

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2022**(Regular/Improvement/Supplementary)****BOTANY****GBOT5B09T: PLANT PHYSIOLOGY****Time: 2 Hours****Maximum Marks: 60****SECTION A: Answer the following questions. Each carries 2 marks.****(Ceiling 20 Marks)**

1. What is diffusion pressure deficit?
2. What is scarification?
3. Name two microelements.
4. What is transpiration?
5. Comment on biological clock.
6. What is a reaction center?
7. Define log phase of growth.
8. What is quantum requirement?
9. What are accessory photosynthetic pigments?
10. Name the most prominent type of photophosphorylation in green plants.
11. What are short day plants?
12. Give an account on vernalization.

SECTION B: Answer the following questions. Each carries 5 marks.**(Ceiling 30 Marks)**

13. Differentiate between active and passive absorption of water.
14. What are primary macronutrients? Write a note on their significance and deficiency symptoms.
15. What is water potential? Explain its components.
16. Write an account on the stress physiology related to drought resistance, salt resistance and chilling resistance in plants.
17. What are photosystems? Differentiate between Photosystem I and Photosystem II
18. Explain the mechanism of phloem loading and unloading in photosynthetic plants.
19. Comment on the physiological role of abscissic acid in plants

SECTION C: Answer any one question. Each carries 10 marks.

20. Describe the CAM cycle and explain how CAM cycle helps desert plants to increase the water use efficiency.
21. Explain the extrinsic and intrinsic factors affecting transpiration.

(1 × 10 = 10 Marks)