

**Bs/BCC-12(T)**

**2 0 2 5**

**( FYUGP )**

**( 6th Semester )**

**BOTANY**

**( MAJOR )**

**Paper : BCC-12(T)**

**( Plant Physiology )**

Full Marks : 75

Pass Marks : 40%

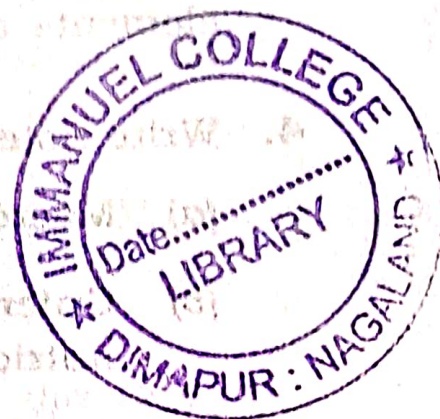
**Time : 3 hours**

*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 :**  $7\frac{1}{2} \times 2 = 15$ 
  - (a) Transpiration and factors affecting transpiration**
  - (b) Water absorption by roots**



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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

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( Continued )

( 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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