

Seat Number

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BOTANY PAPER - II : BOT-232
Plant Physiology
(23146)

P. Pages : 2

Time : Two Hours

Max. Marks : 40

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. All questions are compulsory.
5. Figures to the right indicate full marks.
6. Draw neat & labelled diagrams wherever necessary.

1. Attempt **any eight** of the following.

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- i) Define Diffusion Pressure Deficit (DPD)
- ii) Define phototropic movement.
- iii) The zone on root responsible for water absorption.
 - a) Zone of maturation
 - b) Root hair zone
 - c) Zone of elongation
 - d) Meristematic zone
- iv) The solution which has higher concentration than that of cell sap is called ----- solution.
 - a) Isotonic
 - b) Hypotonic
 - c) Hypertonic
 - d) Monotonic
- v) Define the phenomenon of Diffusion.
- vi) What is xylem sap?
- vii) What is isotonic solution?
- viii) Explain stomatal transpiration.
- ix) What is photolysis?
- x) Explain Kranz Anatomy.

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2. Attempt any four. 8
- i) Water is an universal solvent -explain.
 - ii) What is turgor pressure (TP)?
 - iii) Explain the terms plasmolysis and de-plasmolysis.
 - iv) Explain hypotonic and hypertonic solutions.
 - v) Nyctanastic movements.
 - vi) Sketch and label the structure of typical stoma.
3. Attempt any two. 8
- i) Describe various types of transpiration.
 - ii) What is osmotic and non-osmotic theory of water absorption?
 - iii) Describe ultrastructure of chloroplast.
4. a) Attempt any two. 6
- i) Describe the factors affecting the salt absorption.
 - ii) Give relationship between OP, TP and DPD.
 - iii) Give outline of Calvin cycle.
- b) Bio illumination. 2
5. Describe in detail, the process of light reaction in photosynthesis. 8

OR

What is respiration? Describe the energy releasing steps in Kreb's cycle. 8
