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Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree Examination, April 2023

First Degree Programme under CBCSS

Botany

Core Course

BO 1641 : PLANT PHYSIOLOGY AND BIOCHEMISTRY

(2019 Admission Onwards)

Time : 3 Hours Max. Marks : 80

I. Answer **all** questions in a word, **one or two** sentences. Each question carries **1** mark.

Write short notes on :

1. Hypotonic
2. Antitranspirants
3. Active absorption
4. Trace elements
5. GA3
6. Heteropolysaccarides
7. Amphoteric compounds
8. Nastic movements

P.T.O.

9. Glycosides

10. Isozymes

(10 × 1 = 10 Marks)

II. Answer **eight** of the following. Each question carries **2** marks.

11. Define imbibition.

12. Briefly explain Carrier concept.

13. Give an account on Hydroponics.

14. Describe Emerson effect.

15. Give a brief account on Electron osmotic theory.

16. What is Rotation of crops?

17. Write an account on Donnan equilibrium.

18. Comment on Cohesion Tension theory.

19. Explain the function of Auxins in plants.

20. Explain hydrolysis of proteins.

21. What are Terpenoids?

22. Explain plasmolysis and its significance.

(8 × 2 = 16 Marks)

III. Answer **any six** of the following.

23. Briefly explain pathway of water through the cells of root.

24. Comment on Active and Passive Absorption.

25. Explain Kranz anatomy and its importance.

26. Differentiate between Fluorescence and Phosphorescence.

27. What is the mechanism of photorespiration.

28. Briefly explain Terminal Oxidation.

29. Describe the classification of carbohydrates.

30. Explain the allosteric inhibition of enzymes.

31. Comment on flavanoids and alkaloids.

(6 × 4 = 24 Marks)

IV. Write an essay on **any two** of the following. Each question carries **15** marks.

32. Explain the mechanism of Transpiration with neat diagram of stomata.

33. Briefly describe the process of Photosynthesis.

34. Describe in brief the mechanism of α and β oxidation of lipids.

35. Give an account of secondary plant products and its importance.

(2 × 15 = 30 Marks)
