Таблица 1.Общие сведения

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| --- | --- | --- |
| 1 | Учебное заведение | ФГБОУ ВО АстГМУ |
| 2 | Специальность | Лечебное дело. Фармация. |
| 3 | Дисциплина | Нормальная физиология |
| 4 | Автор заданий | В.Р.Горст |
| 5 | Телефон |  |
| 6 | Электронная почта |  |
| 7 | СНИЛС |  |

Таблица 2.Перечень заданий по дисциплине

|  |  |  |
| --- | --- | --- |
| **Вид** | **Код** | **Текст названия трудовой функции/ вопроса задания/ вариантов ответа** |
| Ф |  | **Musculoskeletal system** |
|  |  |  |
| В | 001 | The neuromuscular synapse mediator is: |
| О |  | acetylcholine |
| О |  | adrenalin |
| О |  | glycine |
| О |  | norepinephrine. |
|  |  |  |
| В | 002 | The result of activation of the receptor-mediator complex in the neuromuscular synapse is: |
| О |  | end plate potential |
| О |  | excitatory post synaptic potential |
| О |  | inhibitory post synaptic potential |
| О |  | miniature potential |
|  |  |  |
| В | 003 | A smooth tetanus is: |
| О |  | slowing down relaxation due to fatigue |
| О |  | smooth muscle contraction |
| О |  | summation of contractions in the relaxation phase |
| О |  | summation of contractions in the shortening phase |
|  |  |  |
| В | 004 | Dental tetanus is: |
| О |  | masticatory muscle contraction |
| О |  | single contraction |
| О |  | summation of contractions in the relaxation phase |
| О |  | summation of contractions in the shortened phase. |
|  |  |  |
| В | 005 | A single muscle contraction consists of: |
| О |  | AP generation - overshut - hyperpolarization |
| О |  | exaltation - absolute refractoriness - relative refractoriness |
| О |  | latent period - shortening period - relaxation period |
| О |  | local answer - depolarization - repolarization |
|  |  |  |
| В | 006 | The properties of the skeletal muscles underlying their ability to return to their original position after contraction: |
| О |  | contractility, lability |
| О |  | elasticity, resilience |
| О |  | elongation, conductivity |
| О |  | plasticity, refractoriness |
|  |  |  |
| В | 007 | The main supply of calcium in skeletal muscle is in: |
| О |  | mitochondria |
| О |  | myofibrils. |
| О |  | sarcoplasm |
| О |  | tanks of sarcoplasmic reticulum |
|  |  |  |
| В | 008 | Sarcomere is: |
| О |  | the fragment of myofibrils between two telofragms |
| О |  | thick filaments of myosin |
| О |  | thin actin filaments |
| О |  | T-tube system |
|  |  |  |
| В | 009 | What structure of muscle fiber shortens during muscle |
| О |  | actin |
| О |  | myosin |
| О |  | sarcomere |
| О |  | tropomyosin |
|  |  |  |
| В | 010 | The All or Nothing Act applies to: |
| О |  | individual muscle fiber |
| О |  | muscle |
| О |  | nerve trunk |
| О |  | neuromuscular synapse |
|  |  |  |
| В | 011 | The process of shortening and relaxing muscle fiber depends on: |
| О |  | actin |
| О |  | concentrations of calcium in the sarcomere |
| О |  | concentrations of sodium in the sarcomere |
| О |  | myosin |
|  |  |  |
| В | 012 | The optimum of muscle contraction is: |
| О |  | stopping muscle contraction for stimulation |
| О |  | the degree of muscle strain |
| О |  | the maximum amplitude of smooth tetanus during muscle stimulation |
| О |  | the number of muscle fibers in the muscle |
|  |  |  |
| В | 013 | The pessimum of muscle contraction is: |
| О |  | decreased amplitude of muscle contraction with excessive stimulation |
| О |  | reducing the length of muscle fiber under the action of a threshold stimulus |
| О |  | the cross-sectional area of the muscle |
| О |  | the increase in the amplitude of the smooth tetanus |
|  |  |  |
| В | 014 | Skeletal muscle provide: |
| О |  | all listed options |
| О |  | protective function |
| О |  | supporting function |
| О |  | the movement of the body in space |
|  |  |  |
| В | 015 | Smooth muscles have: |
| О |  | all listed options |
| О |  | automation |
| О |  | plastic |
| О |  | the innervation of the ANS |
|  |  |  |
| В | 016 | What helps to increase muscle function? |
| О |  | work in isometric mode |
| О |  | muscle contraction does not depend on the load on the muscles |
| О |  | large load on the muscles |
| О |  | average muscle load |
|  |  |  |
| В | 017 | Muscle strength depends on: |
| О |  | of the number of muscle fibers in the muscle |
| О |  | of the cross-sectional area of ​​the muscle |
| О |  | degrees of pre-stretching |
| О |  | all listed options |
|  |  |  |
| В | 018 | Mover is: |
| О |  | sarcomere |
| О |  | myofibrils |
| О |  | muscle |
| О |  | motor neuron of the spinal cord with muscle fibers, innervated by the axon allocated to it |
|  |  |  |
| В | 019 | What muscle contraction parameter is adequate irritation for muscle spindle receptors? |
| О |  | reducing the cross section of the muscle |
| О |  | increased muscle contraction power |
| О |  | increase in muscle length |
| О |  | an increase in the cross section of the muscle |
|  |  |  |
| В | 020 | What fibers transmit impulses from muscle spindles to the back of the brain? |
| О |  | gamma-afferent |
| О |  | gamma effect |
| О |  | fibers of group C |
| О |  | efferent alpha |
|  |  |  |
| В | 021 | Auxotonic reduction is: |
| О |  | performing static work |
| О |  | muscle shortening with constant tension |
| О |  | muscle contraction performed during dynamic overcoming work |
| О |  | muscle contraction caused by a blow of a neurological hammer |
|  |  |  |
| В | 022 | Proprioceptors do not include: |
| О |  | Puccini’s bodies |
| О |  | muscle spindles |
| О |  | Golgi tendon organs |
| О |  | baroreceptors |
|  |  |  |
| В | 023 | Activity rest: |
| О |  | switching to completely different types of motor activity |
| О |  | promotes faster recovery of tired muscles |
| О |  | not productive after intense exercise |
| О |  | all listed options |
|  |  |  |
| В | 024 | The cause of fatigue of the whole organism: |
| О |  | the accumulation of lactic acid in the muscles |
| О |  | long work of a certain muscle group |
| О |  | intense muscle fiber stimulation |
| О |  | excessive afferent information from extero-, inter- and proprioreceptors entering the central nervous system |
|  |  |  |
| В | 025 | The cause of fatigue of an isolated muscle: |
| О |  | the accumulation of metabolic products |
| О |  | lack of oxygen |
| О |  | lack of nutrients |
| О |  | all listed options |
|  |  |  |
| В | 026 | Tendon reflexes: |
| О |  | they are not suppressed arbitrarily |
| О |  | they are carried out only due to the activation of muscle receptors |
| О |  | monosynaptic |
| О |  | all listed options |
|  |  |  |
| В | 027 | The spinal level of organization of movements provides: |
| О |  | Primitive motor reactions |
| О |  | Coordination of complex motor acts |
| О |  | Complex positonic reflexes |
| О |  | Arbitrary movements |
|  |  |  |
| В | 028 | Spinal cord reflexes include: |
| О |  | visual and auditory |
| О |  | static and statokinetic |
| О |  | protective reflexes of sneezing and coughing |
| О |  | flexion and extensor |
|  |  |  |
| В | 029 | The cause of spinal shock is: |
| О |  | strengthening the influence of the brain on the centers of the spinal cord |
| О |  | severe pain reaction |
| О |  | disruption of connections between segments of the spinal cord |
| О |  | cessation of brain control over the centers of the spinal cord |
|  |  |  |
| В | 030 | With damage to the lumbar segments of the spinal cord, reflexes change: |
| О |  | tendons knee reflexes |
| О |  | statokinetic reflexes |
| О |  | rectifying reflexes |
| О |  | digestive reflexes |
|  |  |  |
| В | 031 | The orienting reflex is: |
| О |  | turning the head and eyes toward the stimulus in response to sudden irritation |
| О |  | preparing the body for a timely response to sudden visual or auditory effects |
| О |  | organization of anxiety reaction |
| О |  | all listed options |
|  |  |  |
| В | 032 | The upper hillocks of the corpora quadrigemina (quadruple) are centers of orienting reflexes: |
| О |  | visual |
| О |  | sense of smell |
| О |  | flavoring |
| О |  | auditory |
|  |  |  |
| В | 033 | The lower hillocks of the corpora quadrigemina (quadruple) are centers of orienting reflexes: |
| О |  | visual |
| О |  | olfactory |
| О |  | hearing |
| О |  | flavoring |
|  |  |  |
| В | 034 | At what level is it necessary to cut off the brain stem in order to obtain a state of rigid decerebral rigidity in an animal: |
| О |  | below the red nucleus |
| О |  | at the level of black matter |
| О |  | above the red nucleus |
| О |  | above the nuclei of the upper hillocks |
|  |  |  |
| В | 035 | The red core of the midbrain provides reflexes: |
| О |  | visual orienting reflex |
| О |  | tonic |
| О |  | chewing, swallowing |
| О |  | auditory orienting reflex |
|  |  |  |
| В | 036 | For animals with decerebrate rigidity is characteristic: |
| О |  | increased tone of the extensor muscles |
| О |  | decreased flexor muscle tone |
| О |  | changing normal posture |
| О |  | all listed options |
|  |  |  |
| В | 037 | Static reflexes do not include: |
| О |  | Rectifying reflexes |
| О |  | lifting reflexes |
| О |  | Labyrinth reflexes |
| О |  | Cervical reflexes |
|  |  |  |
| В | 038 | Statokinetic does not include: |
| О |  | reflexes of rotational |
| О |  | reflexes of pose and position |
| О |  | reflexes of linear acceleration |
| О |  | lifting reflexes |
|  |  |  |
| В | 039 | The phenomenon of a cat landing on its feet when falling from a height: |
| О |  | statokinetic reflex |
| О |  | static posture reflex |
| О |  | reflexes of rotational |
| О |  | rectifier reflex |
|  |  |  |
| В | 040 | The structure of basal nuclei does not have: |
| О |  | Coordinated Engine Centers |
| О |  | Chewing and Swallowing Center |
| О |  | Centers of complex unconditioned reflexes and instincts |
| О |  | Centers for control of muscle tone and moving |
|  |  |  |
| В | 041 | When the basal nuclei are damaged, disturbances occur: |
| О |  | providing gnostic (cognitive) processes |
| О |  | movement coordination |
| О |  | conducting an afferent impulse from the senses |
| О |  | all listed options |
|  |  |  |
| В | 042 | Parkinson's disease is associated with impaired mediator synthesis: |
| О |  | noradrenaline |
| О |  | glycine |
| О |  | dopamine |
| О |  | acetylcholine |
|  |  |  |
| В | 043 | Slow bizarre movements of the hands and fingers with damage to the striatum are called: |
| О |  | Parkinson's syndrome |
| О |  | Chorea |
| О |  | Ballism |
| О |  | athetosis |
|  |  |  |
| В | 044 | Basal kernels perform the following functions: |
| О |  | participate in the creation of targeted movement programs |
| О |  | are the most important link between the associative and motor regions of the cerebral cortex |
| О |  | are one of the levels of the system of regulation of movements, transmit mainly effects to the motor cortex and the brain stem |
| О |  | all listed options |
|  |  |  |
| В | 045 | The midbrain carries out: |
| О |  | visual reflexes |
| О |  | regulation of endocrine glands |
| О |  | regulation of autonomic functions and static reflexes |
| О |  | integration of all types of sensitivity |
|  |  |  |
| В | 046 | Orienting-research reactions: |
| О |  | indicate the development of the situation |
| О |  | be long lasting |
| О |  | arise on a new unexpected stimulus |
| О |  | arise on a familiar irritant |
|  |  |  |
| В | 047 | Which CNS department is leading in the formation of statokinetic reflexes? |
| О |  | spinal cord |
| О |  | midbrain |
| О |  | medulla |
| О |  | diencephalon |
|  |  |  |
| В | 048 | The structure of the pons Varolii includes: |
| О |  | sublingual nerve nuclei (pair xii) accessory nerve (pair xi) |
| О |  | facial nerve nuclei (pair VII), abduction nerve (pair VI), trigeminal nerve (pair V) |
| О |  | block nerve core (iv) , ocular nerve (iii) |
| О |  | all listed options |
|  |  |  |
| В | 049 | What pair of cranial nerves is damaged if a person cannot raise his arms above the horizontal level, shrug his shoulders and hardly rotate his head to the sides: |
| О |  | XI pairs of (additional) nerves |
| О |  | X pairs of (vagus) nerves |
| О |  | VII pairs of (facial) nerves |
| О |  | V pairs of (trigeminal) nerves |
|  |  |  |
| В | 050 | What pair of cranial nerves is damaged, if a person has asymmetry of the face, frontal and nasolabial folds are smoothed, the angle of the mouth is lowered, cannot perform tests on the condition of the facial muscles: |
| О |  | X pair (vagus nerve) |
| О |  | VII pair (facial nerve) |
| О |  | V pair (trigeminal nerve) |
| О |  | III pair (oculomotor nerve) |
|  |  |  |
| В | 051 | What pair of cranial nerves is damaged if a person has a “hoarse” voice, when pronouncing the sound “a” a soft palate and tongue hang down: |
| О |  | XII pair (hyoid nerve) |
| О |  | X pair (vagus nerve) |
| О |  | IV pair (block nerve) |
| О |  | III pair (oculomotor nerve) |
|  |  |  |
| В | 052 | The motor function of the midbrain is realized due to: |
| О |  | Thalamus |
| О |  | Reticular formation |
| О |  | Cerebellum |
| О |  | block nerve nuclei, oculomotor nerve nuclei, red nucleus, black substance |
|  |  |  |
| В | 053 | Red core and reticular formation: |
| О |  | Stimulators of the flexors and extensors |
| О |  | Stimulate muscles - flexors and inhibit muscles - extensors |
| О |  | Stimulate muscles - extensors and inhibit muscles - flexors |
| О |  | Do not affect muscles - flexors and muscles - extensors |
|  |  |  |
| В | 054 | Deiters core and reticular formation: |
| О |  | Stimulators of the flexors and extensors |
| О |  | Stimulate muscles - flexors and inhibit muscles - extensors |
| О |  | Stimulate muscles - extensors and inhibit muscles - flexors |
| О |  | Do not affect muscles - flexors and muscles - extensors |
|  |  |  |
| В | 055 | The cause of decerebral rigidity in humans can be: |
| О |  | Tumors and abscesses of the brain and cerebellum, intracerebral hematomas |
| О |  | swelling of the brain with extensive cerebral infarction |
| О |  | Brain injury, meningitis and meningoencephalitis, toxic encephalopathy, renal coma |
| О |  | All listed options |
|  |  |  |
| В | 056 | The functions of the medulla oblongata is: |
| О |  | vital - respiratory and circulatory centers |
| О |  | protective reflexes (vomiting, sneezing, coughing, lacrimation, closing of the eyelids, chewing, swallowing) |
| О |  | conductor, reflex, touch |
| О |  | all listed options |
|  |  |  |
| В | 057 | Afferents to the striatum (striatum) originate from: |
| О |  | from the thalamus |
| О |  | from the substantia nigra substantia nigra through the dopaminergic pathway |
| О |  | from all areas of the cortex |
| О |  | All listed options |
|  |  |  |
| В | 058 | Efferents from striatum (striatum) are sent: |
| О |  | to black substance |
| О |  | through the thalamus into the motor cortex |
| О |  | into All listed options |
| О |  | into a pale ball |
|  |  |  |
| В | 059 | The defeat of the striatum, accompanied by sudden involuntary contractions of one or more muscle groups that occur both with movements and at rest called: |
| О |  | Torsion dystonia |
| О |  | Myoclonia |
| О |  | Hemiballism |
| О |  | Athetosis |
|  |  |  |
| В | 060 | The defeat of the striatum, in which there are large, sweeping movements of the limbs, rotational movements: |
| О |  | Tremor |
| О |  | Parkinson's disease |
| О |  | Hemiballism |
| О |  | Athetosis |
|  |  |  |
| В | 061 | What layer is not in the cerebellar cortex: |
| О |  | pyramidal |
| О |  | molecular |
| О |  | granular |
| О |  | ganglion |
|  |  |  |
| В | 062 | Function of the ancient cerebellum (vestibulocerebellum): |
| О |  | vegetative function control |
| О |  | preserving balance and eye movement |
| О |  | performing movements |
| О |  | making a motion plan |
|  |  |  |
| В | 063 | Function of the old cerebellum (spinocerebellum): |
| О |  | preserving balance and eye movement |
| О |  | motion planning |
| О |  | controls the correctness of the beginning movements of the legs and arms, the implementation of slow movements |
| О |  | arbitrary movement control |
|  |  |  |
| В | 064 | Function of the new cerebellum (neocerebellum): |
| О |  | vegetative function control |
| О |  | performing tonic reflexes |
| О |  | participates in movement planning |
| О |  | maintaining balance |
|  |  |  |
| В | 065 | With partial damage to the cerebellum is not observed: |
| О |  | Skeletal muscle tone disorder |
| О |  | loss of balance |
| О |  | disorders of Tendon reflex |
| О |  | autonomic disorders |
|  |  |  |
| В | 066 | Damage or removal of the cerebellum does not cause: |
| О |  | Paralysis of motor activity |
| О |  | mismatch of the work of individual muscles or muscle groups |
| О |  | Impaired coordination of movements |
| О |  | excessive amplification or weakening of movements |
|  |  |  |
| В | 067 | Luciani's Symptom Triad DOES NOT include: |
| О |  | tremor |
| О |  | atony |
| О |  | asthenia |
| О |  | astasia |
|  |  |  |
| В | 068 | Carrying out a finger-nasal test reveals: |
| О |  | tremor |
| О |  | dystonia |
| О |  | dysmetria |
| О |  | asynergy |
|  |  |  |
| В | 069 | A Romberg test reveals: |
| О |  | dysmetria |
| О |  | disequilibration |
| О |  | atony |
| О |  | asinergy |
|  |  |  |
| В | 070 | Violation of the correct alternation of opposite movements is: |
| О |  | tremor |
| О |  | dystonia |
| О |  | astasia |
| О |  | adiadhokinesis |
|  |  |  |
| В | 071 | A patient with arms extended forward when closing his eyes falls forward. Indicate which part of the central nervous system is damaged: |
| О |  | spinal cord motor neurons |
| О |  | motor zone of the cerebral cortex |
| О |  | medulla |
| О |  | cerebellum |
|  |  |  |
| В | 072 | With lesions of the cerebellum, the proportionality of movements is disturbed, a shaky gait is observed. Indicate this symptom: |
| О |  | Dystonia |
| О |  | Atony |
| О |  | Ataxia |
| О |  | Asthenia |
|  |  |  |
| В | 073 | The highest center of regulation of voluntary movements is: |
| О |  | midbrain |
| О |  | cerebral cortex |
| О |  | cerebellum |
| О |  | brain stem |
|  |  |  |
| В | 074 | If the pyramidal tract is damaged: |
| О |  | Targeted acts become impossible |
| О |  | Resistance to passive movements is observed. |
| О |  | Arbitrary movements disappear |
| О |  | All listed options |
|  |  |  |
| В | 075 | Pyramidal paths begin from: |
| О |  | spinal cord motor neurons |
| О |  | motor zones of the cerebral cortex |
| О |  | cerebellar nuclei |
| О |  | brain stem neurons |
|  |  |  |
| В | 076 | Agnosia is: |
| О |  | the inability to cognize or recognize the world around, in particular various objects of the world around, using information from various cortical analyzers |
| О |  | loss of function resulting from damage to the cerebral cortex |
| О |  | disorders of recognition and cognition, reflecting violations of various types of perception |
| О |  | all listed options |
|  |  |  |
| В | 077 | With lesions of the cerebellum, rapid fatigue develops in the muscles, this symptom is called: |
| О |  | dystonia |
| О |  | ataxia |
| О |  | asthenia |
| О |  | astasia |
|  |  |  |
| В | 078 | Speech disorder with cerebellar lesions is called: |
| О |  | speech agnosia |
| О |  | dysarthria |
| О |  | ataxia |
| О |  | astasia |
|  |  |  |
| В | 079 | A study of the primary motor cortex led this scientist to create a somatotopic map of the motor homunculus: |
| О |  | Sherrington |
| О |  | Sechenov |
| О |  | Penfield |
| О |  | Pavlov |
|  |  |  |
| В | 080 | Primary motor cortex provides: |
| О |  | the organization of posture and auxiliary movements for actions performed by the distal muscles of the limbs |
| О |  | the formation of the program of the upcoming complex movements and in the organization of motor reactions to the specificity of sensory stimuli |
| О |  | relatively simple muscle contractions |
| О |  | complex complexes of movements |
|  |  |  |
| В | 081 | When the speech area (the center of Brock) is affected, it develops: |
| О |  | not understanding speech |
| О |  | not recognition of semantic assessment of objects |
| О |  | motor aphasia, impaired articulation |
| О |  | dysarthria |
|  |  |  |
| В | 082 | With the defeat of the sensory center of speech, or the Wernicke center, it develops: |
| О |  | Violation of the function of understanding speech with the preservation of the speech motor function |
| О |  | Inability to recognize objects |
| О |  | Chanted speech |
| О |  | Articulation Disorder |
|  |  |  |
| В | 083 | The occipital lobe of the cerebral cortex is: |
| О |  | Vision centers |
| О |  | Sensory centers |
| О |  | Hearing centers |
| О |  | Center of thinking |
|  |  |  |
| В | 084 | The temporal lobe of the cerebral cortex is the area of analysis: |
| О |  | visual information |
| О |  | tactile information |
| О |  | olfactory information |
| О |  | auditory information |
|  |  |  |
| В | 085 | The associative frontal lobe or prefrontal cortex is: |
| О |  | short-term memory center |
| О |  | sensory information perception center |
| О |  | center of will, initiative, decision making |
| О |  | center of taste |
|  |  |  |
| В | 086 | The ancient and old cortex are combined into a system of the visceral (olfactory) brain, which performs the functions of: |
| О |  | provides alertness and attention reactions |
| О |  | participates in the perception of olfactory stimuli and coordinates the activity of the autonomic nervous system |
| О |  | participates in the formation of emotions and participates in the implementation of instinctive behavior |
| О |  | all listed options |
|  |  |  |
| В | 087 | In the new cortex, in accordance with the functional purpose, there are: |
| О |  | motor-sensory zones |
| О |  | gnostic zones |
| О |  | associative zones |
| О |  | all listed options |
|  |  |  |
| В | 088 | Gnostic zones involved in the identification of subjective entities and decision makers are presented: |
| О |  | In the temporal lobes of the CPB |
| О |  | In the occipital lobes |
| О |  | in the frontal fields of the cerebral cortex |
| О |  | In the dark lobe |
|  |  |  |
| В | 089 | The area of perception of tactile, temperature and proprioceptive sensitivity in humans is within: |
| О |  | in the posterior central gyrus (somatosensory zone) |
| О |  | In the lower part of the premotor cortex (Broca center) |
| О |  | in the front central gyrus (locomotive zone) |
| О |  | In prefrontal cortex |
|  |  |  |