**Table 2. The list of tasks in the Neurology and neurosurgery discipline with a PDO course.**

**Lesson number 1 .****Paraclinical research methods in neurology.****Radiological diagnosis** **: craniography, spondylography, computed tomography (CT), magnetic resonance imaging (MRI). Elektrofiziologich e skie research methods - EEG, evoked potentials, EMG. Ultrasound research methods (NSG, duplex scanning, TCD, ultrasound).**  

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| Вид | Код | **Текст названия трудовой функции / вопросов задания / вариантов ответа** |
| Ф |  | Radiation diagnosis |
|  |  |  |
| **В** | **001** | **Indicate the radiological signs of intracranial hypertension on the craniogram :** |
| О | А | All the foregoing |
| О | Б | Spherical shape of the skull |
| О | В | dilation of the veins |
|  |  |  |
| О | Г | Reinforcement of the internal relief of the cranial bones and their thinning |
|  |  |  |
| В | 002 | **Specify the radiological signs of osteochondrosis of the spine** |
|  | А | All the foregoing |
|  | Б | Narrowing of the intervertebral canal |
|  | В | The presence of osteophytes |
|  | Г |  |
|  |  |  |
| В | 003 | **Aspect of ischemic stroke in CT :** |
|  | А | hypo-intense lesion (low density) |
|  | А | It is detected from 2 days of illness |
|  | Б | hyper-intense lesion |
|  | В | It is detected from the first hours of the disease |
|  |  |  |
| В | 004 | **Select the signs of a "fresh" hemorrhagic stroke :** |
|  | А | hyper-intense with clear contours with a density of +50 to +70 U |
|  | А | Lesion is detected by its contrast enhancement |
|  | В | All the foregoing |
|  | Г |  |
|  |  |  |
|  |  |  |
| В | 005 | **For IMR, multiple sclerosis images are characterized by :** |
|  | А | All the foregoing |
|  | Б | Multiple lesion of the temporal lobe |
|  | В | Multiple juxtacortical lesions |
|  | Г | Multiple lesion to the corpus callosum |
|  | Д | Periventricular focus |
|  |  |  |
| В | 006 | **Characteristic MRI aspect of multiple sclerosis is "Dawson's fingers" :** |
|  | А | Occur due to inflammation of the tissue surrounding the venules |
|  | А | These are oblong foci, oriented perpendicular to the ventricles of the brain |
|  | Б | Multiple foci of rounded shape in the cortex and subcortical substance of the brain |
|  | В | Multiple shaped in the spinal cord |
|  |  |  |
|  |  |  |
| В | 007 | **Types of intervertebral hernia according to MRI** |
|  | А | All the foregoing |
|  | Б | Median |
|  | Г | Paramédial |
|  | Д | Foraminal |
|  | Е | Ventral |
|  | Ж | Circular |
|  |  |  |
|  |  | Electrophysiology |
| В | 008 | **The background electroencephalogram is recorded :** |
|  | А | In active wakefulness in the absence of muscular activity |
|  | Б | During sleep |
|  | В | With intense mental activity |
|  | Б | Functionally dependent |
|  |  |  |
| В | 009 | **Slow theta and delta waves in an electroencephalogram :** |
|  | А | B and D |
|  | Б | Always present |
|  | В | Occur in various brain diseases |
|  | Г | Occur during sleep |
|  |  |  |
| В | 010 | **Bioelectric silence is:** |
|  | А | recording of an electroencephalogram during brain death |
|  | Б | sick brain activity |
|  | В | Normal brain activity |
|  | Г | electroencephalogram activity during sleep |
|  |  |  |
| В | 011 | **The electroencephalogram indicators are used for:** |
|  | А | Identification of the location of focal brain lesions |
|  | А | Identification of epileptiform activity |
|  | Б | determine the location of the level of spinal cord damage |
|  | В | All the foregoing |
|  |  |  |
| В | 012 | **Electroencephalogram seamless pattern :** |
|  | А | Undergoing regular changes in children, depending on the maturation of the physiological morpho-functional connections of the cerebral cortex with the underlying parts of the central nervous system |
|  | Б | does not change in a person from the moment of birth to the end of their life |
|  | В | undergoing regular changes with age |
|  |  |  |
| В | 013 | **Epileptiform models include :** |
|  | А | Commissures |
|  | А | Sharp waves |
|  | А | Advanced wave complexes |
|  | А | Polyspike |
|  | Б | Transient slowdown in background activity |
|  | В | Continued slowdown in background activity |
|  |  |  |
| В | 014 | **Types of electromyography:** |
|  | А | Stimulating electroneuromyography |
|  | А | Needle Myography |
|  | А | Skin Myography |
|  | Г | Galvanic Myography |
|  | Д | Periodic myography |
|  |  |  |
| В | 015 | **Axonopathy is characterized by the following changes for a stimulating electroneuromyography :** |
|  | А | The decrease in the amplitude of the distal M response with a relatively safe pulse speed along the nerve and the shape of the M wave |
|  | Б | Decreased impulse speed along the nerve |
|  | В | All the foregoing |
|  |  |  |
|  |  |  |
| В | 015 | **study of neuromuscular transmission (decrement test) is carried out for suspected patients:** |
|  | А | Myasthenia gravis |
|  | Б | Amyotrophic lateral sclerosis |
|  | В | Myotonia |
|  | Г | Progressive muscular dystrophy |
|  |  |  |
| В | 016 | **The lower limit of the conduct rate along the ulnar nerve** |
|  | А | 50m / s |
|  | А | 35m / s |
|  | Б | 20m / s |
|  | В | 100m / s |
|  |  |  |
| В | 017 | **With damage to the anterior horns of the spinal cord, the following type of EMG is recorded with superficial abduction :** |
|  | А | Type II - a rare rhythmic activity (6-50 with 1) has two subtypes: Ia (6-20 with 1) and IIb (1 21-50 c) |
|  | Б | Type I - interference curve, which is a high frequency polymorphic activity (1 to 50) that occurs during voluntary contraction or muscle tension of other muscles; |
|  | В | Type III - reinforcement of frequent fluctuations in the resting state, grouping them into rhythmic discharges. |
|  | Г | Type IV "silent" electrical muscles when trying to contract muscle |
|  |  |  |
|  |  |  |
| В | 018 | **Evoked brain potential (VP) is one method:** |
|  | А | Studies of the responses of certain regions of the brain to external stimuli |
|  | Б | Studies of spinal cord cell activity |
|  | В | Skin temperature studies |
|  |  |  |
| В | 019 | **What varieties of evoked potentials (VP) do you know?** |
|  | А | visual field |
|  | А | hearing field |
|  | А | Somatosensory VP |
|  | Б | Flavoring VP |
|  | В |  |
|  |  |  |
| В | 020 | **For myelinopathy, the following changes are characteristic of pacing electroneuromyography :** |
|  | А | Decreased impulse speed along the nerve |
|  | Б | The decrease in the amplitude of the distal M response with a relatively safe pulse speed along the nerve and the shape of the M wave |
|  | В | All the foregoing |
|  |  |  |
|  |  | Ultrasonic research methods |
| В | 021 | **Neurosonography allows diagnosed of :** |
|  | А | Abnormalities in brain development in newborns |
|  | А | To assess the dynamics of ischemic and intracranial traumatic injuries in infants |
|  | Б | Damage to white and gray matter of the brain in the elderly |
|  | В | All these answers e |
|  |  |  |
| **В** | **022** | **When performing stimulation electroneuromyography , an increase in the thickness of the intima-media complex (ICD) is considered** |
|  | А | more than 0.9 and less than 1.3 |
|  | Б | More than 1 and less than 1.6 |
|  | В | More than 1.5 and less than 2.0 |
|  |  |  |
|  |  |  |
| В | 023 | **A variety of atherosclerotic (AB) plaques characterized by:** |
|  | А | Stable and unstable |
|  | А | Homogeneous, heterogeneous, isoechoic, mixed |
|  | Б | Open and closed |
|  | В | Classified and not classified |
|  | Г | All the foregoing |
|  |  |  |
| В | 024 | **Hypoplasia of the vertebral artery (usually straight) is found in:** |
|  | А | 30% of the population |
|  | Б | 50% of the population |
|  | В | 100% of the population |
|  |  |  |
| В | 025 | **The duplex scanning of brachiocephalic arteries allows for** |
|  | А | All the foregoing |
|  | Б | Determine the state of the vascular wall |
|  | В | Identify the presence, nature and size of atherosclerotic plaques |
|  | Г | Identify the tortuosity of blood vessels |
|  |  |  |
|  |  |  |
| В | 026 | **The EchoDoppler  transcranial is** |
|  | А | Ultrasonic research method |
|  | А | Hemodynamic parameters are studied using the Doppler effect |
|  | А | It provides information about the vessels of the brain |
|  | А | Occipital, temporal and orbital areas are examined. |
|  | Б | It is performed with the introduction of a contrast drug |
|  |  |  |
| В | 027 | **The color mapping with EchoDoppler  transcranial helps with:** |
|  | А | see more clearly the speed of blood flow through the vessels |
|  | Б | Coloring of atherosclerotic plaques of different colors |
|  | В | All the foregoing |
|  | Г | none of these answers |
|  |  |  |
| В | 028 | **Duplex scanning reveals:** |
|  | А | Non-stenosed atherosclerosis |
|  | А | Stenosing atherosclerosis |
|  | А | Diffuse atherosclerosis |
|  | Б | Nodular atherosclerosis |
|  | В | Mitral valve prolapse |
|  |  |  |
| В | 029 | **The Echo Doppler  transcranial allows you to:** |
|  | А | Assess the Willis Circle Vessels |
|  | А | Determine the presence of a closed or open Willis circle |
|  | А | Vasodilator or vasoconstrictor of reactions to functional tests |
|  |  |  |
| В | 030 | **Duplex scanning allows you to view** |
|  | А | Common, external and internal carotid arteries |
|  | А | Vertebral arteries |
|  | А | Subclavian artery |
|  | Б | Brachial artery |
|  |  |  |
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