

MINISTRY OF HEALTH OF UKRAINE  
KHARKIV NATIONAL MEDICAL UNIVERSITY

DEPARTMENT OF NEUROLOGY

Academic year 2021-2022

SYLLABUS OF TRAINING COURSE IN  
«NEUROLOGY»

**Regulatory discipline**

Form of education \_\_\_\_\_ full-time \_\_\_\_\_

Field of knowledge 22 «Health» \_\_\_\_\_

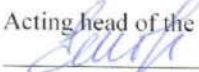
Specialty 221 «Dentistry» \_\_\_\_\_

Second (Master's) level

Year IV

The syllabus of the training course was approved  
at the meeting of the department of neurology


Protocol from  
«01» September 2021 № 1

Acting head of the department  
 prof. Tovazhnyanska O.L.

“ ” \_\_\_\_\_ 20 \_\_\_\_\_

Approved by the methodical commission of KhNMU  
on problems of professional training

Protocol from  
“ ” \_\_\_\_\_ 20 \_\_\_\_\_ № \_\_\_\_\_

Head  \_\_\_\_\_  
prof. Kravchun P.G.

“ ” \_\_\_\_\_ 20 \_\_\_\_\_

*Syllabus of the training course in «Neurology» for students in the field of knowledge 22 "Health" in the specialty 221 "Dentistry" second (Master's) level*

Year 4

Developers: Acting head of the Department of Neurology, MD, Professor O.L. Tovazhnyanska;  
Associated Professor, Ph.D. O.I. Kauk.; Associated Professor, Ph.D. L.V. Tykhonova

## INFORMATION ABOUT LECTURERS

1. Tovazhnyanska Olena Leonidivna – Acting head of the Department of Neurology, MD., professor. Professional interests: cerebrovascular diseases, demyelinating diseases, pain syndromes, somatoneurological syndromes, neurorehabilitation. Cont. phone: +380509221252, e-mail address [ol.tovazhnyanska@knmu.edu.ua](mailto:ol.tovazhnyanska@knmu.edu.ua) (domestic and English-speaking students);
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5. Yeskin Oleksandr Rostyslavovych – Associate Professor of Neurology dpt, PhD (medicine). Professional interests: diagnosis and treatment of sensory polyneuropathy of various etiologies. Cont. phone: +380677077257, e-mail address for correspondence [or.yeskin@knmu.edu.ua](mailto:or.yeskin@knmu.edu.ua) (domestic students);
6. Tykhonova Lyudmyla Volodymyrivna - Associate Professor of Neurology dpt, PhD (medicine). Professional interests: epilepsy and non-epileptic paroxysmal conditions, cerebrovascular pathology, Parkinson's disease. Cont. phone: +38050-401-50-51, e-mail address for correspondence [lv.tykhonova@knmu.edu.ua](mailto:lv.tykhonova@knmu.edu.ua) (domestic students);
7. Riznychenko Olena Kostyantynivna - Associate Professor of Neurology dpt, PhD (medicine). Professional interests: treatment, prevention and rehabilitation of strokes, dorsopathies. Cont. phone: +380667184107, e-mail address for correspondence [ok.riznychenko@knmu.edu.ua](mailto:ok.riznychenko@knmu.edu.ua) (English-speaking students);
8. Teslenko Ol'ha Oleksandrivna - Associate Professor of Neurology dpt, PhD (medicine). Professional interests: cerebrovascular diseases, demyelinating diseases. Cont. phone: +380677430574, e-mail address for correspondence [oo.teslenko@knmu.edu.ua](mailto:oo.teslenko@knmu.edu.ua) (domestic students);
9. Solovyova Evgeniya Tarasivna - Assistant of the Department of Neurology, Candidate of Medical Sciences. Professional interests: cerebrovascular diseases, diseases of the peripheral nervous system. Cont. phone: +380679999450, e-mail address for correspondence [yt.soloviova@knmu.edu.ua](mailto:yt.soloviova@knmu.edu.ua) (English-speaking students);
10. Reminyak Yuliya Kostiantynivna - Assistant of the Department of Neurology. Professional interests: migraine and other types of headache. Cont. phone: +380995655432, e-mail for correspondence [yk.remyniak@knmu.edu.ua](mailto:yk.remyniak@knmu.edu.ua) (English-speaking students).
11. Dariy Ivan Volodymyrovych – Assistant of the Department of Neurology, PhD. Professional interests: cerebrovascular diseases, vertebrogenic pathology, rehabilitation after stroke, Long-covid syndrome, headache. Cont. phone: +380633080920, e-mail address for correspondence [iv.darii@knmu.edu.ua](mailto:iv.darii@knmu.edu.ua) (English-speaking students);
12. Ibrahimova Olena Leonidivna - Assistant of the Department of Neurology, PhD. Professional interests: cerebrovascular diseases, diseases of the peripheral nervous system. Cont. phone: +380674274714, e-mail address for correspondence [ol.ibrahimova@knmu.edu.ua](mailto:ol.ibrahimova@knmu.edu.ua) (English-speaking students);
13. Heletka Oleksandr Oleksandrovych - Assistant of the Department of Neurology, PhD. Professional interests: diagnosis and treatment of plexus and nerve injuries, muscle weakness, myofascial syndromes. Cont. phone: +380732289147, e-mail address for correspondence [io.heletka@knmu.edu.ua](mailto:io.heletka@knmu.edu.ua) (English-speaking students).

**Information about counseling**

The students are consulted face-to-face by teachers of groups according to the schedule approved by the department which can be found on the information stand of the department, on the eve of tests and exams.

**Location**

Lectures in 2021-2022 academic year will be held online.

Venue of practical classes: training room of the Department of Neurology on the basis of SPMC "UC" KhNMU (Kharkiv, O. Speyer St., 4) and KNP CHO "OKL" (Kharkiv, 13 Nezalezhnosti Ave.).

Class time: according to the schedule.

## INTRODUCTION

**The syllabus of the discipline** «Neurology» is compiled in accordance with the educational-professional program (hereinafter - EPP) «Medicine» and the Standard of Higher Education of Ukraine (hereinafter - the Standard), the second (master's) level, field of knowledge 22 "Health", specialty "Dentistry".

### **Description of the course.**

Neurology is a branch of clinical medicine that studies the etiology, pathogenesis and clinical manifestations of diseases of the nervous system and develops methods for their diagnosis, treatment and prevention.

In accordance with the EPP and the curriculum for the training of specialists of the second (master's) educational and qualification level of qualification in the field of training 22 "Health" in the specialty 221 "Dentistry" for the discipline "Neurology" allocated 0.75 ECTS credit, total number of hours - 120; classroom - 17: 2 hours of lectures and 15 hours of practical classes; independent work of students - 5.5 hours.

### **The form of final control is differential credit.**

**General structure of the course** - the program of the course is structured in one section, which in turn consists of separate topics. The amount of student workload is described in ECTS credits which are given to students upon successful mastering of the corresponding volume of the material.

### **The role and place of the course in the educational system**

The course "Neurology" is an integral part of the training of future dentists giving them an opportunity to gain knowledge about the structure and functioning of various parts of the nervous system, master the methodology of neurological status, study etiopathogenetic features, clinical manifestations, differential diagnostic signs and current trends in neurologic emergencies.

### **Prerequisites and co-requisites of the course**

"Neurology" as a training course is based on the study of medical biology, biological and bioorganic chemistry, histology, physiology and pathological physiology, human anatomy and pathomorphology and integrates with these courses, propaedeutic courses of therapeutic profile, pharmacology, radiology and integrates with these. The course "Neurology" is fruitfully integrated with other clinical courses (internal medicine, neurosurgery, oncology, psychiatry, medical genetics, etc.).

## **1. The purpose and objectives of the course**

### **1.1. The purpose of teaching the course "Neurology" is:**

- Analyze the survey data of neurostomatic patients;
- Identify the leading symptoms and syndromes in the most common neurological pathology;
- Provide emergency medical care in emergencies in the clinic of nervous diseases;

- To plan tactics of management of the stomatologic patient with neurologic pathology.

**1.2. The main tasks of studying the course "Neurology" are:**

- Carry out differential diagnosis of diseases in the clinic of neurostomatology;
- Conduct examinations of neurostomatic patients;
- Diagnose emergencies in the clinic of nervous diseases;
- Make a preliminary clinical diagnosis of neurostomatological pathology;
- To make a syndromic diagnosis of neurostomatological pathology.

**1.3. Competences and learning outcomes**

<b>1.3.1. The study of the discipline provides students with mastery of competencies</b>	
Integral competence	Ability to solve complex problems and problems in the field of health care in the specialty "dentistry" in a professional activity or in the learning process, which involves research and / or innovation and is characterized by uncertainty of conditions and requirements
General Competences (GC)	<ol style="list-style-type: none"> <li>1. Ability to abstract thinking, analysis and synthesis.</li> <li>2 Knowledge and understanding of the subject area and understanding of professional activity.</li> <li>3 Ability to apply knowledge in practice.</li> <li>4. Ability to communicate in the state language both orally and in writing.</li> <li>6. Skills in the use of information and communication technologies.</li> <li>7. Ability to search, process and analyze information from various sources.</li> <li>8. Ability to adapt and act in a new situation ..</li> <li>9. Ability to identify, pose and solve problems.</li> <li>10. Ability to be critical and self-critical.</li> <li>11. Ability to work in a team.</li> <li>13. The ability to act socially responsibly and consciously.</li> <li>14. The ability to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine.</li> <li>15. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technologies, use different types and forms of motor activity.</li> </ol>
Professional competencies (PC)	<ol style="list-style-type: none"> <li>1. Ability to collect medical information about the patient and analyze clinical data.</li> <li>2. Ability to interpret the result of laboratory and instrumental research.</li> <li>3. Ability to diagnose: determine the previous, clinical, final, concomitant diagnosis, urgent conditions.</li> <li>7. Ability to determine the tactics of management of patients with diseases of organs and tissues of the oral cavity and maxillofacial region with concomitant somatic diseases.</li> <li>14. Ability to maintain regulatory medical records.</li> <li>15. Processing of state, social and medical information.</li> </ol>

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|  | <p>17. Ability to legally support their own professional activities.</p> <p>18. Ability to provide home care according to protocols tactical medicine.</p> |
|--|--|

**1.3.2. The study of the discipline ensures the acquisition of students the following program learning outcomes:**

1. Identify the leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's anamnesis, data of the patient's examination, knowledge about the person, his organs and systems, to establish a probable nosological or syndromic preliminary clinical diagnosis of a dental disease (according to list 2).
2. Collect information about the general condition of the patient, assess the psychomotor and physical development of the patient, the condition of the organs of the maxillofacial area, based on the results of laboratory and instrumental studies to assess information about the diagnosis (list 5).
3. Assign and analyze additional (mandatory and optional) examination methods (laboratory, radiological, functional and / or instrumental) according to list 5, patients with diseases of organs and tissues of the oral cavity and maxillofacial region for differential diagnosis of diseases ( for list 2).
4. Determine the final clinical diagnosis in accordance with the relevant ethical and legal norms, by making an informed decision and logical analysis of the obtained subjective and objective data of clinical, additional examination, differential diagnosis under the supervision of a physician-manager in the conditions medical institution (according to list 2.1).
5. To diagnose emergencies under any circumstances (at home, on the street, in a medical institution), in an emergency, martial law, lack of information and limited time (according to list 4).
10. To determine the tactics of managing a dental patient with somatic pathology (according to list 3) by making an informed decision according to existing algorithms and standard schemes.
12. Organize medical and evacuation measures among the population, servicemen, in emergency situations, including martial law, during the detailed stages of medical evacuation, taking into account the existing system of medical and evacuation support.
13. Determine the tactics of emergency medical care, using the recommended algorithms, under any circumstances on the basis of a diagnosis of emergency in a limited time (according to list 4).
14. Analyze and evaluate government, social and medical information using standard approaches and computer information technology.
15. Assess the impact of the environment on the health of the population in a medical institution by standard methods.
16. Form goals and determine the structure of personal activities based on the results of the analysis of certain social and personal needs.
17. Adhere to a healthy lifestyle, use the techniques of self-regulation and self-control.
18. To be aware of and guided in their activities by civil rights, freedoms and responsibilities, to raise the general cultural level.
19. Adhere to the requirements of ethics, bioethics and deontology in their professional activities.
20. To organize the necessary level of individual safety (own and persons cared for) in case of typical dangerous situations in the individual field of activity.
21. Perform medical manipulations on the basis of preliminary and / or final clinical diagnosis (according to lists 2, 2.1) for different segments of the population and in different conditions (according to list 6).

**1.3.3. The study of the discipline ensures the acquisition of students following social skills (Soft skills):**

- communication skills
- interpersonal skills
- research skills
- adaptability
- emotional intelligence



## 2. INFORMATION SCOPE OF THE COURSE

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the discipline	
		full-time education	evening form of education
Number of credits – 0,75	educational program for training specialists of the second (master's) level of higher education training 22 "Health"	<u>Regulatory</u>	
Total number of hours – 22,5	Specialty: 221 "Dentistry"	<b>Year of preparation:</b>	
		4 <sup>th</sup>	-th
		<b>Semester</b>	
		VIIth or VIIIth	-th
Hours for full-time (or evening) form of education: classroom – 17 individual work of the student – 5,5	Education level: master	<b>Lectures</b>	
		2 hours	hours
		<b>Practical, seminar</b>	
		15 hours	hours
		<b>Laboratory</b>	
		0 hours	hours
		<b>Individual work</b>	
		5,5 hours	hours
<b>Individual tasks:</b> hours			
<b>Type of control: differential test</b>			

### 2.1 Description of the discipline

#### Lecture themes

№	Theme	Hours
1.	Pain, its differentiation. Headache. Pain.	2
Total		2

#### Topics of practical classes

№	Name topics	Number of hours	Teaching methods	Forms of control
1	<b>Theme 1.</b> Motor disorders. Pyramidal, extrapyramidal system and cerebellum, research methods and lesion syndromes.	2,5	Story-explanation, conversation, demonstration,	Oral interview; written survey; test control;
	<b>Theme 2.</b> Sensitive system. Kinds and types of sensitivity disorders. Pain, its	2,5		

	differentiation. Kinds and types of sensitive disorders.		presentation, supervision of patients,  written creative works, creative tasks; individual tasks.
2	<b>Theme 3.</b> Pathology of I -XII pairs of cranial nerves.	2,5	
	<b>Theme 4.</b> Cognitive functions. Basic methods of cognitive research. Types of lesions. Speech disorders. Research methodology. Differentiation of speech disorders syndromes	2,5	
3	<b>Theme 5.</b> Emergencies in neurology.	2,5	
	<b>Theme 6.</b> Practical skills. Differential credit.	2,5	
Total hours of practical training		15	

### Individual work

№	Name topics	Number of hours	Teaching methods	Forms of control
1	Preparation for practical classes	2	Written creative works, creative tasks; individual tasks	Oral interview; written survey; test control, abstracts; report.
2	Functional methods for diagnosing diseases of the nervous system.	1		
3	Infectious diseases of the nervous system	2,5		
	<b>TOTAL</b>	<b>5,5</b>		

## 3. Evaluation policy

3.1. Evaluation of the success of education of students is carried out on the basis of the current "Instructions for evaluating the educational activities of students of KhNMU" from 21.08.2021 order of the rector of KhNMU №181.

### Organization of current control.

#### *Assessment of general educational activity (hereinafter - GEA)*

General educational activity (GEA) is the educational activity of an applicant during the whole period of studying the discipline. GEA is considered fulfilled if the applicant has completed all the missed classes and lectures, and the average score for all topics is equal to 3 points and above. GEA scores for disciplines with the form of control "differentiated test" or "exam" are calculated as the arithmetic mean of scores for all topics of all semesters, throughout the study period of the discipline (to the nearest hundredth) according to table 1 "Conversion of average score for current control in multi-point scale (for disciplines that end with a medical exam or an exam) ", which is attached (Appendix 1), automatically within the functionality of the electronic journal of the ACS. GEA is defined in points from 70 to 120.

#### *Assessment of individual student tasks (hereinafter - IST)*

The individual tasks of the student in the discipline contribute to a more in-depth study of the theoretical material by the student, the formation of skills to use knowledge to solve relevant

practical problems.

Terms of receipt, performance and protection of individual tasks are determined by the schedule developed by the department for each semester. **IST** is performed by the applicant independently with the receipt of the necessary advice from the researcher. Cases of performance of **IST** of a complex subject by several students are allowed.

**ISTs** are evaluated in points (not more than 10), which are added to the points scored on the **GEA** at the end of the study of the discipline or its part, when conducting a "test", "differentiated test" or "exam".

**The total amount of points for GEA and IST cannot exceed 120 points.**

### *Assessment of independent work of students*

Assimilation of topics that are submitted only for independent work is checked during the final classes and exam.

### *Differential credit*

Differential credit in the discipline is a process during which the received for the course (semester) are checked:

- level of theoretical knowledge;
- development of creative thinking;
- skills of independent work;
- competencies - the ability to synthesize the acquired knowledge and apply them in solving practical problems.

Differential credit is carried out by the teacher of the academic group at the last lesson of the semester.

If the exam is not passed, the dates of rescheduling during the holidays are set, until the beginning of the next semester.

### *Методика проведення диференційного заліку:*

1. Вирішення пакету тестових завдань проводиться на останньому занятті в семестрі, який включає базові (якірні) тестові завдання ЛІІ у кількості не менше **30 тестів**. Критерій оцінювання – 100% вірно вирішених завдань, «склав - не склав».

2. Оцінювання засвоєння практичних навичок та теоретичних знань за всіма темами дисципліни в день іспиту.

На кафедрі встановлене оцінювання освоєння практичних навичок та теоретичних знань за складеними на кафедрі білетами.

### *Оцінка за диференційний іспит*

The maximum number of points that a student can score during the exam is 80. The minimum number of points during the exam is 50.

### *Course assessment policy*

The maximum number of points that a student can score in the course is 200, including the maximum current educational activity - 120 points and 80 points - according to the results of the differential test. The minimum number of points is 120, including the minimum current educational activity - 70 and 50 points - according to the results of the differential test.

Thus, the share of assessment results of current and semester control is 60% and 40%.

**The students who have not been admitted to the credit test or have not passed it, are entitled to liquidation of current academic debt and reassignment of the semester control within the current semester, as well as during winter or summer vacations after the end of the semester but before the next.**

*The students can re-take the differential test no more than twice if it is allowed by the dean of the faculty.*

**Assessment of student performance in the subject is a rating and is set on a multi-point scale as the arithmetic mean of the relevant sections, determined by the ECTS system and the traditional scale adopted in Ukraine.**

If a student wants to improve his rating, he has the opportunity to perform individual tasks, which include preparation of diagrams of meridians and acupuncture points, creating tables of compatibility of acupuncture points in different diseases, schemes of complex application of different reflexology methods in different nosological forms of disease, creating test tasks for control survey, preparation of reports for scientific conferences, participation in interuniversity competitions in the course, etc.

**Elimination of academic debt.** Missed practical classes (both classroom and distance) are subject to mandatory completion. Practice is carried out either by the teacher of the group or by the teacher on duty, the remote form of practice is allowed (by prior arrangement). Missed classes for up to 1 month from the moment of admission are worked out free of charge, if the term exceeds 1 month - on request, with the permission of the dean's office, which decides the form of practice (free or paid).

## **4. Discipline policy**

The department accepts qualified students of any race, national or ethnic origin, gender, age, people with special needs, any religion, sexual orientation, veteran status or marital status for all rights, privileges, programs and activities, provided to university students.

It is expected that male and female students will attend all practical classes. If they have missed classes, it is necessary to work them out (according to the schedule on the information stand of the department).

Written and home assignments must be completed in a timely manner, and if students have questions, they can contact the teacher in person or by e-mail, which the teacher will provide at the first practical session.

During the practical lesson, students are recommended to keep a synopsis of the lesson and keep a sufficient level of silence. Asking questions to the teacher is perfectly normal.

### **Occupational Health**

The first lesson of the course will explain the basic principles of labor protection by conducting appropriate training. It is expected that everyone should know where the nearest evacuation exit is, where the fire extinguisher is, how to use it, and so on.

### **Behaviour in the classroom**

#### **Basic "yes" and "no"**

It is important for students to follow the rules of good behavior at the university. These

rules are common to all, they also apply to all faculty and staff, and are not fundamentally different from the generally accepted norms.

During classes it is allowed:

- to leave the classroom for a short time if necessary and with the permission of the teacher;

- drink soft drinks;
- take photos of presentation slides;
- take an active part in the class

**Forbidden:**

- eating (except for persons whose special medical condition requires different - in this case, medical confirmation is required);

- smoking, drinking alcohol and even low-alcohol beverages or drugs;

- using obscene language or use words that offend the honor and dignity of colleagues and faculty;

- gambling;

- damaging the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);

- shouting or listening to loud music in classrooms and even in corridors during classes

### **Practical training**

Active participation during the discussion in the classroom, students should be ready to understand the material in detail, ask questions, express their point of view, discuss. During the discussion it is important:

- to respect for colleagues,

- tolerate others and their experience,

- receptivity and impartiality,

- the ability to disagree with the opinion, but to respect the personality of the opponent / s,

- careful argumentation of his opinion and the courage to change his position under the influence of evidence,

- self-expression, when a person avoids unnecessary generalizations, describes his feelings and formulates his wishes based on their own thoughts and emotions,

- mandatory acquaintance with primary sources.

A creative approach in its various manifestations is welcome. Students are expected to be interested in participating in city, national and international conferences, competitions and other events in the subject profile.

## **5. Academic integrity**

The Department of Neurology maintains zero tolerance for plagiarism. Students are expected to constantly raise their awareness of academic writing. The first lessons will provide information on what to consider plagiarism and how to properly conduct research and scientific research.

Students with special needs should meet the teacher or warn him/her before the start of classes, at the request of the student this can be done by the group leader. If you have any questions, please contact the teacher.

## 6. Recommended references

### Educational literature

1. Neurology: a textbook / I.A. Grygorova [et.al.]; ed .: I. A. Grygorova, L.I. Sokolova. - K.: Medicine, 2013. - 640 p.
2. Clinical Neurology / Edited by Gryb V..A. - K .: Publishing house Medknyha, 2017.- 288p.
3. Neurology / Grygorova I.A., Sokolova L.I., Herasymchuk R.D. et al. - Kyiv: AUS Medicine Publishing, 2017. - 624 p.

### Auxiliary:

1. Nervous diseases, edited by S.M. Vynychuk, E.G. Dubenko. - K .: Health. - 2001 – 696p.
2. Nikiforov A.S., Konovalov A.N., Gusev E.I. Clinical Neurology: Textbook. In three volumes. - I-II-III .: Medicine, - 2007. - 792p.
3. Skoromets A.A. Nervous diseases: textbook / A.A. Skoromets, A.P. Skoromets, T.A. Skoromets. - 4th ed. - M .: MEDpress-inform, 2010. – 560p with illustr.
4. Shevaga V.M. Neurology: textbook / V.M.Shevaga, A.V.Payenok, B.V.Zadorozhna. - 2nd ed., revised and supplemented..-K .: Medicine, 2009.-. 656p.
5. Yakhno N.N., Shtulman D.R. Diseases of the nervous system. - Volume 1-2 - M .: Medicine, 2007 - 744p. and 480 p.

## 7. Learning outcomes

As a result of studying the course the student should be able to:

1. Examine the number of active and passive movements.
2. Examine muscle tone and strength.
3. Examine tendon, periosteal, skin reflexes (carpo-radial, biceps, triceps, knee, Achilles, abdominal, plantar).
4. Examine pathological reflexes (Babinsky, Oppenheim, Gordon, Schaeffer, Rossolimo, Bekhterev, Zhukovsky and others) and synkinesis.
5. Examine the coordination of movements (finger-nose, knee-heel tests, diadochokinesis, tests for dysmetry), detect static and dynamic ataxia.
6. Examine all types of sensitivity (superficial, deep and complex types).
7. Examine the symptoms of root tension.
8. Examine the state of smell and taste.
9. Examine visual acuity, field of view, color perception.
10. Examine the functions of the oculomotor nerves.
11. Examine the functions of the V nerve.
12. Examine the functions of the VII nerve.
13. Examine the functions of the IX-X nerves.
14. Examine the functions of the XI-XII nerves.
15. Examine the autonomic nervous system.
16. Examine meningeal symptoms (rigidity of the occipital muscles, symptoms of Kernig, Brudzinski), reactive pain phenomena: Mendel, Platau, the exit of the small and large occipital nerves.
17. Examine the level of language, praxis, gnosis, writing, reading, arithmetic.
18. Interpret the main indicators of auxiliary methods of examination in the neurological clinic (electrophysiological, ultrasound, X-ray, computed tomography).
19. Independently examine patients with neurological pathology with a history.
20. To determine the leading neurological syndrome in a patient.
21. Justify the clinical diagnosis.
22. Provide emergency care in acute neurological conditions.

## **List of questions to the differential test**

1. Reflex apparatus of the spinal cord. Reflex, reflex arc. Unconditional reflexes.
2. Tendon and periosteal reflexes, arcs of their closure.
3. Cortico-spinal and cortico-nuclear pathways.
4. Central (spastic) paralysis.
5. Peripheral (flaccid) paralysis. Pathogenesis of atony, areflexia, atrophy.
6. Extrapyrarnidal system, anatomical features, functions.
7. Parkinson's syndrome, biochemical mechanisms of pathogenesis.
8. Types of hyperkinesia.
9. Cerebellum, anatomical and physiological features, lesion syndromes.
10. Types of ataxia.
11. Sensitivity. Types of sensitivity, types of sensitive disorders.
12. Types of sensitivity disorders. Brown-Sekara syndrome.
13. Anatomical and physiological data, research methods, syndromes of lesions of I-XII pairs of cranial nerves.
14. Central and peripheral paresis of the facial nerve.
15. Bulbar and pseudobulbar syndromes.
16. The cortex of the large hemispheres, cytoarchitectonic fields, lesion syndromes.
17. Agnosia, apraxia, aphasia.
18. Speech disorders (dysarthria, aphasia).
19. Classification of vascular diseases of the nervous system.
20. Variants of cerebral vascular crises.
21. Syndromes of transient ischemic attacks.
22. Transient disorders of cerebral circulation.
23. Hemorrhagic stroke (parenchymal and subarachnoid hemorrhage).
24. Ischemic (thrombotic and non-thrombotic) strokes.
25. Principles of undifferentiated and differentiated treatment of strokes.
26. Stroke prevention.
27. Modern classification of paroxysmal conditions in the clinic of nervous diseases.
28. Pathogenetic essence of epilepsy, classification of epileptic seizures, principles of differentiated treatment.
29. Status epilepticus, clinic, diagnosis, treatment.
30. Non-epileptic paroxysmal states - convulsive and non-convulsive.
31. Vegetative-vascular paroxysms.
32. Syncopal states.
33. Cephalgia-pathogenetic mechanisms of occurrence, clinic, diagnosis, treatment.
34. Migraine: pathogenesis, clinic, treatment.
35. Closed traumatic brain injury, bruising, concussion, compression of the brain.
36. Emergency aid.
37. Meningitis (purulent-primary, secondary; serous).
38. Arachnoiditis (adhesive, cystic), basal, convex).
39. Encephalitis (primary, secondary)
40. Lesions of the nervous system with influenza, rheumatism. Herpetic lesions.