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Reg. No. :

Name :

Fifth Semester B.Sc. Degree Examination, December 2022

Career Related First Degree Programme Under CBCSS

Group 2(a) Botany and Biotechnology

Core Course IX

BB 1541 – PLANT PHYSIOLOGY

(2013 and 2014 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

1. What is semipermeable membrane?
2. Define diffusion
3. Define turgor pressure.
4. What is aeroponics?
5. What is an enzyme cofactor?
6. Expand PEP.
7. Define photons?
8. What is the name of complex in respiration?

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9. What is the significance of ATP?
10. What is meant by Circadian rhythms?

(10 × 1 = 10 Marks)

SECTION – B

Answer **eight** questions. Each question carries **2** marks.

11. What are the physical and chemical properties of water?
12. What is the importance of DPD?
13. Write a short account on foliar nutrition.
14. Explain Donnan equilibrium.
15. Explain mass flow hypothesis.
16. What is Hill reaction?
17. What is alcoholic fermentation?
18. Write a short not on symbiotic Nitrogen fixation.
19. Illustrate the plant growth curve.
20. What are the applications of Gibberellins?
21. Write a short account on stress physiology in plants.
22. What are the different types of photosynthetic pigments?

(8 × 2 = 16 Marks)

SECTION – C

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

23. Describe CAM metabolism.
24. Describe the factors affecting photosynthesis.

25. What is photorespiration? How does it affects photosynthesis?
26. Describe cyclic photophosphorylation.
27. Distinguish active and passive absorption.
28. What are the factors affecting respiration?
29. Write an account on Nitrification and denitrification.
30. Describe protoplasm streaming theory.
31. Write an account on growth hormones.

(6 × 4 = 24 Marks)

SECTION – D

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

32. Write a detailed account of the mineral nutrition in plants.
33. Describe the Kerb's cycle. With suitable illustration.
34. Describe the C4 cycle and mention its significance.
35. Write on the IUB system of classification of Enzymes.

(2 × 15 = 30 Marks)
