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S – 1940

Reg. No. :

Name :



Fifth Semester B.Sc. Degree Examination, December 2023

Career Related First Degree Programme Under CBCSS

Botany and Biotechnology

Core Course

BB 1541 : PLANT PHYSIOLOGY

(2019 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in **one** word or sentence.

1. Define Phytochrome.
2. What are the organs of absorption in plants?
3. What is Donnan equilibrium?
4. Write the general equation for photosynthesis.
5. Name a photosynthetic pigment.
6. What is denitrification?
7. Define seed dormancy.
8. What is tropic movement?

P.T.O.

9. Name a gaseous hormone.

10. What is DPD?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions, Short Answer (Not to exceed **one** Paragraph)

11. Differentiate between permeable and impermeable membrane.
12. What are the physical and chemical properties of water?
13. Explain cyclic photophosphorylation.
14. What is transpiration pull?
15. Briefly explain the deficiency symptoms of nitrogen.
16. Explain fertigation.
17. Why is Photorespiration is so called?
18. Explain lactic acid fermentation.
19. Comment on oxidation of fats.
20. What are the sources of Nitrogen in soil?
21. Explain symplast pathway.
22. Elaborate on vernalisation.



(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions. Each question carries **4** marks. (Answer not to exceed **120** words)

23. With suitable examples, explain day neutral plants.
24. Explain the role of auxin in plants.
25. What are the practical applications of ethylene?

26. Add a note on protoplasmic streaming theory.
27. Explain photorespiration.
28. Explain symbiotic nitrogen fixation and its significance.
29. What is glycolysis? What is its significance?
30. State and explain law of limiting factors.
31. Explain the mechanisms of stomatal opening and transpiration in plants.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. Each question carries **15** marks. (Answer not to exceed **3** pages)

32. With suitable diagrams, explain the dark reactions of photosynthesis, Compare C3 with C4 cycle.
33. Elaborate on Nitrogen cycle and explain its significance.
34. Write an essay on translocation of salutes in plants.
35. Detail the Importance and deficiency symptoms of major and minor essential elements.

(2 × 15 = 30 Marks)

