

Written Q

1. Enumerate functions of basal ganglia ?
2. Effect and mechanism of lesion in nigro striatal fibers on ms tone ?
3. Def chorea ?

Formative MCQ

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| <p>4. Which of the following structure are considered part of basal ganglia:</p> <ul style="list-style-type: none">a) Dentate nucleusb) Inferior olivec) Superior olived) Globus palliduse) Red nuclus | D |
| <p>5. Nigro strial pathway secrete which of the following:</p> <ul style="list-style-type: none">a) Acetylocholineb) Noradreanalinec) GABAd) Dopaminee) Glutamate | D |
| <p>6. Akinesia in Parkinsonism is manifested by:</p> <ul style="list-style-type: none">a) Static tremors.b) Hypertonia.c) Mask face.d) Lead pipe rigidity.e) Kinetic tremors. | C |

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| <p>7. Parkinsonism is characterized by:</p> <ul style="list-style-type: none"> a) Kinetic tremors. b) Staccato speech. c) Nystagmus. d) Hypotonia. e) Shuffling gait. | E |
| <p>8. Parkinsonism is:</p> <ul style="list-style-type: none"> a) Due to lesion in nigro-striatal dopaminergic pathway. b) Due to lesion in striato-nigral pathway. c) Characterized by kinetic tremor. d) Characterized by hypotonia. e) Characterized by staccato speech. | A |
| <p>9. Parkinson's disease.</p> <ul style="list-style-type: none"> a) Results from lesion in the substantia nigra. b) Is treated with dopamine. c) Is accompanied with kinetic tremors. d) Is accompanied with hypotonia. e) Is manifested by drunken gait. | A |
| <p>10. Which of the following is a manifestation of Parkinson's disease:</p> <ul style="list-style-type: none"> a) Lead pipe rigidity. B) Clasp knife spasticity. c) Nystagmus. D) Kinetic tremors. e) None of the above. | A |
| <p>11. Lesion in nigro-striatal dopaminergic pathway leads to:</p> <ul style="list-style-type: none"> a) Lead pipe rigidity. b) Clasp-knife rigidity. c) Dunken gait. d) Nystagmus. e) Staccato speech. | A |

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| <p>12. Concerning the basal ganglia:</p> <ul style="list-style-type: none"> a) The putamen circuit is responsible for cognitive control of voluntary movements. b) The caudate circuit is responsible for execution of voluntary movements. c) The inhibitory nigro-striatal fibers secretes GABA. d) Caudate nucleus lesion causes hypotonia. e) None of the above is correct. | D |
| <p>13. Which of the following describes a connection between components of the basal ganglia?</p> <ul style="list-style-type: none"> a) The subthalamic nucleus releases glutamate to excite the globus pallidus, internal segment. b) The substantia nigra pars reticulata releases dopamine to inhibit the striatum. c) The substantia nigra pars compacta releases dopamine to excite globus pallidus, external segment. d) The striatum releases acetylcholine to excite the substantia nigra pars reticulata. e) The globus pallidus, external segment releases glutamate to excite the striatum. | A |
| <p>14. Dysidokinesia results from lesion in the:</p> <ul style="list-style-type: none"> a) Cerebellum. b) Nigrostriatal connection. c) Archicerebellum. d) Paleocerebellum. e) Basal ganglia. | A |

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| <p>15. Which of the following structures is not considered to be part of the basal ganglia?</p> <p>a) Caudate nucleus. b) Dentate nucleus. c) Substantia nigra. d) Putamen. e) Globus pallidus.</p> | B |
| <p>16. The condition of athetosis results when which area of the brain is dysfunctional?</p> <p>a) Globus pallidus. b) Substantia nigra. c) Ventral anterior complex of the thalamus. d) Putamen. e) Purkinje cell layer of the cerebellum.</p> | A |
| <p>17. Chemical transmitters in basal ganglia include all the following, except:</p> <p>a) GABA b) Dopamine c) Glutamine d) Glycine</p> | D |
| <p>18. Movements controlled by basal ganglia include all the following, except:</p> <p>a) voluntary movements b) reflex movements c) postural movements d) gesture movements</p> | B |
| <p>19. Basal ganglia send direct projections to:</p> <p>a) primary motor area b) premotor area c) VA and VL thalamic nuclei d) lower motor neurons in the spinal cord</p> | C |

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| <p>20. Manifestation of Parkinsonism include all the following except:</p> <ul style="list-style-type: none"> a) Kinetic tremors b) rigidity c) bradykinesia d) disturbance of speech | A |
| <p>21. The basal ganglia are primarily concerned with:</p> <ul style="list-style-type: none"> a) Short term memory. b) Sleep and wakefulness c) Control of movement d) Neuro-endocrine control | C |
| <p>22. The basal ganglia:</p> <ul style="list-style-type: none"> a) Receive the main input from the motor and association cortex. b) Receive its input from the visual and auditory cortex. c) is informed about the state of joints and muscles through impulse discharge directly from the proprioceptors. d) Play a role in mediating the olfactory signals to the sensory cortex. | A |
| <p>23. In Parkinson's disease, the muscular rigidity:</p> <ul style="list-style-type: none"> a) Due to increased dopamine content in the corpus striatum. b) Present in both flexors and extensors by the same degree. c) More marked in extensor muscles. d) More marked in flexor muscles. | D |
| <p>24. Chorea is:</p> <ul style="list-style-type: none"> a) A disease resulting from damage of the substantia nigra. b) A common of a typhoid fever. c) A disease from damage of the caudate nucleus. d) Due to decrease in the number of acetylcholine secreting neurons in the basal ganglia. | C |

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| <p>25. Parkinson's disease:</p> <ul style="list-style-type: none"> a) Typically occurs before the age of 40 years. b) is due to lesion in the sub-thalamic nucleus. c) Is associated with muscle weakness and decreased muscle tone d) is due to degeneration of the nigra striatal dopaminergic neurons | D |
| <p>26. Parkinson's disease is characterized by:</p> <ul style="list-style-type: none"> a) Hypertonia in extensors muscle only. b) static tremors that disappear during activity and sleep c) Can be improved by administration of cholinergic drugs d) Sensory ataxia and positive Romberg's sign | B |
| <p>27. Concerning the Basal ganglia:</p> <ul style="list-style-type: none"> a) In human the corpus striatum can initiate fine voluntary movements. b) they contribute in planning and programming of voluntary movements. c) Destruction of the sub-thalamic nucleus causes athetosis. d) Their stimulation causes muscle rigidity | B |
| <p>28. About the function of the basal ganglia, all of the following is true except:</p> <ul style="list-style-type: none"> a) Their general stimulation increases the muscle tone. b) They control the automatic association movements. c) They play a role in providing suitable background and posture for the performance of skilled movements. d) The damage of its nuclei may impair the ability of the individual to automatically repeat the skilled movements at a faster rate. | A |
| <p>29. Damage of the different nuclei of basal ganglia may result in all of the following except:</p> <ul style="list-style-type: none"> a) Parkinson's disease. b) Chorea. c) Athetosis. d) Sensory ataxia. | D |

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| <p>30. Widespread damage of basal ganglia in humans leads to:</p> <ul style="list-style-type: none"> a) Flaccid paralysis b) Muscle rigidity c) Increased to fine rapid movements. d) Decreased visual acuity due to damage of the visual pathway | B |
| <p>31. The rigidity in case of Parkinson's diseases:</p> <ul style="list-style-type: none"> a) similar to that occurring in decerebrate animals b) present in certain animal only c) associated with hyperactive myotatic reflexes d) present in both agonist and antagonist muscle | D |
| <p>32. In Parkinson's disease the muscle rigidity is:</p> <ul style="list-style-type: none"> a) Due to increased dopamine content in the corpus striatum b) Mainly caused by decreased gamma efferent discharge c) Not improved by electrocoagulation of the ventro-lateral thalamic nucleus d) increased by use of the phenothiazine tranquilizers e) More marked in the extensor muscles | D |
| <p>33. About functions of basal ganglia all following is true except:</p> <ul style="list-style-type: none"> a) They share in the initiation of gross voluntary movements. b) They control the associated movements (e.g. arm swinging during walking) c) They decrease the activity of the gamma motor neurons by increasing activity of the inhibitory reticular formation d) They decrease the activity of the alpha motor neurons by decreasing the activity in the corticospinal tracts e) They are essential for normal sensory functions. | E |

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| <p>34. Chorea is:</p> <ul style="list-style-type: none"> a) A disease resulting front damage of the substantia nigra. b) Due to a decreased number of GABA-secreting neurons in B.G c) A common complication of typhoid fever. d) Characterize by hypertonia and pendular knee jerk. e) Characterized by involuntary movement , exaggerated during sleep. | B |
| <p>35. About neurotransmitters in basal ganglia all the following is true except:</p> <ul style="list-style-type: none"> a) The nigrostriatal system releases dopamine b) Dopamine inhibits the release of acetylcholine in the corpus striatum c) The corpus striatum receives neurons that release serotor d) The striatal neurons release GABA which inhibits the dopaminergic nigrostriatal fibers by a -ve feedback mechanism e) The net result of the nigrostriatal and other fibers in the Caudate nucleus is inhibitory | E |
| <p>36. In parkinsonism (paralysis agitans):</p> <ul style="list-style-type: none"> a) There are exaggerated tendon jerks and apparent ankle clonus. b) The external ocular muscles often show severe rigidity. c) There are mask face, shuffling gait and slow monotonous speech. d) There are hyperkinesia and clasp-knife rigidity. e) The dopamine content in the corpus striatum is markedly increased | C |
| <p>37. Concerning the basal ganglia:</p> <ul style="list-style-type: none"> a) In man, the corpus striatum can initiate fine voluntary movements. b) Their stimulation causes muscle rigidity. c) They facilitate the stretch reflex by activating the facilitatory reticular formation. d) Destruction of the substantia nigra causes hemiballismus while damage of the subthalamic nucleus causes athetosis. e) They contribute in planning and programming of voluntary movements | E |

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| <p>38. Choreo-athetosis results from a lesion in the:</p> <ul style="list-style-type: none"> a) Cerebellum b) Corpus striatum. c) Cerebral cortex d) Spinal cord | B |
| <p>39. About diseases of the basal ganglia:</p> <ul style="list-style-type: none"> a) Chorea is accompanied by hypertonia and static tremors b) Hemiballismus is due to lesions in the substantia nigra c) Athetosis is characterized by akinesia d) parkinsonism can be improved by anti-cholinergic drugs and is worsened by the phenothiazine tranquilizers | D |
| <p>40. Which of the following neurotransmitters is used by the axon of substantia nigra neurons that project to the caudate and putamen?</p> <ul style="list-style-type: none"> a) Norepinephrine b) Dopamine c) Serotonin d) Acetylcholine e) GABA | B |
| <p>41. Hemiballismus, the sudden flailing movements of an entire limb, results when damage occurs to which area of the brain?</p> <ul style="list-style-type: none"> a) The subthalamic nucleus b) The ventral basal complex of the thalamus c) The Globus pallidus d) The red nucleus e) The lateral hypothalamus | A |

42. Which component of the basal ganglia plays the major role in the control of cognitive (memory-guided) motor activity?

- a) *Globus pallidus*
- b) *Substantia nigra*
- c) *Caudate nucleus*
- d) *Putamen*
- e) *Subthalamic nucleus*

C