

(i) Printed Pages : 3

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(ii) Questions : 9

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Exam. Code : 

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**B.A./B.Sc. (General) 6<sup>th</sup> Semester**

**(2054)**

**BOTANY**

**Paper : Paper-A : Plant Physiology-II**

**Time Allowed : Three Hours]**

**[Maximum Marks : 36**

**Note :—** Attempt 5 questions in all. Question 1 is compulsory and is of 8 marks, comprising 4 MCQ & 4 fill in the blanks. Attempt 4 more questions selecting one each from units I to IV carrying 7 marks each.

1. (A) Tick the correct answer :—

4

(1) Oxidative Phosphorylation is the formation of ATP in :

- (a) Transpiration
- (b) Photosynthesis
- (c) Imbibition
- (d) Respiration

(2) Photosystem—I receives electrons from :

- (a) Water
- (b) Chlorophyll
- (c) PS II
- (d) Trap centre.

(3) Dormin, Inhibin are the previous names of :

- (a) Auxin
- (b) Ethylene
- (c) ABA
- (d) Cytokinin

(4) Process of formation of complete plant from a somatic cell is called :

- (a) Tissue Culture
- (b) Hybridization
- (c) Hardening
- (d) Totipotency.

(B) Fill in the blanks :

4

- (1) Initial fixation of  $\text{CO}_2$  in  $\text{C}_4$  Plants occurs in \_\_\_\_\_ cells.
- (2) 5-Carbon compound formed during Kreb's Cycle is \_\_\_\_\_ .
- (3) Instrument used to measure Growth/height in Plants is called \_\_\_\_\_ .
- (4) Virus free regenerates are formed from which part of plant \_\_\_\_\_ .

### UNIT—I

2. (a) Describe the process of Non Cyclic Photophosphorylation.

5

(b) How it differs from Cyclic one ?

2

3. Write short notes on :
- (a) RUBISCO enzyme
  - (b) Trap centre and Harvesting molecules
  - (c) Water and Evolution of Oxygen. 2+2+3

### UNIT—II

4. (a) Describe the process of ATP formation by Chemi Osmotic hypothesis during ETC. 4
- (b) Write a note on ATP. 3
5. Write short notes on :
- (a) Respiratory Quotient
  - (b) Aerobic & Anaerobic Respiration
  - (c) Respiratory Substrate. 3+2+2

### UNIT—III

6. What are Gibberellins ? Write their Physiological Roles and Commercial uses or Application. 7
7. Write notes on :
- (a) Phases of Growth
  - (b) Tropic Movements
  - (c) Florigen Concept. 3+2+2

### UNIT—IV

8. (a) What is Tissue Culture ? Describe its main Aspects. 5
- (b) Write a note on Totipotency. 2
9. (a) Describe Various Applications of Tissue culture. 5
- (b) What is Recombinant DNA Technology ? 2