2019

PHYSIOLOGY — HONOURS

Paper : CC–4

Full Marks : 50

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Group – A

1. Answer ***any five*** questions : 2×5

(a) What are climbing and mossy fibres?

(b) What is referred pain?

(c) Explain "alpha block".

(d) What is meant by ephaptic transmission?

(e) What is Bell-Magendie Law?

(f) What is evoked potential?

(g) What is foramen of Luschka?

(h) Explain "summation" and "subliminal fringe" properties of reflex action.

(i) What is meant by "Consolidation of Memory"?

(j) What is Blood-Brain barrier?

Group – B

2. Answer ***any two*** questions from the following :

(a) Discuss how cardiac functions and gastro-intestinal functions are regulated through Autonomic Nervous System. 5

(b) Describe the analgesic neural pathway modulating the pain sensation. 5

(c) Write note on intercollicular decerebrate rigidity. 5

(d) Describe the structure and functions of different types of GABA receptors. 2+3

(e) Name the Extrapyramidal tracts and mention their function. 2½+2½

Group – C

3. Answer ***any three*** questions from the following :

(a) (i) Explain the neurological basis of EEG.

(ii) Distinguish between explicit and implicit memory. 5+5

(b) (i) What is gamma motor neurone?

(ii) How cerebellum helps in the act of locomotion? 4+6

(c) Describe the principles of CT scan, MRI and PET scan. 3+3+4

(d) (i) Describe formation, circulation and functions of C.S.F.

(ii) What is Hydrocephalus? (4+2+2)+2

(e) (i) State the location of sensory and motor speech area.

(ii) What is Aphasia?

(iii) Classify different types of Aphasia. 4+2+4

(f) (i) Write the sensory-motor changes that occur after hemisection of spinal cord below the level of section.

(ii) Differentiate between REM and NREM sleep. 6+4

(g) Write short notes on ***any two*** of the following : 5×2

(i) Dopamine Receptor

(ii) Acetylcholine Receptor

(iii) Serotonin Receptor

(iv) Glutamate Receptor.
