, systematic and profound knowledge of the subject, can independently perform the tasks provided by the program; has good knowledge of the main literature and familiar with the additional literature recommended by the program; demonstrates creative abilities in understanding and use of the material of the studied discipline, faultlessly answers not only questions of the card, but also additional questions within the main program, correctly performs a practical task.	Excellent
	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The student has good knowledge of material of the studied discipline; can successfully perform the tasks provided by the program; has a good knowledge of the main literature recommended by the	Good

		program; answers all questions of the card, correctly performs a practical task, but makes some mistakes.	
	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The student demonstrates knowledge of material for further study; can cope with the tasks provided by the program; familiar with the main recommended literature; makes mistakes when performing examination tasks, but has necessary knowledge for their elimination under the supervision of the teacher.	Satisfactory
	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	The student demonstrates poor knowledge of the material, makes significant mistakes in performance of the tasks provided by the program.	Unsatisfactory

Type of the task	Assessed competences	Assessment criteria	Grade
Test	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	80 – 100%	Excellent
		66 – 80%	Good
		46 – 65%	Satisfactory
		Less Than 46%	Unsatisfactory

**Chart of the examination grade assessment:**

Tasks	Assessed competences	Grade	Score
Theoretical point № 1 (Oral quiz)	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	Excellent	5
		Good	4
		Satisfactory	3
		Unsatisfactory	2
Theoretical point № 2 (Oral quiz)	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	Excellent	5
		Good	4
		Satisfactory	3
		Unsatisfactory	2
Test	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-8.1,PC-8.2	Excellent	5
		Good	4
		Satisfactory	3
		Unsatisfactory	2
Total	PC-1.1, PC-1.2 PC-2.1, PC-3.1 PC-3.2, PC-3.3 PC-3.4, PC-5.2 PC-7.2, C-7.4 PC-	Excellent	13-15
		Good	10-12
		Satisfactory	7-9

	8.1,PC-8.2	Unsatisfactory	6-2
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