

B.Sc. DEGREE END SEMESTER EXAMINATION - OCTOBER 2024**SEMESTER 3 : COMPLEMENTARY COURSE FOR PSYCHOLOGY****COURSE : 19U3CPBHS03 : NEUROPHYSIOLOGY OF BEHAVIOUR I PAPER - III***(For Regular 2023 Admission and Improvement/Supplementary 2022/2021/2020 Admissions)*

Time : Three Hours

Max. Marks: 75

PART A**Answer any 10 (1 marks each)**

1. Name the scanning technique that combines a series of x-ray images taken from different angles around the body and uses computer processing to create cross-sectional images of the blood vessels, bones and soft tissues inside the body.
2. Which division of nervous system controls ordinary, day-to-day bodily functions?
3. Name the most superficial of meninges layer.
4. The higher mental functions, such as thinking and problem solving, are associated with which lobe?
5. Name the small protrusions that cover each branch of the dendrites and help increase the dendrite's surface area.
6. What is the ability to respond to a stimulus and convert it into an action potential called?
7. What are the parallel ridges of the cerebellum called?
8. Name a neurotransmitter that can have only inhibitory effect at receptor sites.
9. Name the point, located just below the base of the brain, where a portion of optic nerve fibres cross the midline of the Central Nervous System.
10. Which nerve receives sensory information from the tonsils, pharynx, middle ear and back of the tongue?

(1 x 10 = 10)**PART B****Answer any 8 (2 marks each)**

11. What are Nociceptors? Give examples.
12. What is summation?
13. Why is changes in respiratory rhythm a possible symptom of damage to medulla oblongata?
14. Write a short note on Glutamate.
15. How is the posture of writing said to affect the relationship of cerebral hemisphere and language processing?
16. In which lobe is the primary auditory cortex located? What are its functions?
17. What is the major function of Cranial sensory nerves? Give an example of a cranial sensory nerve.
18. What is resting membrane potential?
19. Write a short note on Wada Test.
20. Why is Ptosis or drooping of the upper eyelid a possible effect of Midbrain impairment?

(2 x 8 = 16)

PART C

Answer any 5 (5 marks each)

21. Write a note on the Spatial Skills of the Right Hemisphere.
22. Write a short note on Enteric Nervous System.
23. Explain briefly the functions of the Frontal Lobe.
24. Write a short essay on Acetylcholine and its functions.
25. Briefly explain the anatomy of the Hippocampus.
26. Do the left and right hemispheres show differences on a structural or anatomical basis? Substantiate your answer.
27. Explain the major functions of dopamine with the help of an example.

(5 x 5 = 25)

PART D

Answer any 2 (12 marks each)

28. Write an essay on Hemispheric asymmetry, handedness and cerebral dominance.
29. Write an essay on the Autonomic Nervous System and its functions.
30. Write an essay on the major divisions of the adult human brain.
31. Write an essay on Neuroglia and its functions.

(12 x 2 = 24)