

22U442

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Name:

Reg.No:

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2024

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19U BOT4 C04 - PLANT PHYSIOLOGY, ECOLOGY AND GENETICS

(Botany - Complementary Course)

(2019 Admission onwards)

Time : 2.00 Hours

Maximum : 60 Marks

Credit : 2

Part A (Short answer questions)

Answer *all* questions. Each question carries 2 marks.

1. Differentiate active and passive absorption.
2. What are antitranspirants?
3. Explain the deficiency symptoms of potassium in plants.
4. Explain photosystems in plants.
5. Distinguish the role of Rubisco in photosynthetic gain and loss.
6. What is abscission?
7. What is dormancy of seed?
8. List out the anatomical adaptations in xerophytes.
9. What are pneumatophodes?
10. Write short notes on variation.
11. What is incomplete dominance?
12. Explain 12:3:1 ratio.

(Ceiling: 20 Marks)

Part B (Short essay questions - Paragraph)

Answer *all* questions. Each question carries 5 marks.

13. Briefly explain the structure of plant cell wall.
14. Describe the differences between osmosis and diffusion.
15. Write an account of electron transport chain and photophosphorylation.
16. Explain the role of auxins and cytokinin in plant growth and development.

17. Briefly describe photoperiodism.
18. Distinguish between ammensalism and mutualism.
19. Explain the law of independent assortment. Give one example.

(Ceiling: 30 Marks)

Part C (Essay questions)

Answer any *one* question. The question carries 10 marks.

20. Explain the C₃ pathway of photosynthesis with the help of a schematic diagram.
21. What is plant succession? Explain different stages of hydrosere.

(1 × 10 = 10 Marks)
