

Reg. No

Name

24U265

B. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2024

SEMESTER 2 - COMPLEMENTARY BOTANY FOR ZOOLOGY

COURSE : 19U2CPBOT02 - PLANT PHYSIOLOGY

(For Regular - 2023 Admission and Improvement / Supplementary – 2022/2021/2020/2019 Admissions)

Time : Three Hours

Max. Marks: 60

PART A

Answer All (1 mark each)

1. What is phototropism?
2. Write notes on denitrification.
3. Name the organelle and mention the part of it, in which dark reaction takes place
4. The stomata open at night and close during day time in
(a) Succulents (b) Mesophytes (c) Hydrophytes (d) Xerophytes
5. Explain RUBP- Carboxylase.
6. What are apoplastic and symplastic pathways of water movement?
7. Explain Nitrogen cycle.
8. Differentiate between turgor pressure and wall pressure.

(1 x 8 = 8)

PART B

Answer any 6 (2 marks each)

9. Define and differentiate between osmosis and imbibition.
10. Explain Munch Mass flow hypothesis.
11. 'Abscisic acid is known as plant stress hormone'. Comment on it.
12. What are long day plants? Give an example.
13. List out various roles of stomata.
14. Mention the use of isotopes in Photosynthesis studies.
15. What is Carboxylation? Name the Primary Carboxylation enzyme and the product of carboxylation in C₃ Plants .
16. Briefly explain CAM Metabolism.

(2 x 6 = 12)

PART C

Answer any 4 (5 marks each)

17. Explain different theories of Ascent of sap.
18. Explain the factors causing seed dormancy.
19. Compare cyclic and noncyclic electron transport.
20. Explain tropic movements in plants.
21. Write a brief note on salt stress.
22. Briefly describe the mechanism of Light Reaction in green plants.

(5 x 4 = 20)

PART D

Answer any 2 (10 marks each)

23. Explain the mechanism of water absorption in plants.
24. Give an account on classification of plant movements with reference to tropic and nastic movements.
25. Write an essay on transpiration in plants. Add a note on its significance. Mention various factors affecting transpiration.
26. Summarise Photophosphorylation in plants.

(10 x 2 = 20)