2020
PHYSIOLOGY
[HONOURS]
Paper : VII

Full Marks : 80 Time : 4 Hours

The figures in the right-hand margin indicate marks. Candidates are required to give their answers in their own words as far as practicable.

GROUP–A

1. Answer any **seven** questions: 1×7=7

   a) Define EPP.

   b) What is synaptic gutter?

   c) Define bio-transducer.

   d) What is GABA receptors?

   e) Define muscle tone.

   f) What is Kinaesthetic Sensation?

   g) What do you mean by isometric contraction?

   h) What is fovea centralis?

   i) What do you mean by sympathetic chain of ganglia?

GROUP-B

2. Answer any **six** questions: 2×6=12

   a) What is meant by lower motor neurone paralysis?

   b) Define visual acuity.

   c) State the functions of blood-brain barrier.

   d) What do you mean by sensory aphasia and motor aphasia?

   e) What is organ of corti?

   f) What is microphonic potential?

   g) What do you mean by Wallerian degeneration?

   h) What do you mean by antagonism?

GROUP-C

3. Answer any **three** questions: 7×3=21

   a) Describe the chemical changes that occur during contraction and relaxation of striated muscle. 7

   b) Describe the mechanism of accommodation of eye with diagram. 7

   c) Describe the functions of thalamus by mentioning its nuclei. 7

d) Draw and level a streatch reflex arc. Describe four properties of reflex action. 3+4=7

e) What are REM and NREM sleep? Describe different stages of sleep. 2+5=7

GROUP-D

4. Answer any **four** questions: 10×4=40

a) What is CSF? Discuss the circulation and functions of CSF. 2+4+4=10

b) Describe the structure of N-M Junction with a labelled diagram. Write briefly the process of release of neurotransmitters from the presynaptic terminals after arrival of nerve impulse. 6+4=10

c) Describe with a neat diagram, the origin, course, termination and functions of pyramidal tract. 2+2+2+2+2=10

d) Trace the neural pathway carrying the olfactory signal to the brain. What is olfactometer? 8+2=10

e) What do you mean by the term basal-ganglia?

Discuss about papez circuit and its role in human emotion. 2+(5+3)=10

f) Describe the structure and functions of nicotonic and muscarinic acetylcholine receptors. What are their agonists and antagonists?

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