

19U433S

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Name:

Reg. No.....

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2021

(CUCBCSS-UG)

CC15U BOT4 C04 - PLANT PHYSIOLOGY, ECOLOGY & GENETICS

(Botany - Complementary Course)

(2015 to 2018 Admissions – Supplementary/Improvement)

Time: Three Hours

Maximum: 64 Marks

Draw diagrams only when specified.

Part A

Answer *all* questions. Each question carries 1 mark.

1. Name a halophyte.
2. Transpiration pull theory is proposed by _____
3. Acceleration of growth by chilling treatment is called as _____
4. Name a natural auxin.
5. Which substrate is the connecting link between glycolysis and Krebs cycle?
6. _____ is a metabolic process in which microorganisms convert a carbohydrate into an alcohol or an acid.
7. _____ is an intermediate stage found in ecological succession in an ecosystem.
8. _____ is an example for antitranspirant.
9. Write down the complementary gene interaction F₂ phenotypic ratio.
10. Name a weedicide.

(10 × 1 = 10 Marks)

Part B

Answer any *seven* questions. Each question carries 2 marks.

11. What is red drop?
12. What is root pressure?
13. What is climax community?
14. What is incomplete dominance? Give an example.
15. Differentiate between scarification and stratification.
16. What is lenticular transpiration?
17. What is test cross?
18. What is photorespiration? Explain its significance.
19. What is sigmoid curve? Explain.
20. What are quantasomes?

(7 × 2 = 14 Marks)

Part C

Answer any *six* questions. Each question carries 4 marks.

21. List the characteristic features of SDP.
22. Write notes on process of succession.
23. Briefly explain physiology of fruit ripening.
24. Compare and contrast between C₃ and C₄ cycle.
25. Explain the mechanism of dominant epistasis with an example.
26. Differentiate between active and passive absorption of water.
27. Explain the biotic components of an ecosystem.
28. What is abscission? Explain the role of plant growth hormones in abscission.

(6 × 4 = 24 Marks)

Part D

Answer any *two* questions. Each question carries 8 marks.

29. With a schematic representation explain non-cyclic photophosphorylation in plants.
30. Explain terminal oxidation in detail.
31. Write an essay on morphological and anatomical adaptations of hydrophytes and xerophytes.

(2 × 8 = 16 Marks)
