

(i) Printed Pages : 3

Roll No. ....

(ii) Questions : 9

Sub. Code : 

0	4	5	4
---	---	---	---

Exam. Code : 

0	0	0	5
---	---	---	---

**B.A./B.Sc. (General) 5<sup>th</sup> Semester  
(2122)**

**BOTANY**

**Paper : A Theory : Plant Physiology-I**

**Time Allowed : Three Hours]**

**[Maximum Marks : 36**

**Note :—**Attempt **FIVE** questions in all. Question No. 1 is compulsory. Attempt **FOUR** more questions selecting **ONE** from each Unit.

1. (A) Choose the correct answer (MCQ) :

(i) Imbibants are \_\_\_\_\_ Colloids.

(a) Hydrophobic

(b) Hydrophillic

(c) Diffusible

(d) Insoluble

(ii) Who first observed that opened stomata have high conc. of  $K^+$  in guard cells ?

(a) Levitt

(b) Fujino

(c) Stewards

(d) Sayre

(iii) In which theory it was stated that active site of enzyme has buttressing and catalytic group ?

- (a) Lock & Key
- (b) Induced Fit
- (c) Activation
- (d) Modern theory

(iv) Term MUFA & PUFA are associated with :

- (a) Proteins
- (b) Carbohydrates
- (c) Lipids
- (d) DNA

4×1=4

(B) Fill in the blanks :

- (i) Number of Stomata per square mm of leaf is \_\_\_\_\_.
- (ii) Which pigment is present inside root nodules \_\_\_\_\_.
- (iii)  $\beta$ -oxidation process is the oxidation of \_\_\_\_\_.
- (iv) The structure formed by two or more polypeptides is \_\_\_\_\_.

4×1=4

### UNIT—I

2. (a) How water is important for plants ? Write its role.
- (b) Write the Physical and Chemical properties of water (any six).

4+3

3. (a) What is Transpiration ? Write its types. Explain Stomatal transpiration.  
(b) Write any four advantages of Transpiration. 5+2

### UNIT—II

4. What are essential elements ? Write the criteria for its essentiality. Differentiate between Macro & Micro nutrients. 1+3+3
5. (a) What are deficiency symptoms ? Write any six with meanings.  
(b) Explain Passive Mineral absorption by Ionic Exchange. 1+3+3

### UNIT—III

6. Write notes on :  
(a) Enzyme Nitrogenase  
(b) Ammonia Assimilation  
(c) Legume-Rhizobium Symbiosis. 2+3+2
7. What are lipids ? Write their types and functions. 7

### UNIT—IV

8. Explain the structural types and classification of Proteins. 3+4
9. (a) How temperature and pH affect Enzymatic activity ?  
(b) Classify enzymes on the basis of Modern System. 3+4