

Seat Number

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April - 2016



कडबा - 035

**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 and labelled diagrams wherever necessary.

1. Attempt any eight of the following.

8

- i) Osmosis is diffusion of -----  
a) Water  
b) Solute particles  
c) Gases  
d) Energy
- ii) The outer solution having equal concentration as that of cell sap is called ----- solution.  
a) Hypertonic  
b) Hypotonic  
c) Isotonic  
d) None of these
- iii) Protein-Lecithin theory of absorption of mineral salts was first proposed by -----  
a) Lundergardh  
b) Donnan  
c) Bennett-Clark  
d) None of these
- iv) The special modified epidermal cells surrounding stomatal pore is called ----- cells.  
a) Epithelial  
b) Guard  
c) Subsidiary  
d) Accessory
- v) Movement of locomotion which occur in free swimming organisms is called ----- movement.  
a) Tropic  
b) Tactic  
c) Nastic  
d) None of these

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- vi) Define deplasmolysis.
- vii) What is wall pressure?
- viii) What is fermentation?
- ix) Define diffusion.
- x) Define Ascent of sap.

2. Attempt any four.

8

- a) Explain cuticular transpiration.
- b) What is photolysis of water?
- c) Define aerobic & anaerobic respiration.
- d) Give any two importance of plant physiology in agriculture.
- e) Pre-requisites of Osmosis.
- f) Define Imbibition.

3. Answer any two.

8

- a) Give relation between OP, TP & DPD.
- b) Give difference between active & passive absorption of water.
- c) Briefly describe contact exchange theory.

4. a) Write any two.

6

- i) Explain in brief  $K^+$  pump theory of transpiration.
- ii) Explain importance of cohesive and adhesive forces in ascent of sap.
- iii) Explain role of root hair in water absorption.
- b) Sketch and label structure of stomata.

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5. Draw schematic representation of citric acid cycle.

8

OR

Explain non-cyclic photophosphorylation.

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