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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 Clinical Neurology and Medical
Rehabilitation
_____ / Shestopalov E.Yu./
"14th" of April 2025

COLLECTION OF ASSESSMENT TOOLS
Б1.О.23 Neurology
of the basic educational program
of Higher Education

Specialty	**31.05.01 General Medicine for international students (in English)** (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 Clinical Neurology and Medical Rehabilitation

Vladivostok, 2025

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 for international students (in English), 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 for international students (in English) specialty, 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**
		Interview Questions
		Mini-Case Studies
		Medical record
2	**Interim assessment**	**Exam**
		Interview Questions
		Checklists

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

Tests for continuous assessment

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine for international students (in English)
C	GPC-5	Is able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
C	PC-2	Ability and readiness to recognize urgent and life-threatening conditions in acute surgical pathology, traumatic conditions, diseases of the female genital organs and pregnancy requiring urgent and emergency medical care
F	A/01.7	Providing emergency or urgent medical care to the patient

I		**ANSWER LEVEL 1 TEST QUESTIONS (ONE CORRECT ANSWER)**
		General neurology: **1. The movement that occurs when the Achilles reflex is triggered is** 1. flexion of the toes +2. plantar flexion of the foot 3. dorsal extension of the foot 4. extension of the lower leg 5. extension of the first toe **2. The reflex arc of the knee reflex includes ____ roots** +1. L2-4 2. S1-2 3. L5 4. S3-5 5. L1 **3. The reflex arc of the knee reflex includes** 1. sciatic nerve 2. fibular nerve +3. femoral nerve 4. tibial nerve 5. obturator nerve **4. The reflex arc of the triceps reflex includes** 1. ulnar nerve 2. median nerve 3. musculoskeletal nerve +4. radial nerve 5. suprascapular nerve **5. In the cerebral cortex, the central motor neuron is located in the** 1. occipital lobe 2. temporal lobe 3. parietal lobe +4. frontal lobe 5. cerebellum **6. In the nervous system, the peripheral motor neuron is located in the** 1. posterior horns of the spinal cord 2. precentral gyrus +3. anterior horns of the spinal cord 4. spinal ganglion 5. postcentral gyrus **7. Plegia is defined as** 1. impaired movement coordination 2. partial loss of voluntary movements 3. loss of sensitivity +4. complete loss of voluntary movements 5. impaired balance

8. Injury of the _____ leads to peripheral paralysis
1. precentral gyrus
2. lateral funiculus of spinal cord
3. cerebellum
4. posterior horn of the spinal cord
+5. anterior horn of spinal cord

9. Central paralysis is also known as
1. flaccid paralysis
2. atrophic paralysis
+3. spastic paralysis
4. Bell's palsy
5. bulbar palsy

10. Spasticity is defined as
+1. increased muscle tone
2. decreased muscle tone
3. muscle atrophy
4. abnormal gait
5. increased deep reflexes

11. Symptoms of peripheral paralysis include
1. muscle hypotrophy
2. fasciculations
3. decreased muscle tone
+4. all of the above
5. none of the above

12. The first neuron of the spino-thalamic pathway is located in the
1. posterior horns of the spinal cord
+2. spinal ganglion
3. skin
4. thalamus
5. postcentral gyrus

13. The sensory analyzer of the general types of sensitivity is located in the
1. occipital lobe
2. temporal lobe
+3. parietal lobe
4. frontal lobe
5. Broca's area

14. Partial loss of sensitivity is called
1. anaesthesia
2. hyperesthesia
3. hyperpathia
+4. hypesthesia
5. dysesthesia

15. Injury of the posterior horn of the spinal cord leads to _____ type of sensitivity impairment

+1. segmental-dissociated
2. polyneuropathic
3. conduction/regional
4. cerebral
5. neural

16. A disorder of coordination and balance is called
1. adiadochokinesis
2. dysmetria
3. paresis
+4. ataxia
5. plegia

17. Damage to the cerebellum causes the muscle tone to
+1. decrease
2. increase
3. remain unchanged
4. develop the clasp-knife effect
5. develop the cogwheel phenomenon

18. Parkinson's syndrome is most often characterized by
1. intention tremor
2. postural tremor
3. kinetic tremor
4. physiological tremor
+5. resting tremor

19. Impaired movement of the eyeballs caused by damage to the cerebellum is called
1. ophthalmoparesis
+2. nystagmus
3. gaze palsy
4. diplopia
5. strabismus

20. Movement impairment that most often characterizes Parkinson's syndrome is
1. ataxia
2. impaired movement coordination
+3. akinesis
4. paresis
5. athetosis

21. Hemianopsia is defined as
1. blindness in one eye
2. loss of the central field of vision
+3. loss of half of the visual field
4. partial optic nerve atrophy
5. unequal size of the eyes' pupils

22. Diplopia is
1. strabismus
+2. double vision
3. hemianopsia

4. amblyopia
5. gaze palsy

23. Ptosis is defined as
1. impaired movement of the eyeballs
2. impairment of the direct pupillary response to light
3. impaired consensual pupillary response to light
+4. lowering of the upper eyelid
5. impaired closing of the eye

24. Paroxysmal pain in the face is a manifestation of the damage to the
1. facial nerve
2. oculomotor nerve
+3. trigeminal nerve
4. trochlear nerve
5. accessory nerve

25. Impaired swallowing is called
1. dysphonia
2. dysarthria
3. dysphasia
+4. dysphagia
5. dysmnesia

26. Chewing function is controlled by the
+1. trigeminal nerve
2. facial nerve
3. glossopharyngeal nerve
4. accessory nerve
5. hypoglossal nerve

27. Work of the internal organs is controlled by the
1. trigeminal nerve
2. facial nerve
3. hypoglossal nerve
+4. vagus nerve
5. accessory nerve

28. Loss of movement of one of the eyeballs is called
1. gaze palsy
2. ophthalmalgia
+3. ophthalmoplegia
4. exophthalmos
5. anophthalmos

29. Speech disorder caused by damage to the cortical center is called
1. aphonia
2. dyslalia
3. dysarthria
+4. aphasia
5. agnosia

30. A patient with Wernicke's aphasia has impaired ability to
1. speak
2. hear
3. recognize music
+4. understand speech
5. recognize objects

31. A patient with apraxia has impaired
1. voluntary movements
2. movement coordination
+3. purposeful/targeted actions
4. sensitivity
5. synchronous movements

32. The main function of the autonomic nervous system is
1. the ability to perceive sensation stimuli
2. voluntary motor activity
+3. maintaining homeostasis
4. reflex-automatic motor activity
5. maintenance of muscle tone

33. The suprasegmental apparatus of the autonomic nervous system is located in the
1. cranial nerves
2. spinal roots
+3. hypothalamic-limbic-reticular complex
4. neurons of the lateral horns of the spinal cord
5. neurons of the anterior horns of the spinal cord

34. Inflammation of the meninges is confirmed using
1. EEG
2. CT scan
+3. CSF analysis
4. blood test
5. ENMG

35. Lumbar puncture in an adult patient is performed in the
1. T11-T12 intervertebral space
+2. L3-L4 intervertebral space
3. L5-S1 intervertebral space
4. S1-S2 intervertebral space
5. L1-L2 intervertebral space

Specialized neurology:
1. Vertebral-basilar and carotid systems of cerebral blood flow are anastomosed through the
+1. middle cerebral artery
2. anterior communicating artery
3. posterior communicating artery
4. basilar artery
5. ophthalmic artery

2. A branch of the vertebrobasilar system is
1. middle cerebral artery
2. anterior cerebral artery
+3. posterior cerebral artery
4. anterior communicating artery
5. ophthalmic artery

3. Occlusion of the right middle cerebral artery is characterized by
+1. left-sided hemiparesis
2. right-sided hemiparesis
3. right-sided homonymous hemianopsia
4. ataxia
5. nystagmus

4. Vertebral artery occlusion is characterized by
1. headache
2. meningeal symptoms
+3. cerebellar ataxia
4. sensory aphasia
5. motor aphasia

5. Anterior cerebral artery supplies blood to the
1. most of the subcortical nodes
2. temporal lobes
3. most of the convexital surface of the frontal lobe
+4. medial surface of the frontal and parietal lobes
5. occipital lobes

6. Occlusion of the left middle cerebral artery is characterized by
1. left-sided hemiparesis
+2. right-sided hemiparesis
3. left-sided hemihypesthesia
4. cerebellar ataxia
5. left-sided homonymous hemianopsia

7. Occlusion of the right posterior cerebral artery is characterized by
1. right-sided hemiparesis
2. motor aphasia
+3. left-sided homonymous hemianopsia
4. right-sided homonymous hemianopsia
5. cortical blindness

8. Properly developed Circle of Willis may lead to asymptomatic character of
1. middle cerebral artery occlusion
2. posterior cerebral artery occlusion
3. basilar artery occlusion
4. cerebellar artery occlusion
+5. vertebral artery occlusion

9. Ischemic stroke includes
1. subarachnoid hemorrhage
2. intraventricular hemorrhage
3. parenchymal hemorrhage
+4. atherothrombotic stroke
5. acute hypertensive encephalopathy

10. Hemorrhagic stroke includes
+1. non-traumatic subarachnoid hemorrhage
2. cardioembolic stroke
3. hemodynamic stroke
4. atherothrombotic stroke
5. acute hypertensive encephalopathy

11. Hemorrhagic stroke is most likely to occur
1. in the morning after sleep
+2. in the daytime during physical activity
3. during sleep
4. in patients with the paroxysmal form of atrial fibrillation
5. after a transient ischemic attack

12. Ischemic stroke is most likely to occur
1. in the morning after sleep
+2. in the daytime during physical activity
3. when taking anticoagulants
4. in patients with an arterial aneurysm
5. in patients with coagulopathies

13. The most typical signs of ischemic atherothrombotic stroke include
+1. gradual onset (over the course of several hours)
2. remitting course
3. meningeal symptoms
4. blood in the cerebrospinal fluid
5. seizures

14. The most typical signs of ischemic cardioembolic stroke include
+1. sudden onset
2. "knife-like" headache
3. meningeal symptoms
4. gradual onset (over the course of several hours)
5. blood in the cerebrospinal fluid

15. Hemorrhagic stroke is characterized by the _____ appearance of the face
1. pale
2. normal
3. icteric
+4. hyperemic
5. cyanotic

16. The symptoms of a transient ischemic attack completely regress over the course of

		1. 48 hours 2. 21 days +3. 24 hours 4. 24 days 5. 1 week **17. Transient disorders of cerebral circulation include** 1. dyscirculatory encephalopathy +2. transient ischemic attack 3. stroke 4. panic attack 5. vascular dementia **18. Focal symptoms include** 1. headache 2. vomiting +3. hemiparesis 4. altered level of consciousness 5. psychomotor agitation **19. Treatment methods contraindicated in the acute period of vertebrogenic radicular syndrome include** 1. use of nonsteroidal anti-inflammatory drugs 2. use of muscle relaxants +3. mud therapy 4. pharmacological nerve blocks 5. use of steroidal anti-inflammatory drugs **20. Injury of ___ root is characterized by pain on the back of the thigh** 1. L2 2. L4 3. L1 +4. S1 5. S3 **21. Injury of ___ root is characterized by the weakness of the extensor of the big toe** 1. L2 2. L4 +3. L5 4. S1 5. S2 **22. Group of medications used to relieve pain syndrome in patients with degenerative-dystrophic diseases of the spine is** +1. non-steroidal anti-inflammatory 2. cytostatics 3. calcium channel blockers 4. ACE inhibitors 5. antibiotics **23. Non-steroidal anti-inflammatory drugs include**

		1. dexamethasone +2. diclofenac 3. detralex 4. drotaverine 5. Dysport **24. Chronic disorders of cerebral circulation include** +1. dyscirculatory encephalopathy 2. transient ischemic attack 3. stroke 4. panic attack 5. syncope **25. Cerebral symptoms include** 1. ataxia 2. hemiparesis 3. hemianopsia +4. altered level of consciousness 5. aphasia
		ANSWER LEVEL 2 TEST QUESTIONS (MULTIPLE CORRECT ANSWERS)
		1. The most characteristic symptoms of multiple sclerosis are +1. remitting course +2. cerebellar ataxia 3. polyneuritic type of sensitivity impairment +4. central asymmetrical, symmetrical paralysis 5. peripheral paralysis +6. onset predominantly at a young age **2. Diagnostic criteria for multiple sclerosis include** +1. disease progression without general inflammatory manifestations +2. young age of the patient +3. damage predominantely to the motor system +4. predominantly remitting course 5. non-progressive course 6. pronounced meningeal manifestations **3. Clinical symptoms characteristic of tick-borne encephalitis include** 1. pronounced meningeal phenomena +2. peripheral paresis predominantly of the muscles of the upper shoulder girdle 3. central hemiparesis +4. fibrillary contractions in the muscles of the shoulder girdle +5. atrophy of the muscles of the neck and shoulder girdle (dropped head syndrome) +6. Epilepsia partialis continua (Kozhevnikov's epilepsy) in the residual period **4. Damage to the radial nerve at the shoulder level is characterized by** 1. “claw hand”

		+2. absence of triceps reflex +3. “wrist drop” 4. lack of biceps reflex +5. loss of sensitivity in the "anatomical snuffbox" zone **5. The causes of polyneuropathies include** +1. diabetes mellitus +2. chronic alcoholism 3. impaired spinal cord circulation +4. malignant lesions of internal organs 5. hypertension +6. infections and allergies

Assessment criteria

“Very good” – 91-100% correct answers of questions of every level
“Good” - 81-90% correct answers of questions of every level
“Satisfactory” - 71-80% correct answers of questions of every level
“Unsatisfactory” - less than 71% correct answers of questions of every level

Assessment tool 2

Standardized case studies and checklists for the **Б1.О.23 Neurology** course

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.01	General Medicine for international students (in English)
C	GPC-5	Is able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
C	PC-2	Ability and readiness to recognize urgent and life-threatening conditions in acute surgical pathology, traumatic conditions, diseases of the female genital organs and pregnancy requiring urgent and emergency medical care
F	A/01.7	Providing emergency or urgent medical care to the patient
I		**ANSWER THE QUESTIONS** **1. A 57-year-old woman presenting with dizziness and unstable gait was taken to a hospital. Neurological status: nystagmus, instability in the Romberg position, and pronounced intentional tremor in the left extremities when performing coordination tests. Specify the vascular basin most likely affected in this case** 1) Right anterior cerebral artery 2) Left anterior cerebral artery 3) Right cerebellar artery 4) Basilar artery +5) Left cerebellar artery **2. A 64-year-old man could not open his right eye upon waking up in the morning. When he went up to the mirror he saw that the right eyelid was lowered, noted double vision and strabismus after lifting the eyelid. He also felt weakness in his left limbs. Specify the vascular basin most likely affected in this case** +1) Stem branches of the basilar artery on the right

2) Branches of the right middle cerebral artery
3) Stem branches of the basilar artery on the left
4) Branches of the left middle cerebral artery
5) Branches of the right posterior cerebral artery

3. A woman of 60 years old presents with a visual impairment in the right eye, weakness and numbness in the left limbs that have occurred for the third time this year. Neurological status one day after the appearance of complaints: no neurological symptoms were detected. What is the most likely diagnosis?

1) Retinal detachment
2) Ischemic stroke in the basin of the right internal carotid artery
3) Brain tumor
4) Hysteria
+5) Transient ischemic attack in the basin of the right internal carotid artery

4. 58-year-old man with a rheumatic mitral valve disease suddenly lost consciousness and developed a generalized seizure. When the man recovered, the following was noted: left-sided hemianopsia, left-sided hemiparesis, left-sided hemihypesthesia. There were no meningeal symptoms. What is the most likely diagnosis?

1) Lacunar stroke
+2) Cardioembolic ischemic stroke
3) Atherothrombotic ischemic stroke
4) Epilepsy
5) Hemorrhagic stroke

5. A 74-year-old patient suffering from hypertension, trying to reduce high blood pressure, independently took a large number of antihypertensive medications. When she got out of bed, she suddenly lost consciousness. Upon recovering could not remember what happened to her, did not recognize her daughter nor her room. Examination results: left-sided homonymous hemianopsia, visual agnosia, retrograde amnesia. ECG: sinus rhythm, signs of focal cardiosclerosis. Ultrasound revealed stenosis of the right common carotid artery up to 90%, the left common carotid artery up to 70%. What is the most likely diagnosis?

1) Vascular dementia
2) Cardioembolic ischemic stroke
+3) Hemodynamic ischemic stroke
4) Brain tumor
5) Hysteria

6. After running after the bus, a 60-year-old man suddenly felt unwell, noticed weakness in the right limbs and speech impairment. Examination was one hour after the onset of symptoms: right-sided hemiparesis, hemihypesesthesia, dysarthria. There were no meningeal

		symptoms. On CT: hypodense zone in the brainstem area on the left. What is the most appropriate treatment? 1) Surgical treatment +2) Thrombolysis 3) Massage 4) Vitamin therapy 5) Exercise therapy **7. A 39-year-old man presents with intense pain in the lumbar spine that radiates to the posterior surface of the hip, up to VI,V toes on the right leg; the pain has been present for two months. Pain is not relieved by non-steroidal anti-inflammatory drugs, muscle relaxants, anticonvulsants, antidepressants, pharmacological nerve blocks, physiotherapy and manual therapy methods. MRI revealed a hernia of the L5-S1 disc, 11 mm in size, compressing the dural sac. The most appropriate treatment tactics:** 1) Continue conservative treatment by increasing the dose of NSAIDs 2) Continue conservative therapy, include antibiotics 3) Perform surgical treatment +4) Continue conservative therapy, use physiotherapeutic methods of administering medications 5) Conduct sanatorium-resort treatment

Case Study No.1

	Code	**Competence description / name of labor function / name of work activity / text**
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F	A/01.7	Providing emergency or urgent medical care to the patient
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient K. Examination results: atrophy of the muscles of the upper extremities was revealed, decrease in tendon reflexes in the upper extremities, decreased muscle strength in the hands, fibrillary contractions in the muscles of the hands. The gait has changed: the patient "stretches" his legs when walking. Sharp increase in tendon reflexes on the legs, Babinsky and Oppenheim signs positive on both sides
Q	1	Question: What is the name of the syndrome?
Q	2	Question: What is the location of the pathological focus?
Q	3	Question: What is the cause of peripheral paresis in the hands?

Q	4	Question: What type of function impairment of pelvic organs will this patient experience?
Q	5	Question: What is the reason for the increase in muscle tone in case of central paresis?

Case Study No.1 Checklist

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.01	General Medicine for international students (in English)
C	GPC-5	Is able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
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F	A/01.7	Providing emergency or urgent medical care to the patient
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient K. Examination results: atrophy of the muscles of the upper extremities was revealed, decrease in tendon reflexes in the upper extremities, decreased muscle strength in the hands, fibrillary contractions in the muscles of the hands. The gait has changed: the patient "stretches" his legs when walking. Sharp increase in tendon reflexes on the legs, Babinsky and Oppenheim signs positive on both sides
Q	1	Question: What is the name of the syndrome?
A		Correct answer: Combined tetraplegia (upper flaccid paraplegia and lower spastic paraplegia)
Q	2	Question: What is the location of the pathological focus?
A		Correct answer: The spinal cord is affected at the level of the cervical enlargement: the anterior horns at the level of CV – ThII and the lateral pyramidal pathways at the same levels
Q	3	Question: What is the cause of peripheral paresis in the hands?
A		Correct answer: The second neuron for the innervation of the hands is already damaged at the site of the lesion
Q	4	Question: What type of function impairment of pelvic organs will this patient experience?
A		Correct answer: Central type (retention)
Q	5	Question: What is the reason for the increase in muscle tone in case of central paresis?
A		Correct answer: Reducing the inhibitory effect of the I neuron

Case Study No.2

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine for international students (in English)
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C	PC-2	Ability and readiness to recognize urgent and life-threatening conditions in acute surgical pathology, traumatic conditions, diseases of the female genital organs and pregnancy requiring urgent and emergency medical care
F	A/01.7	Providing emergency or urgent medical care to the patient
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient M. Examination results: dysphagia, dysphonia, dysarthria, restriction of tongue movements in the absence of atrophy of the tongue muscles. The pharyngeal reflex is heightened. Reflexes of oral automatism and involuntary crying are present.
Q	1	Question: What is the name of the syndrome?
Q	2	Question: What is the location of the pathological focus?
Q	3	Question: How many pathological foci should be present for this syndrome to develop?
Q	4	Question: Which diseases can cause this syndrome to develop?
Q	5	Question: Is this syndrome life-threatening?

Case Study No.2 Checklist

	Code	Competence description / name of labor function / name of work activity / text
S	31.05.01	General Medicine for international students (in English)
C	GPC-5	Is able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
C	PC-2	Ability and readiness to recognize urgent and life-threatening conditions in acute surgical pathology, traumatic conditions, diseases of the female genital organs and pregnancy requiring urgent and emergency medical care
F	A/01.7	Providing emergency or urgent medical care to the patient
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS** Patient M. Examination results: dysphagia, dysphonia, dysarthria, restriction of tongue movements in the absence of atrophy of the tongue muscles. The pharyngeal reflex is heightened. Reflexes of oral automatism and involuntary crying are present.
Q	1	Question: What is the name of the syndrome?
A		Correct answer: Pseudobulbar

Q	2	Question: What is the location of the pathological focus?
A		Correct answer: In corticobulbar pathways
Q	3	Question: How many pathological foci should be present for this syndrome to develop?
A		Correct answer: Two
Q	4	Question: Which diseases can cause this syndrome to develop?
A		Correct answer: Chronic cerebrovascular ischemia, multiple sclerosis, neurodegenerative pathology
Q	5	Question: Is this syndrome life-threatening?
A		Correct answer: No

Assessment criteria

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"Good" - 81-90% correct answers of questions of every level
"Satisfactory" - 71-80% correct answers of questions of every level
"Unsatisfactory" - less than 71% correct answers of questions of every level

Assessment tool 3

Interview questions

	Code	**Competence description / name of labor function / name of work activity / text**
S	31.05.01	General Medicine for international students (in English)
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F	A/01.7	Providing emergency or urgent medical care to the patient
I		**ANSWER THE QUESTIONS** 1. Examination of pain and temperature sensitivity.\ 2. Examination of position (joint-muscular), vibration, and tactile sensitivity. Examination of deep reflexes. 3. Examination of the reflexes of newborns: Moro reflex, Babkin reflex, rooting reflex, support and automatic stepping reflexes. 4. Unconditional reflexes of newborns and infants: Robinson hand grasp reflex, Moro reflex, Galant reflex, Landau reflex, cervical and labyrinthine tonic reflexes. 5. Examination of reflexes of oral automatism. 6. Examination of pathological foot reflexes (extensor and flexor groups). Specifics of pathological foot reflexes in children. 7. Methodology for examination of active movements; muscle strength, its assessment. 8. Methods for examination of cerebellar function (atony,

		ataxia, static and dynamic, asynergy). 9. Examination of abdominal, plantar, cremaster reflexes. 10. Examination of cardiovascular reflexes (oculocardial, ortho and clinostatic). 11. Examination of the facial nerve. 12. Examination of the oculomotor, trochlear nerve, and abductor nerves. 13. Examination of the glossopharyngeal and vagus nerves. 14. Examination of the accessory and sublingual nerves. 15. Examination of the visual field. 16. Examination of the olfactory nerve. 17. Trigeminal nerve examination. 18. Taste sense examination. 19. Examination of dynamic and static coordination. 20. Examination of muscle tone. 21. Nerve stretch tests. 22. Examination of Barre signs (upper and lower). 23. Examination of meningeal symptoms. 24. Investigation of two-dimensional spatial sense and stereognosis. 25. Examination of praxis. Types of apraxia. 26. Examination of gnosis. Types of agnosia (visual, auditory) 27. Normal composition of cerebrospinal fluid. 28. Auditory nerve examination. 29. Investigation of the direct and consensual pupillary response to light and the reaction of the pupils to convergence. 30. Examination of pathological hand reflexes. 31. Lumbar puncture technique. 32. Examination of aphasia. Types of aphasia (motor, sensory, amnestic). 33. Alternating syndrome of lesions of the medulla oblongata. 34. Alternating syndromes of lesions of the pons. 35. Alternating syndromes in brain stem lesions. 36. Hemicord syndrome (Brown-Séquard syndrome). 37. Spinal cord transverse lesion syndrome. 38. Bulbar paralysis syndrome. 39. Pseudobulbar paralysis syndrome. 40. Syndromes of impaired sensitivity of segmentally dissociated and conductor types. 41. Charcot's neurologic triad. 42. Parkinson's syndrome. 43. Syndrome of lesions of the thalamus. 44. Various types of hyperkinesis: athetosis, torsion dystonia, chorea, hemiballism, myoclonia, tics. 45. Argyll Robertson pupils. 46. Horner's syndrome. 47. Syndrome of internal capsule lesion. 48. Meningeal syndrome. 49. Polyneuritic syndrome. 50. Sensitivity disorder syndrome in patients with lesions of the posterior horns of the spinal cord. 51. Syndromes of radicular and neural types of sensitivity impairment.

		52. Syndrome of lesions of the anterior horns of the spinal cord. 53. Syndrome of lesions of the medial lemniscus. 54. Syndrome of internal capsule lesion. 55. Apraxia and its types (ideatory, motor, constructive). 56. Rossolimo sign. 57. Agnosia (visual, auditory, olfactory, gustatory). Astereognosis. 58. Parietal lobe lesion syndrome. 59. Frontal lobe lesion syndrome. 60. Syndrome of temporal lobe lesions. 61. Occipital lobe lesion syndrome. 62. Symptoms of peripheral and central paralysis of the facial and hypoglossal nerves. 63. Peripheral paralysis and its signs. 64. Central paralysis and its signs. 65. Alternating paralysis and its signs. 66. Perinatal encephalopathy. Etiology. Pathogenesis, classification. Syndromes of damage to the central nervous system. 67. Cerebral palsy. Periods of its development. Clinical forms of the disease. Treatment. 68. Birth injuries of the brachial plexus, cervical spine, and spinal cord. 69. Epilepsy, etiology, clinical manifestation, modern treatment. 70. Intracranial vascular injuries at different stages of life. Diagnosis, etiology, pathogenesis. Clinical manifestation, treatment, risk factors. 71. Intrauterine infection (cytomegalovirus, herpes infections). Syphilis of newborns (environmental factor) 72. Syphilis of the nervous system in newborns. 73. Poliomyelitis. Etiology, routes of transmission. Classification. Paralytic and aparalytic forms. Differential diagnosis, treatment, prevention. 74. Von Economo Encephalitis. Differential diagnosis. Treatment, prevention. 75. Meningococcal purulent meningitis (meningococcal infection, purulent meningitis). Clinical manifestation, features of the modern progression, atypical forms, treatment. 76. Secondary purulent meningitis: pneumococcal, staphylococcal, otogenic; treatment, prevention of purulent meningitis. 77. Serous meningitis in children. Lymphocytic choriomeningitis. Enteroviral meningitis. Clinical manifestation, diagnosis, treatment, prevention. The role of environmental factors in the spread of infection. 78. Tuberculous meningitis. Clinical manifestation, diagnosis, treatment. 79. Tick-borne encephalitis. Etiology, pathogenesis, classification of clinical forms (in acute and chronic stages of the disease). 80. Neuro-AIDS. Current views on the role of environmental

		situations in the development of HIV infection 81. Secondary allergic encephalitis: measles, varicella, rubella, post-vaccination encephalitis in children (rabies vaccination, DTP). 82. Nervous system damage in patients with rheumatism. Minor chorea: pathomorphology, clinical manifestation, diagnosis, treatment. 83. Multiple sclerosis. Modern theories of pathogenesis. Pathomorphology. Early symptoms. Main clinical forms, differential diagnosis. Treatment. The role of environmental hazards in the development of anomalies. 84. Anomalies in the development of the nervous system: craniocerebral hernias, spinal hernias, microcephaly, anencephaly. Environmental causes of anomalies. 85. Polyradiculoneuritis (acute demyelinating polyradiculoneuropathy of Guillain-Barré). 86. Myasthenia gravis. Treatment, emergency care in case of myasthenic crisis. 87. Syringomyelia, syringo-bulbia. Clinical manifestation, treatment. 88. Progressive muscular dystrophies (juvenile form of progressive Erb-Roth muscular dystrophy, pseudohypertrophic Duchenne muscular dystrophy, Landouzy-Dejerine maxillofacial muscular dystrophy). 89. Charcot-Marie-Tooth neural amyotrophy. Kugelberg-Welander spinal juvenile pseudomyopathic amyotrophy. Werdnig-Hoffmann spinal amyotrophy. 90. Congenital Oppenheim's myotonia. 91. Strümpell's familial spastic paraplegia. Friedreich's ataxia. Pierre Marie's hereditary cerebellar ataxia. 92. Parkinson's disease (idiopathic parkinsonism). Huntington's chorea. 93. Hepatocerebral dystrophy (Wilson-Konovalov disease). 94. Hereditary metabolic diseases: phenylketonuria, mucopolysaccharidosis, Marfan's disease, lipoidoses (Tay-Sachs' disease). 95. Phakomatoses: von Recklinghausen's neurofibromatosis, Bourneville tuberous sclerosis. Sturge-Weber angiomatosis. 96. Chromosomal diseases caused by disorders in the autosomal system (Down's syndrome, Patau syndrome, Edwards syndrome, cri du chat syndrome). 97. Chromosomal diseases associated with disorders in the sex chromosome system (Turner syndrome, Klinefelter syndrome). 98. Neuropathy of the facial nerve. Etiology, clinical manifestation, diagnosis, treatment. 99. The concept of rheoencephalography (REG) and transcranial Dopplerography (TCDG). 100. Computed tomography of the brain. 101. Electroencephalography methodology.

Assessment criteria

“Very good” - more than 80% correct answers of questions of every level

“Good” - 70-79% correct answers of questions of every level

“Satisfactory” - 55-69% correct answers of questions of every level
“Unsatisfactory” - less than 54% correct answers of questions of every level

4. Assessment criteria for learning outcomes

"Very good" grade is given to a student who possesses knowledge of the subject in full scope outlined in the curriculum, has a sufficiently deep insight into the subject; is able to answer all questions clearly, exhaustively, and with no outside help; structures their answers logically, with emphasis on the most important information; is able to analyze, compare, classify, summarize, refine, and structure the course content, giving particular attention to cause-and-effect relationships.

"Good" is given to a student whose knowledge of the subject is almost in full scope outlined in the curriculum (gaps are only present in the knowledge of some especially complex aspects); is able to answer questions exhaustively with little to no outside help; does not always put emphasis on the most important information, but does not make significant mistakes.

"Satisfactory" is given to a student who possesses the bulk of knowledge on the subject; has difficulties answering questions with no outside help, uses imprecise wording; makes mistakes in substantial number of their answers.

"Unsatisfactory" is given to a student who does not have the mandatory minimum of knowledge on the subject, is not able to give an answer even with additional guiding questions.

Appendix 1

Practical Skills Assessment Checklist

Practical Skill Name: Kernig's sign assessment

C	GPC-5	Is able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
C	PC-2	Ability and readiness to recognize urgent and life-threatening conditions in acute surgical pathology, traumatic conditions, diseases of the female genital organs and pregnancy requiring urgent and emergency medical care
F	A/01.7	Providing emergency or urgent medical care to the patient

	Action	Performed	Not Performed
1.	Chose the patient position	1 point	0 points
2.	Bent the patient's leg at right angles in the hip and knee joints	1 point	0 points
3.	Extended the patient's leg at the knee joint	1 point	0 points
4.	Evaluated reflex flexor contraction and pain that inhibit extension	1 point	0 points
5.	Gave a conclusion	1 point	0 points
	Total	5 points	

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: Motor coordination assessment, vestibular function assessment in standing and sitting positions. Romberg test (static coordination) assessment

C	GPC-5	Is able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity
C	PC-2	Ability and readiness to recognize urgent and life-threatening conditions in acute surgical pathology, traumatic conditions, diseases of the female genital organs and pregnancy requiring urgent and emergency medical care
F	A/01.7	Providing emergency or urgent medical care to the patient

	Action	Performed	Not Performed
Preparatory stage			
1.	Put on protective equipment (medical disposable non-sterile face mask)	1 point	0 points
2.	Greeted the patient	1 point	0 points
3.	Introduced themselves to the patient	1 point	0 points
4.	Checked the patient's full name against medical records	1 point	0 points
5.	Voiced the name of the examination method, i.e. "Assessment of coordination of movements and vestibular function", explained the course and purpose of the examination	1 point	0 points
6.	Obtained consent from the patient (or their parent or legal guardian) to conduct the examination	1 point	0 points

7.	Performed hygienic treatment of one's hands (with a skin antiseptic)	1 point	0 points
Main stage			
8.	Asked the patient to stand on a flat surface in comfortable clothes.	1 point	0 points
9.	**Initial pose:** **Simplified test:** The patient stands with their feet together, arms extended forward or to the sides with fingers spread apart.	1 point	0 points
10.	**Closing eyes:** The patient is asked to close their eyes.	1 point	0 points
11.	**Safety:** During the test, the doctor or examiner should stand next to the patient to prevent falls and possible injuries.	1 point	0 points
12.	**Patient stability assessment**: The patient is observed for 30 seconds (or more), any staggering, deviation of the torso, repositioning of the legs, or falls are noted.	1 point	0 points
13.	*Evaluate the results*	1 point	0 points
13.1	**Normal result:** A healthy person remains stable for 30 seconds or more, only small, rapidly compensated body oscillations may be present.		
13.2	**Positive (Romberg's Symptom):** Depending on the pathology, there may be a deviation of the trunk to the side (in case of unilateral damage of the vestibular apparatus or cerebellum), a fall backwards (in case of damage to the brain stem or cerebellum), or shakiness.		
14.	*Give a conclusion.*	1 point	0 points
	Diagnostic significance: The test helps to identify balance impairments caused by pathologies of the vestibular apparatus, diseases of the cerebellum, or disorders of deep sensitivity (for example, in patients with polyneuritis).		
Final stage			
15.	Removed and placed the face mask in the disinfection container	1 point	0 points
16.	Performed hygienic treatment of one's hands	1 point	0 points
	Total	16 points	

Assessment criteria:
"Pass" - at least 75% of required actions performed
"Fail" - 74% of required actions or less performed