T – 2574

Zoology-250

(Pages : 3)

Reg. No. : .....

Name : .....

Fourth Semester B.Sc. Degree Examination, July 2024

First Degree Programme under CBCSS

Botany

Complementary Course for Home Science, Zoology, Bio-chemistry

BO 1431 : PLANT PHYSIOLOGY, PLANT ECOLOGY, HORTICULTURE AND PLANT BIOTECHNOLOGY

(2022 Admission)

Time : 3 Hours

Max. Marks : 80

(Draw diagrams wherever necessary)

SECTION – A

I. Answer **all** questions in **one** word or **two** sentences. Each question carries **1** mark.

1. What is root pressure?
2. What is cuticular respiration?
3. What are C3 plants?
4. What is aerobic respiration?
5. What is a growth curve?
6. What is a food web?

P.T.O.

7. Mention any two organic manures.

8. What is vermiculture?

9. What are artificial seeds?

10. What is organogenesis?

(10 × 1 = 10 Marks)

SECTION – B

II. Answer any **eight** questions, not to exceed a paragraph. Each question carries **2** marks.

11. What is plasmolysis? Mention its significance.

12. What are antitranspirants?

13. What is photorespiration?

14. Compare senescence and abscission.

15. What are the features of LDP?

16. What is activated diffusion hypothesis?

17. What is a hydrosere?

18. Mention any two disadvantages of propagation by seeds.

19. List the applications of a nursery spade.

20. What is T-budding?

21. List any two major achievements of biotechnology in India.

22. What is suspension culture?

(8 × 2 = 16 Marks)

SECTION – C

III. Answer any **six** questions, not to exceed 120 words of the following. Each question carries **4** marks.

23. What is passive absorption of mineral ions? Explain.

24. Discuss the vital and physical theories associated with the ascent of sap.

25. Draw the schematic representation of CAM pathway.

26. Explain the physiological effects of gibberellins.

27. Discuss the energy flow in an ecosystem.

28. Explain structure and functions of a grass land ecosystem.

29. Write a brief account of nitrogenous fertilizers. Give two examples.

30. Explain different methods of grafting used in horticulture.

31. Add a note on a composition of a tissue culture medium.

(6 × 4 = 24 Marks)

SECTION – D

IV. Write essay on any **two** of the following, not more than three pages. Each question carries **15** marks.

32. With a schematic representation explain noncyclic phosphorylation in detail.

33. With a labelled diagram explain electron transport in terminal oxidation.

34. Describe the procedure for anther culture. Add a note on advantages and disadvantages.

35. Discuss the various adaptations of halophytes with examples.

(2 × 15 = 30 Marks)
