

## UG 5th Semester Examination 2021

### BOTANY(Honours)

Paper : DC-11

[CBCS]

Full Marks: 25

Time: Two Hours

- 1. Answer any *five* questions of the following:** **1×5=5**
- (a) What are aquaporins?
  - (b) What are cryptochromes?
  - (c) Define diffusion pressure deficit.
  - (d) What is critical day length?
  - (e) Mention the structural difference between carrier and channel.
  - (f) Name one steroidal plant hormone.
  - (g) What is 'assimilates partitioning'?
- 2. Answer any *four* questions of the following:** **3×4=12**
- (a) State the deficiency symptoms of Nitrogen and Potassium. (1.5+1.5)
  - (b) Discuss cohesion tension theory in relation to the ascent of sap in plants.
  - (c) What do you mean by active transport? State the difference between symport and antiport channel with example. (1+2)
  - (d) Write in brief the role of K<sup>+</sup> ion in stomatal movement.
  - (e) Briefly enumerate the structural properties of phytochrome.
  - (f) Write GA<sub>3</sub> induced carbohydrate mobilization during seed germination.
  - (g) What are the advantages of seed dormancy?
- 3. Answer any *one* question of the following:** **8×1=8**
- (a) Name one natural and one synthetic auxin. Discuss the physiological roles of auxins in plants. (2+6)
  - (b) Write short notes on: (2×4)
    - i. Zeatin
    - ii. DELLA proteins
    - iii. Munch hypothesis
    - iv. Chlorosis