

(i) Printed Pages : 3 Roll No.

(ii) Questions : 9

Sub. Code :

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Exam. Code :

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B.A./B.Sc. (General) 5th 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 butressing 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) β -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