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Reg. No. : .....

Name : .....

Fourth Semester B.Sc. Degree Examination, July 2019

First Degree Programme under CBCSS

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 are compulsory.

I. Answer the following. All questions are compulsory.

1. Totipotency
2. Olericulture
3. Callus culture
4. Food chain
5. Anti-transpirants
6. Diffusion
7. Warburg effect
8. Scion
9. Hill reaction
10. Quantasomes

(10 × 1 = 10 Marks)

P.T.O.

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

11. EMP pathway.

12. What is the role of decomposers in an ecosystem?

13. What is senescence?

14. Write short note on C2 cycle.

15. What are hydathodes?

16. Write any two garden tools and its uses.

17. What happens when a plant cell is placed in hypotonic solution?

18. What is carrier concept?

19. What is 'Kranz' anatomy?

20. What is photoperiodism?

21. Name the "stress hormone" and the "ripening hormone"

22. How electrons are refilled in PSII during non-cyclic photophosphorylation?

(8 × 2 = 16 Marks)

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

23. What are the applications of anther culture?

24. Write an account on organic manures.

25. Explain CAM cycle with examples.

26. What are the advantages of somatic embryogenesis?

27. What is phloem loading and phloem unloading?

28. What is the role of auxin in plant tissue culture?

29. Write an account on xerosere.

30. Explain transpiration pull theory of ascent of sap

31. What are the differences between cyclic and non cyclic photophosphorylation?

(6 × 4 = 24 Marks)

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

32. Describe the morphological and physiological adaptations of hydrophytes?

33. Explain the steps in the light independent reaction of photosynthesis.

34. Explain citric acid cycle with its importance.

35. Describe the composition of a culture medium.

(2 × 15 = 30 Marks)
