

2021
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) State the use of ECoG.
 - b) Name one adrenergic agonist drug.
 - c) Name one cholinergic antagonist drug.
 - d) What is GABA?
 - e) What is tetanus?
 - f) Name one non-skeletal voluntary muscle.
 - g) Name one neuromodulator.
 - h) What is the function of an olfactometer?
 - i) Define 'Lux'.

2. Answer any **six** questions: 2×6=12
- a) What is aphasia?
 - b) What do you mean by auditory reflex?
 - c) What is blind spot?
 - d) State Muller's law of specific nerve energies.
 - e) What do you mean by rigor mortis?
 - f) What is EPSP?
 - g) What is after taste?
 - h) What is critical fusion frequency?

GROUP-C

3. Answer any **three** questions: 7×3=21
- a) i) What do you mean by visual acuity?
ii) Discuss briefly the mechanism of maintaining visual acuity in humans. 2+5=7
 - b) i) What is reflex action?
ii) Discuss briefly about the properties of reflex action. 2+5=7

- c) i) What are opiate receptors and CAM proteins?
- ii) What do you know about ionotropic receptors? (2+2)+3=7
- d) i) What is sarcotubular system?
- ii) Distinguish between isotonic and isometric muscle contraction. 3+4=7
- e) i) What do you mean by Wallerian degeneration?
- ii) Discuss briefly the process of regeneration of nerve fibre. 2+5=7

GROUP-D

4. Answer any **four** questions: 10×4=40
- a) i) What is decerebrate rigidity?
 - ii) How does it differ from decorticate rigidity?
 - iii) What do you mean by the vestibular organ? Discuss its role in the maintenance of body balance.
2+2+(2+4)=10

- b) i) What do you mean by sleep-wakefulness cycle?
- ii) Discuss the physiological basis of different types of sleep. 2+8=10
- c) Discuss with a neat diagram the structure and functions of basal ganglia. 2+4+4=10
- d) Describe with diagram the origin and outflow of sympathetic nerves. 2+4+4=10
- e) i) What is muscle spindle?
- ii) Describe with a diagram the structure and innervation of muscle spindle.
2+(2+4+2)=10
- f) i) What is CSF?
- ii) Discuss briefly about the formation, circulation and functions of CSF.
2+(2+2+4)=10
