

2025

(FYUGP)

(6th Semester)

BOTANY

(MAJOR)

Paper : BCC-12(T)

(Plant Physiology)

Full Marks : 75

Pass Marks : 40%

Time : 3 hours

**The figures in the margin indicate full marks
for the questions**

Answer one question from each Unit

UNIT—1

- 1. Discuss the concept of water potential and its components.** **15**
- 2. Write notes on the following :** **7½×2=15**
 - (a) Transpiration and factors affecting transpiration**
 - (b) Water absorption by roots**

UNIT—2

3. Write a note on the roles of essential elements and their deficiency symptoms. 15
4. Write notes on the following : $7\frac{1}{2} \times 2 = 15$
- (a) Macro- and micro-nutrients
 - (b) Criteria for essentiality of mineral nutrients

UNIT—3

5. Write a complete note on the translocation in the phloem. 15
6. Write notes on the following : $7\frac{1}{2} \times 2 = 15$
- (a) Soil as a nutrient reservoir
 - (b) Facilitated diffusion

UNIT—4

7. Write a note on the discovery and physiological roles of auxins. 15
8. Write notes on the following : $7\frac{1}{2} \times 2 = 15$
- (a) Physiological role of cytokinin
 - (b) Physiological role of ethylene

(3)

UNIT—5

9. Write a note on discovery, chemical nature and role of phototropins in photomorphogenesis. 15
10. Write notes on the following : $7\frac{1}{2} \times 2 = 15$
- (a) Photoperiodism
 - (b) Low energy responses (LER) and High irradiance responses (HIR)

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