# Written Q

***1. Enumerate functions of premotor area ?***

***2. Enumerate effects of lesion in premotor area ?***

***3. Enumerate lateral motor systems ?***

***4. Effects of lesion in extra pyramidal tract ?***

# Formative MCQ

| | |
|---|---|
| ***1. Motor area 4 of cerebral cortex:***<br>*a) inhibits stretch reflex.*<br>*b) controls fine skilled movements.*<br>*c) is less excitable than area 6.*<br>*d) is located in post central gyrus.*<br>*e) supplies mainly the same side of the body.* | ***B*** |
| ***2. Which one of the following extrapyramidal tracts control fine skilled movements:***<br>*a) Reticulospinal tract.*<br>*b) Rubrospinal tract.*<br>*c) Olivospinal tract.*<br>*d) Vestibulospinal tract.*<br>*e) Tectospinal tract.* | ***B*** |
| ***3. Increased neural activity before skilled voluntary movement is a first seen in:***<br>*a) Spinal motor neurons*<br>*b) Precentral motor neurons*<br>*c) Cortical association areas*<br>*d) Midbrain*<br>*e) Cerebellum* | **C** |

| | |
|---|---|
| ***4. Primary motor area:***<br>*a) Occupies most of parital lobe*<br>*b) Control mainly ipsilateral ms*<br>*c) Occupies the post central gyruas*<br>*d) Inhibitory to ms spindle*<br>*e) Connected with anterior horn cells by pyramidal tract* | ***E*** |
| ***5. Fine motor movement of index finger can be elicited by stimulation of:***<br>*a) Primary motor cortex.*<br>*b) Lateral cerebellar hemisphere.*<br>*c) Premotor cortex.*<br>*d) Supplemental motor area.*<br>*e) Red nucleus.* | ***A*** |
| ***6. The fibers of corticospinal tract pass through which structure?***<br>*a) Medial lemniscus.*<br>*b) Medullary pyramid.*<br>*c) Posterior funiculus.*<br>*d) Medial longitudinal bundle.*<br>*e) Anterior roots.* | ***B*** |
| ***7. Motor area 4:***<br>*a) Inhibits stretch reflex.*<br>*b) Controls fine killed Movements.*<br>*c) Is less excitable than area 6.*<br>*d) Is located in the post central gyrus.*<br>*e) Supplies Mainly the same side of the body.* | ***B*** |

# Other MCQ

| | |
|---|---|
| ***1. Corticospinal tract:***<br>*a) Originates only from primary motor area.*<br>*b) Terminate mainly in the anterior horn cells of the opposite side.*<br>*c) Is inhibitory to stretch reflex.*<br>*d) Passes through the anterior limb of internal capsule.*<br>*e) None of the above.* | ***B*** |
| ***2. Which of the following is true concerning the extrapyramidal tracts:***<br>*a) They pass through the pyramid in the medulla.*<br>*b) They are one way pathways.*<br>*c) They control mainly gross postural movements.*<br>*d) They originate mainly from area 4.*<br>*e) They terminate only on the opposite side.* | ***C*** |
| ***3. Which of the following structures serves as an "alternative pathway" for signals from the motor cortex to the spinal cord?***<br>*a) Red nucleus.*<br>*b) Basilar pontine nuclei.*<br>*c) Caudate nucleus.*<br>*d) Thalamus.*<br>*e) Dorsal column nuclei.* | ***A*** |
| ***4. The primary motor area:***<br>*a) Occupies most of the parietal lobe.*<br>*b) Controls mainly ipsilateral muscles.*<br>*c) Occupies the post central gyrus.*<br>*d) Is inhibitory to muscle spindle.*<br>*e) Is connected with anterior horn cells by the by the pyramidal tract.* | ***E*** |

| | |
|---|---|
| ***5. Which of the following body parts is represented most laterally and inferiorly within the primary motor cortex?***<br>*a) Face.*<br>*b) Hand.*<br>*c) Neck.*<br>*d) Abdomen. E) Lower limb.* | ***A*** |
| ***6. Pyramidal tract:***<br>*a) Controls gross postural movement.*<br>*b) Terminate on AHC mainly on same side.*<br>*c) Inhibits muscle tone.*<br>*d) Is one way pathway.*<br>*e) Inhibit tendon jerk.* | ***D*** |
| ***7. All of the following are descending motor tracts, except:***<br>*a) Rubrospinal tract*<br>*b) Spinotectal tract*<br>*c) Reticulospinal tract*<br>*d) Corticobulbar tract* | ***B*** |
| ***8. Corticospinal tract originates from all the following areas, except:***<br>*a) premotor area in the frontal lobe*<br>*b) prefrontal area in the frontal lobe*<br>*c) supplemental motor area in the frontal lobe*<br>*d) somatic sensory area in the parietal lobe* | ***B*** |
| ***9. The cranial motor nuclei which receive innervation only from the contralateral corticobulbar tract are:***<br>*a) nuclei of the trigeminal and vagus nerves*<br>*b) nuclei of the vagus and glossopharyngeal nerves*<br>*c) nuclei of the facial and hypoglossal nerves*<br>*d) nuclei of the facial and glossopharyngeal nerves* | ***C*** |

| | |
|---|---|
| ***10. Axons of the lateral corticospinal tract synapse mainly with:***<br>*a) lateral motor neurons*<br>*b) medial motorneurons*<br>*c) intermedio-lateral neurons*<br>*d) interneurons* | ***A*** |
| ***11. The lateral motor system includes:***<br>*a) the lateral Reticulospinal tract*<br>*b) the lateral corticospinal tract*<br>*c) the lateral vestibulospinal tract*<br>*d) all the above tracts* | ***B*** |
| ***12. The Rubro-spinal tract:***<br>*a) originates from the pontine reticular formation*<br>*b) descends contralaterally*<br>*c) controls activity of axial muscles*<br>*d) is a component of the medial motor system* | ***B*** |
| ***13. The reticulo-spinal tracts:***<br>*a) are inhibitory to muscle tone*<br>*b) are excitatory to muscle tone*<br>*c) are either excitatory or inhibitory to muscle tone*<br>*d) have effect on muscle tone* | ***C*** |
| ***14. Vestibulo-spinal tract:***<br>*a) adjust the discharge of Vestibular receptors*<br>*b) adjust muscle tone*<br>*c) antagonize the effects of rubrospinal tract*<br>*d) terminate on the lateral motor neurons in the spinal cord* | ***B*** |

| | |
|---|---|
| ***15. Tectospinal tract:***<br>*a) originate mainly from the inferior colliculus*<br>*b) originate mainly from the medial geniculate body*<br>*c) mediate responses initiated by sudden changes of head position*<br>*d) terminate in the cervical segments of the cord* | ***D*** |
| ***16. Representation of the body in the primary motor area:***<br>*a) is ipsilateral*<br>*b) is upright*<br>*c) is disproportionate to the actual anatomical size of the represented region*<br>*d) all the above are correct* | ***C*** |
| ***17. The extra-pyramidal pathways to skeletal muscle:***<br>*a) Are important for posture and fixation.*<br>*b) Are required for discrete movements of the hands*<br>*c) Are interrupted when the pyramids are cut.*<br>*d) Have no connection with reticular formation.*<br>*e) All of the above.* | ***A*** |
| ***18. Which of the following body parts is represented most laterally and inferiorly within the primary motor cortex?***<br>*a) Face*<br>*b) Hand*<br>*c) Neck*<br>*d) Abdomen*<br>*e) Lower limb* | ***A*** |

| | |
|---|---|
| ***19. Corticospinal tract:***<br>*a) originates only from primary motor area.*<br>*b) terminate mainly on the anterior horn cells of the opposite side.*<br>*c) is inhibitory to stretch reflex.*<br>*d) passes through the anterior limb of internal capsule.*<br>*e) none of the above.* | ***B*** |
| ***20. Which of the following is true concerning the extrapyramidal tracts:***<br>*a) they pass through the pyramid in the medulla.*<br>*b) they are one-way pathways.*<br>*c) they control mainly gross postural movements.*<br>*d) they originate mainly from area 4.*<br>*e) they terminate only on the opposite side.* | ***C*** |