



TEE/BPA501/2019/2021 - 22

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Barasat, Kolkata -700125

BRAINWARE UNIVERSITY

Term End Examination 2021 - 22

Programme – Bachelor of Science in Physician Assistant

Course Name – Neurology

Course Code - BPA501

(Semester V)

Time : 1 Hr.15 Min.

Full Marks : 60

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

Choose the correct alternative from the following :

- (1) Basic functional unit in the nervous system
 - a) Neurons
 - b) Reflex arch
 - c) Receptors
 - d) Nuclei
- (2) Which is not correct With related to nerve fibers ?
 - a) Myelinated fibers have diameter more than unmyelinated fibers
 - b) Myelinated fibers conduct signals more rapidly than unmyelinated fibers
 - c) Pricking (fast) pain usually conducted by type A nerve fibers while aching pain (slow pain) conducted by type C nerve fibers
 - d) Cold and warmth usually conducted by myelinated fibers
- (3) Botulinum toxin act by
 - a) enhance neurotransmitter release
 - b) inhibit neurotransmitter release
 - c) inhibit muscle relaxation
 - d) inhibit spasticity
- (4) Which of the following is inhibitory neurotransmitter found in spinal cord ?
 - a) Serotonin & glycin
 - b) Dopamine
 - c) Glutamate
 - d) Ach
- (5) Rheobase (R) refers to
 - a) minimum intensity of stimulus which if applied for adequate time
 - b) minimum duration of time for which the stimulus is applied
 - c) Duration of time applied for action potential
 - d) The applied intensity of impulse
- (6) ___ Neurotransmitter is found in area of brain responsible for long-term behavior and memory
 - a) Ach
 - b) CO
 - c) NO
 - d) Glycine
- (7) Lesion confined to posterior column – medial lemniscus system can cause all the follo

- wing except
- a) Sensory ataxia
c) Loss of vibration
- (8) Which is true about Cerebrospinal fluid
a) Is formed in the arachnoid granulations.
c) Protects the brain from injury when the head is moved.
- (9) Which of the following is not the function of Neurotrophin is
a) Facilitate initial growth and development of nerve cells in central and peripheral nervous system
c) Play an important role in the maintenance of nervous tissue and neural transmission.
- (10) Which of the following nerve fibre is slowest according to the conductive velocity?
a) A alpha
c) B
- (11) Relative Refractory Period is
a) during which the nerve does not show any response
c) the time when firing level is reached till the time when half of repolarization is completed
- (12) In the process of REGENERATION which option is correct
a) Myelination is completed in 1 year
c) Diameter of the nerve fiber gradually increases
- (13) Which of the glial cell form the blood brain barrier
a) ASTROCYTE
c) MICROGLIA
- (14) Which of the following compound function as Neurotransmitter
a) NO₂
c) NO
- (15) Which one is Neuromodulator in nature
a) Ach
c) Substance P
- (16) Flexor Reflex is
a) Withdrawal reflex
c) Antigravity Reflex
- (17) Bell- Magendie law states that
a) During any reflex activity, impulses are transmitted in only reversible direction through the reflex arc
c) During any reflex activity, impulses are transmitted in sensory to motor direction through the reflex arc
- (18) Lateral spinothalamic tract is responsible for
b) Loss of pain and temperature sensation
d) Loss of fine touch sensation on ipsilateral side
- b) Provides the brain with most of its nutrition.
d) Has a lower pressure than that in the cerebral venous sinuses.
- b) Promote survival and repair of the nerve cells
d) Synthesis of Neurotransmitters
- b) A Gamma
d) C
- b) nerve fiber shows response, if the strength of stimulus is increased to maximum.
d) extends through rest of the depolarization period
- b) pseudopodia like extensions grow from the proximal cut end of the nerve
d) Fibrils move towards the proximal cut end of the nerve fiber
- b) OLIGODENDROCYTES
d) SCHWANN CELLS
- b) CO₂
d) O₂
- b) Endorphins
d) Dopamine
- b) Conditioned Reflex
d) Cerebellar Reflex
- b) During any reflex activity, impulses are transmitted in only one direction through the reflex arc
d) During any reflex activity, impulses are transmitted in only motor to center direction through the reflex arc

- a) To carry sensation of pain
- b) carries impulses of crude touch (protopathic) sensation.
- c) to carry cold temperature sensations
- d) pathway for subconscious kinesthetic sensation
- (19) Flechsig tract starts from
- a) lower lumbar and sacral segments of spinal cord
- b) cortex of anterior lobe of cerebellum
- c) dorsal nucleus of Clarke gray matter of the spinal cord
- d) lateral white column of the spinal cord along the lateral periphery
- (20) TRACT OF GOLL is responsible for
- a) Pain
- b) Temperature
- c) Balance
- d) Tactile sensation
- (21) VENTRAL SPINOCEREBELLAR TRACT is responsible for
- a) Tactile sensation
- b) subconscious kinesthetic sensation
- c) Pain
- d) Balance
- (22) Babinski reflex is
- a) after the one of the toe of the foot has been firmly stroked, big toe then moves upward or toward the top surface of the foot
- b) after the sole of the foot has been firmly stroked, all the toes then move upward or toward the top surface of the foot
- c) after the big toe of the foot has been firmly stroked, all the toes then move upward or toward the top surface of the foot
- d) after the sole of the foot has been firmly stroked, big toe then moves upward or toward the top surface of the foot
- (23) Fast pain sensation is carried by
- a) A δ type afferent fibers
- b) A β type afferent fibers
- c) C type afferent fibers
- d) B type afferent fibers
- (24) Hypothalamus and Thalamus are located within
- a) Cerebellum
- b) Cerebrum
- c) Diencephalon
- d) Limbic system
- (25) Which one of the following is the function of parasympathetic nervous system
- a) Stimulates sweat gland secretion
- b) Acceleration of heart
- c) Pupillary constriction
- d) Increase blood pressure
- (26) At a neuromuscular junction synaptic vesicles discharge
- a) Epinephrine
- b) Acetylcholine
- c) Adrenaline
- d) Dopamine
- (27) Broca's area in the left cerebral hemisphere is related to
- a) Speech
- b) Learning and memory
- c) Recognition of words
- d) Smell sensation
- (28) Functions of smooth muscles, glands, cardiac muscle are regulated by
- a) Somatic nervous system
- b) Autonomic nervous system
- c) Central nervous system
- d) Sympathetic nervous system
- (29) Comprehension of spoken and written words take place in the region of
- a) Association area
- b) Broca's area
- c) Wernicke's area
- d) Motor area
- (30) One of the following is naturally occurring compound which reduces pain sensation-
- a) Acetylcholine
- b) Epinephrine
- c) Dopamine
- d) Endorphine

- (31) The sensory nerves helpful in maintenance of balance and posture is
 a) Cutaneous
 b) Olfactory
 c) Optic
 d) Proprioceptor
- (32) The monocyte that migrate from blood to CNS and modified into glial cell is
 a) Astrocyte
 b) Microcyte
 c) Schwann cell
 d) Macrophage
- (33) From outer to inner which order is correct for Meninges?
 a) Duramater- arachnoidmater- piamater
 b) Duramater- piamater-arachnoidmater
 c) arachnoidmater-duramater-piamater
 d) Piamater-arachnoidmater-Duramater
- (34) The canal which communicates 3rd and 4th ventricles is called
 a) Septum lucidum
 b) Cerebral aqueduct
 c) Foramen monro
 d) Tentorium cerebelli
- (35) The part of the brain which plays important role in maintaining CSF pressure is
 a) Septum lucidum
 b) Arachnoid villi
 c) Piamater villi
 d) Tentorium cerebelli
- (36) When a person is sitting CSF pressure is
 a) 10 cm H₂O
 b) 20 cm H₂O
 c) 30 cm H₂O
 d) 40 cm H₂O
- (37) To discriminate different weights by lifting them we use
 a) Muscle spindle
 b) Golgi tendon organ
 c) Pacinian corpuscle
 d) Ruffini corpuscle
- (38) Best known examples of referred pain is
 a) Cardiac pain felt in chest surface
 b) Chronic Headache
 c) Hand pain
 d) Chest pain to inner left arm
- (39) Neurotransmitter of acute pain is ----- while of chronic pain is -----
 a) Glutamate and Substance P
 b) endorphine and Dopamine
 c) Ach and Endorphine
 d) Enkephaline and Glutamate
- (40) The structure which greatly increases the the surface area of cerebrum of the brain is known as
 a) Corpus callosum
 b) Septum lucidum
 c) Pons
 d) Gyri
- (41) Causes of true visceral pain
 a) Chest pain to inner left arm
 b) Chronic Headache
 c) spasm of viscous
 d) Muscle pain
- (42) The primary motor area of cerebral cortex is found in
 a) Frontal lobe
 b) Temporal lobe
 c) Limbic lobe
 d) Occipital lobe
- (43) With concerning anterior horn cells
 a) Gamma-motor neuron innervate intrafusal muscle fibers
 b) Alpha-motor neuron innervate extrafusal muscle fibers
 c) Renshaw cell is inhibitory cell to sensory nerve fibers and can block transmission of unwanted sensation
 d) Gamma-motor neurons cause the muscle spindle to relax
- (44) In decerebration

- a) Medullary inhibitory system become non functional b) Pontine excitatory system became over-functional
- c) Block inhibition to vestibular nuclei & Development of rigidity d) all of the statements are correct regarding de cerebation
- (45) Motor area of of which hemisphere of cerebrum controls the skelton muscle movement on the right side of body ?
- a) Right side b) Left side
- c) Righ and Left both side d) Sometime left and sometime right
- (46) The sonmatosensory area of cerebral cortex is found in
- a) Parietal lobe b) Limbic lobe
- c) Temporal lobe d) Occipetal lobe
- (47) Which of the following statement is true?
- a) Purkinje fibers output is totally to deep cerebellar nuclei b) Vestibulocerebellum inhibit the stretch reflex
- c) Cerebrocerebellum is acting to perform the damping function of cerebellum d) Asthenia may produced due to defects in climbing fibers
- (48) With related to parkinsonism, all of the following could happen except
- a) Rigidity in both flexor and extensors b) There is static tremors
- c) broad base steps d) absence of arm swinging during walking
- (49) With related to neurotransmitters in basal ganglia components, all the following is true except
- a) Overall basal ganglia have dopaminergic activity b) Substantia nigra have dopaminergic activity
- c) Corpus striatum have glutamic activity d) Subthalamic nuclei have glutamic activity
- (50) With related to reticular formation
- a) Ventral reticulospinal tract is crossed b) Lateral reticulospinal tract is uncrossed
- c) Reticular formation receives inputs from motor cortex, in addition to basal ganglia d) Pontine reticular system is excitatory
- (51) all of the following are functions of extrapyramidal tract except :-
- a) adjustment of skeletal muscle tone b) producing of fine discrete movement
- c) adjustment of postural activities d) adjustment of muscle movement to meet present plans
- (52) All the following cause excitation of the muscle spindle except
- a) Contraction of the end-portion of the intrafusal fibers b) Shortening of the mid-portion of the intrafusal fibers
- c) Lengthening of the muscle d) Increase the activity of gamma-motor neuron
- (53) With related to muscle spindle and golgi tendon organ
- a) Muscle spindles have a sensory innervation. b) Muscle spindles mediate the withdrawal reflex
- c) Golgi tendon organ give a feedback about the degree of muscle tension d) Golgi tendon organ stimulate muscle tearing and equalize tension on separate muscle fibers
- (54) with related to stretch reflexes
- a) They have no relation to muscle tone b) Can not be mediated by higher brain centers
- c) Have no role in stabilizing the body position during tense motor activities d) Reciprocal inhibition is a characteristic of the afferent nerve fibers.

- (55) Which of the following statement is false about the reflex action
- a) Is initiated at a sensory receptor organ.
 - b) May result in endocrine secretion.
 - c) Involves transmission across at least two central nervous synapses in series.
 - d) May be excitatory or inhibitory.
- (56) Which of the following statement is true about Cerebrospinal fluid?
- a) Is formed in the arachnoid granulations.
 - b) Provides the brain with most of its nutrition.
 - c) Protects the brain from injury when the head is moved.
 - d) Has a lower pressure than that in the cerebral venous sinuses.
- (57) Which is true about sensory receptors
- a) Stimulus energy is converted into a local depolarization.
 - b) The generator potential is graded and self-propagating.
 - c) a generator potential can be produced by only one form of energy
 - d) The frequency of action potentials generated doubles when the strength of the stimulus doubles.
- (58) Which is true about a somatic lower motor neurone
- a) Innervates fewer fibres in an eye muscle than does one innervating a leg muscle.
 - b) Conducts impulses at a speed similar to that in an autonomic postganglionic neurone.
 - c) Is unmyelinated.
 - d) Conducts impulses which cause relaxation in some skeletal muscles.
- (59) The brain stem is composed of _____
- a) Spinal cord
 - b) Axon and vertebra
 - c) Medulla pons and middle brain tissue
 - d) Cerebellum and Medulla
- (60) What connects two hemispheres of the brain?
- a) Pons
 - b) Pia matter
 - c) Corpus callosum
 - d) Diencephalon