TDC (CBCS) Odd Semester Exam., 2021
held in March, 2022

ZOOLOGY

(3rd Semester)

Course No. : ZOODSC/GE–301T

(Physiology and Biochemistry)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer any *fifteen* of the following questions : 1×15=15

1. What is synapse?

2. Define axon.

3. Give an example of a neurotransmitter.

4. What is Schwann cell?

5. In which part of alimentary canal maximum digestion occurs?

6. Mention the name of two glands that are associated with alimentary canal.

7. State the significance of pulmonary ventilation.

8. Which element of blood transports oxygen during inhalation?

9. Mention the constituents of Malpighian tubules.

10. Mention the steps involved in the process of urine formation.

11. Write the full form of ADH.

12. Name the chambers of human heart sequentially.

13. Define spermiogenesis.

14. Write the full form of FSH.

15. State the significance of oxytocin.

16. Name a heterocrine gland.

17. Mention the enzyme category that needs an ATP to become functional.

18. How many ATPs are produced directly in a Krebs cycle?

19. What is gluconeogenesis?

20. Define FAD.

SECTION—B

Answer any *five* of the following questions : 2×5=10

21. Mention the function of dendrites.

22. What causes muscle fatigue?

23. Which organ secretes bile? State the function of bile.

24. State the function of hydrochloric acid in the digestive system.

25. Mention the types of leucocytes found in human blood.

26. How does T-lymphocyte originate?

27. Mention two hormones that control the menstrual cycle.

28. Mention the hormones secreted by anterior pituitary.

29. What is formed when pyruvic acid is oxidised under aerobic condition?

30. What is coenzyme? State its significance.

SECTION—C

Answer any *five* of the following questions : 5×5=25

31. Describe the molecular mechanism of muscle contraction.

32. Describe the structure of neuron with a suitable diagram.

33. Describe the process of digestion of carbohydrates and protein in the alimentary canal.

34. How is oxygen and carbondioxide transported in human blood?

35. Describe the physiology of cardiac cycle and state its significance.

36. Write about the composition of blood along with their functions.

37. Describe the hormones secreted by the posterior pituitary and state their function.

38. Describe the process of spermatogenesis.

39. What is enzyme kinetics? Describe the factors that influence the enzyme kinetics.

40. Describe the Krebs cycle in detail.

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