

Question Paper Code : 6436

M.Sc. (Semester-IV) Examination, 2018

(Regular & BP/Imp.)

PLANT SCIENCE

[Fifth Paper]

(Plant Physiology)

Time : Three Hours]

[Maximum Marks : 70

Note : Answer **five** questions in all. Question **No.1** is **compulsory**. Besides this, attempt **one** question from each unit.

1. Answer in brief the following : [3x10=30]

- (a) Diffusion pressure deficit (DPD)
- (b) P-protein
- (c) Light Harvesting Complex (LHC)
- (d) Role of cytochromes
- (e) Peroxisomes
- (f) Gluconeogenesis
- (g) Enlist micro and macro-nutrients

6436/100

(1)

[P.T.O.]

- (h) LEA and its role
- (i) ROS and RNS
- (j) Nitrite Reductase and Nitrate Reductase

UNIT-I

2. Describe the mechanism of stomatal opening and closing. Also elaborate the role of abscisic acid in it. [10]
3. Write notes on **any two** of the following : [2x5=10]
 - (a) Concept of water potential
 - (b) Photophosphorylation
 - (c) CAM pathway

UNIT-II

4. Write in detail electron transport system in mitochondria. [10]
5. Write notes on **any two** of the following : [5x2=10]
 - (a) Aerobic and anaerobic respiration
 - (b) α and β oxidatives
 - (c) Synthesis of phospholipids and their role

UNIT-III

6. Define stress with its various types. Also write about antioxidative defence system in plants. [6+4=10]
7. Write notes on **any two** of the following : [5x2=10]
 - (a) Deficiency symptoms of N, Mg and Zn in plants.
 - (b) Sulphate uptake in plants and its assimilation.
 - (c) Various beneficial elements and their role in plants.

UNIT-IV

8. Describe the photoperiodism in plants with suitable examples. Also elaborate the control of flowering mechanism at molecular level. [5+5=10]
9. Write notes on **any two** of the following : [5x2=10]
 - (a) Mechanism of nodule formation and role of nodules
 - (b) Phytochrome localization in a cell
 - (c) Abscission

----- X -----