

20U457

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Name:

Reg.No:

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2022

(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. Explain the role of imbibition in plants.
2. What is symplast?
3. What are the different types of transpiration?
4. What is absorption spectrum?
5. Explain the characteristic features and advantages of C4 plants.
6. Explain the role of abscisic acid in higher plants.
7. Explain the role of vernalin on flowering.
8. Mention the role of pneumatophore.
9. What is plant succession?
10. Explain homozygosity.
11. What is the significance of 1: 1 ratio?
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.
14. Briefly describe solution culture.

15. Explain the non-cyclic electron transport and photophosphorylation.
16. Describe abscission and senescence.
17. Explain the factors controlling seed dormancy.
18. Explain anatomical adaptations of xerophytes.
19. Differentiate law of segregation and law of independent assortment of characters.

(Ceiling: 30 Marks)

Part C (Essay questions)

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

20. What is Calvin cycle? Explain the main reaction of Calvin cycle by means of a schematic diagram.
21. Explain the effect of various biotic and abiotic factors on the existence of an ecosystem.

(1 × 10 = 10 Marks)
