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

ZOOLOGY

(3rd Semester)

Course No. : ZOOSEC-301T

(Apiculture)

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* questions : 1×15=15

1. Define apiculture.

2. Write the scientific names of two honeybee species that are reared in India.

3. Why are bees polymorphic?

4. Mention the main body parts of honeybee.

5. Name different types of beehives.

6. Which species of bee is best for apiculture?

7. Write the names of beekeeping equipments.

8. What is meant by bee pasturage?

9. Name two bacterial diseases of honeybee.

10. Mention a few predators of honeybee.

11. Write the names of two viral diseases of honeybee.

12. Who are the enemies of honeybee?

13. Enlist the products of apiculture industry.

14. What is beeswax?

15. What is bee venom?

16. What is pollen?

17. What is pollination?

18. What do you mean by cross-pollination?

19. What is horticulture?

20. Name the bee species that is a good pollinator.

SECTION—B

Answer any *five* questions : 2×5=10

21. Write a short note on mouthparts of honeybee.

22. Write the classification of honeybee up to order. Name different types of bees found in the world.

23. What is movable frame hive?

24. Write two important criteria used for selection of bee species for apiculture.

25. Write a short note on Nosema disease of honeybee.

26. "Birds are important enemies of honeybees." Justify the statement.

27. Mention the composition of honey.

28. What is propolis?

29. How are bees important in cross-pollination?

30. Write a short note on pollinating agents.

SECTION—C

Answer any *five* questions : 5×5=25

31. Give an account of social organization of honeybee colony.

32. Describe the structural morphology of honeybee with a neat diagram.

33. Describe the Langstroth type of beehive.

34. Describe the modern method of extraction of honey.

35. Write the causes and management of various viral diseases of honeybee.

36. Discuss the process of management of various predators of honeybees.

37. Describe the process of storage of honey. Add a note on the use of honey.

38. Write the process of collection of beeswax.

39. Write about the recent efforts employed in beekeeping industry.

40. Discuss the modern methods of beekeeping used for cross-pollination in horticulture.

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2021/TDC/CBCS/ODD/
ZOODSC/GE–301T/031

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.

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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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