April 2015

खजूर - 023

Seat Number

* 0 4 8 3 *

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. **8**

i) Upward movement of water in plants is.....
   a) Transpiration b) Ascent of sap
   c) Exudation d) Sucking

ii) Stomata open & close due to.....
   a) Root pressure
   b) Imbibition pressure
   c) Turgor pressure of guard cell
   d) Positive pressure.

iii) Osmosis is diffusion of.....
   a) Water b) Energy
   c) Solute particles d) Gases

iv) Growth movement caused by gravitational pull is called as.....movements.
   a) Phototropic b) Geotropic
   c) Phototactic d) Chemotactic

v) .....is the process of conversion of light.
   a) Photosynthesis b) Respiration
   c) Transpiration d) Imbibition

vi) Define deplasmolysis.

vii) What is diffusion pressure (DP)?

viii) Any two types of plant movement.

ix) Define anaerobic respiration.

x) What is imbibition?

2. Attempt **any four** 8

a) Define phenomenon of diffusion.

b) Explain lenticular transpiration.

c) What is fermentation?

d) Give any two importance of plant physiology.

e) Define Nyctinastic movement.

f) Enlist photosynthetic pigments.

3. Answer **any two**. 8

a) Describe different types of solutions in relation to cell sap.

b) Describe external factors affecting salt absorption.

c) Give mechanism of stomatal opening & closing.

4. a) Write **any two**. 6

i) Explain how transpiration is necessary evil.

ii) Explain role of root hair in absorption of water.

iii) Briefly describe carbonic acid exchange theory.

b) Sketch and label structure of stomata. 2

5. Describe ETS cycle. 8

OR

Describe HSK (C_4) pathway & its significance.

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