

D5BBT2204

Reg. No.....

Name:

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

(Regular/Improvement/Supplementary)

BOTANY

GBOT5B09T: PLANT PHYSIOLOGY

Time: 2 Hours

Maximum Marks: 60

SECTION A: Answer the following questions. Each carries *two* marks.

(Ceiling 20 marks)

1. What is gravitropism?
2. State the meaning of photorespiration.
3. What is Kranz anatomy?
4. State the law of limiting factors.
5. Differentiate between hypertonic and hypotonic solutions.
6. What is photoperiodism?
7. What is turgor pressure?
8. List any two applications of auxins.
9. Enlist two factors affecting the rate of transpiration.
10. What is ascent of sap?
11. Comment on biological clock.
12. What is hypersensitive response?

SECTION B: Answer the following questions. Each carries *five* marks.

(Ceiling 30 marks)

13. Discuss the radial movement of water towards xylem in roots.
14. What is seed dormancy? Describe different types of seed dormancy.
15. Explain the merits and demerits of Cohesion tension theory.
16. Briefly explain the mechanisms of resistance found in plants against drought, salt and heat stress.
17. Explain symbiotic nitrogen fixation in legumes.
18. Describe the mechanisms of guard cell movement with suitable illustrations.
19. Explain the mechanism of Secondary Acquired Resistance (SAR).

SECTION C: Answer any *one* question. Each carries *ten* marks.

20. Define photophosphorylation and describe the mechanism of photosynthetic electron transport.
21. With suitable illustrations, explain CO₂ fixation in C₃ plants.

(1 × 10 = 10 Marks)