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Reg. No. : .....

Name : .....

Fourth Semester B.Sc. Degree Examination, June 2020

First Degree Programme under CBCSS

Botany

Complementary Course

BO 1431 – PLANT PHYSIOLOGY, PLANT ECOLOGY, HORTICULTURE AND PLANT BIOTECHNOLOGY

(2014 Admission Onwards)

Time : 3 Hours Max. Marks : 80

Write a short note on the following. All questions **compulsory**.

I. Answer the following. All questions **compulsory**.

1. Cytokinins
2. Growth curve
3. Incipient plasmolysis
4. Nursery spade
5. Reaction centre
6. RQ
7. Water potential

P.T.O.

8. Secondary succession

9. Callus

10. Vermi culture

(10 × 1 = 10 Marks)

II. Answer **any eight** of the following.

11. Mention the applications of synthetic plant hormones.

12. Compare PSI and PSII.

13. Explain law of limiting factor.

14. Write an account on organic manures.

15. What is photoperiodism?

16. Briefly describe culture media.

17. Differentiate action spectrum from absorption spectrum.

18. Give an account on pyramid of energy.

19. What are anti-transpirants? Give example.

20. Mention the structural adaptations of C_4 plants.

21. Briefly describe physical force theory of ascent of sap.

22. Explain the advantages of haploid production.

(8 x 2 = 16 Marks)

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

23. Explain Starch-sugar inter -conversion theory.

24. Write an account on factors affecting photosynthesis.

25. Describe Krebs cycle.

26. Compare C_3 and C_4 plants.

27. Explain anther culture. Mention its advantages.

28. Mention the characteristic feature of desert ecosystem.

29. Role of ABA in plant body.

30. Outline Non-cyclic photophosphorylation and explain.

31. Briefly describe plant introduction.

(6 × 4 = 24 Marks)

IV. Write essay on **any two** of the following.

32. Explain the process of breakdown of glucose.

33. Explain the morphological, anatomical and physiological applications of Xerophytes.

34. Write an essay on various methods of vegetative propagation.

35. Describe the mechanisms involved in mineral absorption.

(2 × 15 = 30 Marks)
