(Pages: 3)

Reg.	No.	:	
Mam			



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?
- Define seed dormancy.
- 8. What is tropic movement?

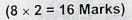
- 9. Name a gaseous hormone.
- 10. What is DPD?

 $(10 \times 1 = 10 \text{ Marks})$

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.



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.

 $(6 \times 4 = 24 \text{ Marks})$

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.

 $(2 \times 15 = 30 \text{ Marks})$

