

D6BBT1802 (S2)

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Reg. No.....

Name:

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2023

(Supplementary-2018 Admission)

BOTANY

ABOT6B11T: PLANT PHYSIOLOGY AND METABOLISM

Time 3 Hours

Maximum Marks: 80

PART A: Answer *all* the questions. Each carries 1 mark

1. Describe the properties of water.
2. What is acent of sap?
3. Define seed dormancy.
4. Differentiate between cohesion and adhesion.
5. What is meant by Genetics of Nitrogen Fixation?
6. Describe Carrier concept.
7. Write notes on two phases of glycolysis.
8. Mention the composition of phloem exudates.
9. Comment on Pressure flow hypothesis.
10. Describe transamination.

(10 × 1 = 10 Marks)**PART B: Answer *all* questions. Each carries 2 marks**

11. Differentiate between active and passive uptake.
12. What do you mean by hydrolysis of proteins?
13. Describe macro and micro nutrients with example.
14. Give an account on transformation of amino acids.
15. Write the classification of enzymes by IUB.
16. What are the ecological significance of C4 plants?
17. Differentiate between anabolism and catabolism.
18. What are electron carriers?
19. Write notes on physico – chemical nature of enzymes.
20. Describe Red drop and Emerson enhancement effect.

(10 × 2 = 20 Marks)**(PTO)**

PART C: Answer any six questions. Each carries 5 marks.

21. Give an account on Symbiotic nitrogen fixation in leguminous plants.
22. Explain cohesion – tension theory and write down its merits and demerits.
23. Write short notes on synthesis of triglycerides.
24. Elaborate on Multienzyme complex.
25. Explain phloem loading and unloading
26. Describe soil plant atmospheric continuum.
27. Explain citric acid cycle.
28. Discuss α and β oxidation of fatty acids.

(6 × 5 = 30 Marks)

PART D: Answer any two questions. Each carries 10 marks.

29. Explain Transpiration and the mechanism of guard cell movement.
30. Elucidate photosynthetic electron transport and photophosphorylation.
31. Write a detailed account on plant movements.

(2 × 10 = 20 Marks)