

**2021-24**

*Time : 3 hours*

*Full Marks : 75*

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer from both the Groups as directed.*

**Group – A**

**(Compulsory)**

1. Answer all questions of the following :  $1 \times 10 = 10$ 
  - (a) Define water potential.
  - (b) Most of the foliar transpiration takes place through the stomatal openings is known as \_\_\_\_\_.
  - (c) Elements required by plants in less quantities are known as \_\_\_\_\_.

- (d) The Stomata of CAM plants open at \_\_\_\_\_.
- (e) All biological nitrogen fixation is affected by enzymes called \_\_\_\_\_.
- (f) Define Phytohormone.
- (g) The effective temperature range for vernalization is between \_\_\_\_\_.
- (h) The non-proteinous part of an enzyme is called \_\_\_\_\_.
- (i) Define Transpiration.
- (j) Define Macronutrients.

2. Write note on Guttation. 5

**OR**

✓ Write note on essential and non-essential elements.

**Group – B**

Answer any four questions of the following :

$15 \times 4 = 60$

- ✓ 3. Discuss the Translocation of organic solutes and their mechanism and factors affecting the rate of translocation.

4. Describe the discovery and physiological role of Auxin.
- ✓ 5. Give a detail account of Krebs cycle (TCA cycle) and their regulation.
- ✓ 6. Define physiology of flowering and discuss about photoperiodism.
7. Describe the discovery and physiological role of Ethylene.
- ✓ 8. Define photosynthesis and describe Calvin cycle.



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XL -- 63/2 (1,200)      ( 3 )      UESD(IV) — Bot  
(GE – 4)

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