



Seat No. _____

HA-003-1144002

M. Sc. (Sem. IV) (CB3CS) (W.E.F. 2016) Examination

April - 2023

Botany : BOT - 420

(Plant Physiology & Metabolism)

Faculty Code : 003

Subject Code : 1144002

Time : $2\frac{1}{2}$ Hours / Total Marks : 70

- 1** Answer the following : (any **seven**) **7×2=14**
- (a) Distinguish between hormones and plant growth regulators.
 - (b) What are the physiological changes occurring during senescence ?
 - (c) What is apical dominance ?
 - (d) What are the end products of light and dark reaction of photosynthesis ?
 - (e) Write the difference between C₃ and C₄ cycle.
 - (f) What is Smerson effect ?
 - (g) Write the function of abscisic acid.
 - (h) Define phototropism and geotropism.
 - (i) What are the causes for the seed dormancy ?
 - (j) Write the significance of vernalization.
- 2** Answer the following : (any **two**) **2×7=14**
- (a) Explain in detail vernalization.
 - (b) Briefly describe seed viability and germination.
 - (c) Give a brief account of plant growth process.

- 3 Answer the following : **2×7=14**
- (a) Give a brief account of translocation phenomena.
 - (b) Write a note on water potential.

OR

- 3 Answer the following : **2×7=14**
- (a) Describe the CAM Pathway.
 - (b) Describe the functions of macronutrients and micronutrients in plants.

- 4 Answer the following : **2×7=14**
- (a) Explain light reaction of photosynthesis.
 - (b) Describe Calvin cycle.

- 5 Write short notes on any **two** of the following : **2×7=14**
- (a) Physiological functions of GA.
 - (b) Bioassay for cytokinin.
 - (c) Auxin.
 - (d) Methods of hormones estimation.
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