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Federal State Budget Educational Institution
of Higher Education
Pacific State Medical University
of the Ministry of Health of the Russian Federation

APPROVED BY

Director of the Institute of Therapy (Internal
Medicine) and Instrumental Diagnostics

_____/ Nevzorova V.A./
"2nd" of April 2026

COLLECTION OF ASSESSMENT TOOLS

B1.C.53 Clinical functional diagnostics of the basic educational program of Higher Education

Specialty	31.05.01 General Medicine (English-language program) (code, name)
Degree	Specialist's degree
Profile	02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system)
Mode of study	Full-time
Period of mastering the BEP	6 years (nominal length of study)
Institute	of Therapy (Internal Medicine) and Instrumental Diagnostics

Vladivostok, 2026

1. INTRODUCTION

1.1. Collection of Assessment Tools is a document that regulates the format, content, and types of assessment tools for continuous assessment, interim examination and final (state final) examination, and graded criteria for each type of assessment tools.

1.2. Assessment tools allows to evaluate the development of universal, general professional, and professional competencies (UCs, GPCs and PCs respectively) outlined in Federal State Educational Standard of Higher Education and defined in the basic educational program of higher education for the specialty 31.05.01 General Medicine (English-language program), profile 02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system).

([BEP HE for the 31.05.01 General Medicine \(English-language program\)](#)), section 3. Learning Outcomes Requirements of the Basic Educational Program of Higher Education)

2. DOCUMENT BODY

2.1. Types of Assessment, Formats of Assessment Tools

No.	Types of assessment	Assessment Tools Format
1	Continuous assessment	Tests
2	Interim assessment	Checklists

3. The contents of assessment tools for continuous and interim examination are prepared by the teacher of the course

Assessment tool 1

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine (English-language program)
C	GPC-4	Able to use medical devices included in the healthcare guidelines, as well as perform medical examination to make a diagnosis
I		ANSWER LEVEL 1 TEST QUESTIONS (ONE CORRECT ANSWER)
		01. A BIPHASIC P WAVE IS MOST COMMONLY RECORDED A. in lead V1 B. in lead aVF C. in lead III D. in lead aVR
		02. NORMALLY THE DURATION OF THE PQ INTERVAL WITH INCREASING HEART RATE A. decreases B. increases C. does not change
		03. THE WIDTH OF THE QRS COMPLEX IN THE LEADS FROM THE EXTREMITIES SHOULD NOT NORMALLY EXCEED A. 0.10 s B. 0.08 s C. 0.09 s D. 0.11 s

04. DEPOLARIZATION OF THE VENTRICLES BEGINS FROM
A. the left part of the interventricular septum
B. the right part of the interventricular septum
C. the basal part of the left ventricle
D. the apex of the heart
05. RATIO OF THE AMPLITUDE OF P WAVES IN STANDARD LEADS WITH A NORMAL POSITION OF THE ELECTRICAL AXIS OF THE HEART MOSTLY COMMONLY IS
A. PII>PI>PIII
B. PI>PII>PIII
C. PIII>PII>PI
06. SIGNIFICANT DIAGNOSTIC CRITERIA FOR TERMINATION OF STRESS HEART ULTRASOUND DO NOT INCLUDE
A. achieving BP of 180 and 100 mmHg during the test
B. reaching the maximum dose of the drug (for a pharmacological test) or maximum load (for a stress test)
C. reaching a submaximal heart rate (85% of the age-specific maximum heart rate)
D. obvious echocardiographic signs of a positive test (akinesis of two or more LV segments)
E. severe chest pain or obvious ECG signs of a positive test (ST segment shift of more than 2 mm)
07. AN INCREASE IN LEFT VENTRICULAR WALL THICKNESS IN SYSTOLE BY 30% OR MORE IS CALLED
A. normokinesis
B. hypokinesis
C. akinesis
D. dyskinesis
E. hyperkinesis
08. STRESS HEART ULTRASOUND WITH ELECTRICAL PACING IS PREFERRED IN
A. patients with an implanted pacemaker
B. patients with atrial fibrillation
C. patients with suspected coronary artery disease
D. all patients without exception
09. TIDAL VOLUME OF THE LUNGS IS
A. the volume of air during quiet breathing
B. the maximum volume of air ventilated in a minute
C. the volume of gas remaining in the lungs after quiet exhalation
D. the maximum volume of air exhaled from the lungs after a maximum inspiration
E. the volume of air remaining in the lungs after a maximum exhalation
10. EXPIRATORY RESERVE VOLUME IS
A. the maximum volume of air that can be additionally exhaled after a quiet exhalation
B. the maximum volume of air exhaled from the lungs after a maximum inspiration
C. the volume of inhaled and exhaled air during quiet breathing

11. VITAL CAPACITY OF THE LUNGS IS

- A. the maximum volume of air exhaled from the lungs after a maximum inspiration**
- B. the maximum volume of air that can be inhaled after a quiet exhalation
- C. the maximum volume of gas ventilated in 1 minute
- D. the volume of gas remaining in the lungs after a quiet exhalation

12. CLASS I INDICATIONS FOR 24-HOUR HOLTER ECG MONITORING DO NOT INCLUDE

- A. suspected variable angina**
- B. unexplained syncope and presyncopal states or episodic dizziness when the cause is unclear
- C. unexplained recurrent palpitations
- D. assessment of the response to concomitant drug therapy in patients with an implantable cardioverter-defibrillator

13. THE FORCED EXPIRATORY VOLUME IN THE FIRST SECOND (FEV1) IS 30% OF THE PROBABLE FEV1

- A. indicates severe airway obstruction**
- B. has no diagnostic value
- C. is typical for a healthy person
- D. indicates mild bronchial spasm

14. ACCORDING TO T. BIGGER CLASSIFICATION, POTENTIALLY MALIGNANT VENTRICULAR RHYTHM DISORDERS INCLUDE

- A. ventricular premature heart beats occurring at a frequency of more than 10 per minute in patients with organic heart disease with a decrease in the contractility of the left ventricle**
- B. paroxysms of ventricular tachycardia
- C. episodes of ventricular fibrillation eliminated by resuscitation measures in patients with organic heart disease
- D. premature heart beat regardless of gradation, especially in individuals with organic heart disease

15. FUNCTIONAL LOADS DURING EEG ARE

- A. open-close eye test; rhythmic light stimulation hyperventilation (and other effects, if necessary)**
- B. performing movements of different limbs while sitting
- C. performing movements of different limbs while standing
- D. maintaining balance in a standing position with eyes closed

16. ALPHA ACTIVITY DURING EEG IS

- A. fluctuations in biopotentials with a frequency of 8-13 Hz**
- B. fluctuations in biopotentials with a frequency of 1 to 50 Hz
- C. fluctuations in biopotentials with a frequency of 1 to 10 Hz
- D. fluctuations in biopotentials with a frequency of 14 to 30 Hz

17. DURING HOLTER 24-HOUR ECG MONITORING, THE HEART RATE IS ESTIMATED DEPENDING ON

- A. the patient's age, time of day**
- B. the patient's diagnosis
- C. the size of the heart chambers

		D. criteria chosen by the physician 18. TRANSESOPHAGEAL ELECTROPHYSIOLOGICAL METHOD OF INVESTIGATION IN PATIENTS WITH BRADYARRHYTHMIAS CAN REVEAL A. increase in the recovery time of the sinus node function, a decrease in the Wenckebach point values atrioventricular junction B. increase in the recovery time of the sinus node function, increase in the Wenckebach point of the atrioventricular junction C. decrease in the recovery time of the sinus node function, decrease in the Wenckebach point of the atrioventricular junction D. increase in the Wenckebach point of the atrioventricular junction 19. SINUS NODE DYSFUNCTION IS DIAGNOSISED BASED ON A. set of examinations, including ECG techniques and cardiac ultrasound B. isolated data from an electrophysiological examination C. set of examinations, including a clinoorthostatic test and cardiac ultrasound D. set of examinations, including a clinoorthostatic test and electrophysiological examination data 20. BETA ACTIVITY DURING EEG IS A. oscillations of biopotentials with a frequency of 14 to 30 Hz B. oscillations of biopotentials with a frequency of 1 to 50 Hz C. oscillations of biopotentials with a frequency of 1-3 Hz D. oscillations biopotentials with a frequency of 8-13 Hz
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Assessment criteria

“Very good” – 91-100% correct answers of questions of every level

“Good” - 81-90% correct answers of questions of every level

“Satisfactory” - 51-80% correct answers of questions of every level

“Unsatisfactory” - less than 51% correct answers of questions of every level

Assessment tool 2

Practical Skills Assessment Checklist

Practical Skill Name "Electrocardiography recording technique"

C	GPC-4	Able to use medical devices included in the healthcare guidelines, as well as perform medical examination to make a diagnosis	
	Action	Performed	Not Performed
1.	Establish contact with the patient (greet, introduce yourself, define your role)	1 point	-1 point
2.	Ask the patient to state their full name and date of birth	1 point	-1 point
3.	Explain the procedure and its purpose, ask the patient to sign a voluntary informed consent form for the procedure	1 point	-1 point
4.	Prepare equipment	1 point	-1 point
5.	Cover the couch with a disposable sheet	1 point	-1 point
6.	Ask the patient to undress to the waist, expose the shins, remove jewelry, watch	1 point	-1 point
7.	Ask the patient to lie on the couch on their back with arms extended along the body and legs straight.	1 point	-1 point
8.	Wash hands hygienically and put on gloves	1 point	-1 point

9.	Degrease the areas where the electrodes are placed with an alcohol solution	1 point	-1 point
10.	Apply gel to the electrodes	1 point	-1 point
11.	Place the electrodes in the correct order on the limbs	1 point	-1 point
12.	Place the electrodes in the correct order on the chest	1 point	-1 point
13.	Record the ECG sequentially in all standard and chest leads (12 leads)	1 point	-1 point
14.	After completing the procedure, turn off the electrocardiograph switch	1 point	-1 point
15.	Remove the electrodes from the patient, completing the process by removing the black electrode	1 point	-1 point
16.	Ask the patient to remove excess gel with a disposable paper towel, get up, and get dressed	1 point	-1 point
17.	Place the paper napkin in a Class A waste container	1 point	-1 point
18.	Treat the electrodes with an antiseptic wipe	1 point	-1 point
19.	Place antiseptic wipes in a Class B waste container	1 point	-1 point
20.	Place the disposable sheet in a Class A waste container	1 point	-1 point
21.	Remove and discard gloves in the designated Class B waste disposal bag	1 point	-1 point
22.	Wash hands hygienically	1 point	-1 point
23.	Sign the ECG (full name, age, date, time of ECG recording)	1 point	-1 point
24.	Make a note of the procedure performed in the ECG registration log	1 point	-1 point
	Total	24 points	

Final grade: "Pass" / "Fail"

Assessment criteria:

"Pass" - at least 75% of required actions performed

"Fail" - 74% of required actions or less performed

Practical Skills Assessment Checklist

Practical Skill Name "Electroencephalography recording technique"

C	GPC-4	Able to use medical devices included in the healthcare guidelines, as well as perform medical examination to make a diagnosis	
	Action	Performed	Not Performed
1.	Establish contact with the patient (greet, introduce yourself, define your role)	1 point	-1 point
2.	Ask the patient to state their full name and date of birth	1 point	-1 point
3.	Explain the procedure and its purpose, ask the patient to sign a voluntary informed consent form for the procedure	1 point	-1 point
4.	Prepare equipment	1 point	-1 point
5.	Wash hands hygienically and put on gloves	1 point	-1 point
6.	Inspect the skin where the electrodes are attached to ensure there is no damage to the epidermis	1 point	-1 point
7.	Ask the patient about the medications they are taking (what dosage, whether they have taken anticonvulsants before), as well as tea, coffee, cola, energy drinks	1 point	-1 point
8.	Ask the patient to remove metal jewelry	1 point	-1 point
9.	Place the patient comfortably in a chair or on a couch	1 point	-1 point
10.	Press impedance	1 point	-1 point
11.	Lubricate the cap with built-in electrodes with gel	1 point	-1 point
12.	Place a cap on the patient's head	1 point	-1 point
13.	Place the ear electrodes	1 point	-1 point

14.	Place the ground electrode on the right hand	1 point	-1 point
15.	Ask the patient to close and open their eyes several times.	1 point	-1 point
16.	Ask the patient to close their eyes and sit/lie quietly without making any movements	1 point	-1 point
17.	Perform background recording	1 point	-1 point
18.	Conduct photostimulation in the frequency range of 1-20 Hz	1 point	-1 point
19.	Conduct background recording after functional load	1 point	-1 point
20.	Remove the cap with built-in electrodes from the patient	1 point	-1 point
21.	Process used inventory	1 point	-1 point
22.	Wash hands hygienically	1 point	-1 point
23.	Sign the EEG (full name, age, date, time of EEG recording)	1 point	-1 point
24.	Make a note of the procedure performed in the EEG registration log	1 point	-1 point
	Total	24 points	

Final grade: "Pass" / "Fail"

Assessment criteria:

"Pass" - at least 75% of required actions performed

"Fail" - 74% of required actions or less performed

Practical Skills Assessment Checklist

Practical Skill Name "Spirometry recording technique"

C	GPC-4	Able to use medical devices included in the healthcare guidelines, as well as perform medical examination to make a diagnosis	
	Action	Performed	Not Performed
1.	Establish contact with the patient (greet, introduce yourself, define your role)	1 point	-1 point
2.	Ask the patient to state their full name and date of birth	1 point	-1 point
3.	Explain the procedure and its purpose, ask the patient to sign a voluntary informed consent form for the procedure	1 point	-1 point
4.	Prepare equipment	1 point	-1 point
5.	Wash hands hygienically	1 point	-1 point
6.	Ask the patient about: the last medication taken, including an inhaler, the last meal, smoking 2 hours before the procedure, physical activity before the procedure, the presence of removable dentures	1 point	-1 point
7.	Measure the patient's height and weight	1 point	-1 point
8.	Ask the patient to sit on a chair	1 point	-1 point
9.	Ask the patient to straighten their back, not cross their legs, slightly raise their head, and take the pneumotachometric tube in their hand	1 point	-1 point
10.	Put on gloves	1 point	-1 point
11.	Enter the patient's data into the spirometer (name, weight, height, gender, race)	1 point	-1 point
12.	Offer the patient a disposable napkin	1 point	-1 point
13.	Open the mouthpiece packaging and dispose of it in the designated Class A waste disposal bag	1 point	-1 point
14.	Attach the mouthpiece to the pneumotachometer tube	1 point	-1 point
15.	Instruct the patient by demonstrating on yourself, while simultaneously asking the patient to copy the actions without a pneumotachometric tube	1 point	-1 point
16.	Ask the patient to take 2-3 calm breaths in and out, on the command "deep breath" take the deepest possible breath, on	1 point	-1 point

	the command “sharp exhalation” exhale sharply, strongly and for as long as possible		
17.	After warning the patient, place a clamp on his nose	1 point	-1 point
18.	Ask the patient to firmly grasp the mouthpiece with their teeth and lips, placing their tongue under the tube	1 point	-1 point
19.	Looking at the spirometer display and checking the correct execution of commands: ask the patient to take 2-3 calm breaths in and out, give the command “deep breath in”, give the command “sharp breath out”	1 point	-1 point
20.	Ask the patient to repeat the steps two more times	1 point	-1 point
21.	Save a results	1 point	-1 point
22.	Remove the nose clip	1 point	-1 point
23.	Discard the mouthpiece in the designated Class B waste disposal bag	1 point	-1 point
24.	Tell the patient that the procedure is complete and the report will be prepared in writing	1 point	-1 point
25.	Remove and discard gloves in the designated Class B waste disposal bag	1 point	-1 point
26.	Wash hands hygienically	1 point	-1 point
27.	Make a note of the procedure performed in the registration log	1 point	-1 point
	Total	27 points	

Final grade: "Pass" / "Fail"

Assessment criteria:

"Pass" - at least 75% of required actions performed

"Fail" - 74% of required actions or less performed

4. Assessment criteria for learning outcomes

"Pass" is given to a student who has shown a sufficiently strong knowledge of the basic concepts of the subject; is able to complete specific practical tasks outlined in the program with no outside help, use recommended reference material, and correctly evaluate the results.

"Fail" is given to a student who has significant gaps in knowledge of the basic concepts of the subject, is not able reach the correct solution to a specific practical task outlined in the curriculum even with outside help.