

(i) Printed Pages : 3

Roll No.

(ii) Questions : 9 Sub. Code :

1	7	4	5	4
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Exam. Code :

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B.A./B.Sc. (General) 5th Semester
(2124)

BOTANY

Paper : Theory Paper-A : Plant Physiology-I

Time Allowed : Three Hours]

[Maximum Marks : 36

Note :— Attempt **FIVE** questions in all. Question No. 1 is compulsory and is of **8** marks, comprising **FOUR** MCQ & **FOUR** fill in the blanks. Attempt **FOUR** more questions selecting **ONE** each from Units I to IV carrying 7 marks each.

1. (A) Tick the correct answer :

(a) Pulsation Theory proposed by Bose, was proved on which plant ?

(a) Balsum

(b) Desmodium

(c) Chlorella

(d) Touch me Not

(b) A section of Root Nodule of Leguminous plant appears pink due to presence of :

(a) Haemoglobin

(b) Iron

(c) Leghaemoglobin

(d) Rhizobium

(c) The two elements found in the enzyme Nitrogenase are :

(a) Mn & Mg

(b) Fe & Na

(c) Fe & Mo

(d) Mn & Ca

(d) With reference to Turnover number, which is the fastest known enzyme ?

(a) Nitrogenase

(b) Peptidyl Transferase

(c) Carbonic anhydrase

(d) Catalase

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(B) Fill in the blanks :

(a) Ionic exchange theory for mineral absorption is a type of _____ absorption.

(b) During Osmosis, movement of water is from _____ solution to _____ solution.

(c) In Induced Fit hypothesis, the part of active site which supports Substrate is called _____.

(d) The building blocks of Fats are _____ & _____.

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UNIT—I

2. (a) How structure of Guard cells in stomata help in its Opening & Closing ? Explain stomatal working. 5

(b) Write a short note on Plasmolysis & Deplasmolysis. 2

3. (a) Show by diagram, Apoplastic & Symplastic pathway of water in side root. 4

(b) Write a short note on Imbibition & its significance. 3

UNIT—II

4. What is Hydroponics ? Write its types, Requirements & Significance. 7
5. (a) Describe various types of Passive absorption of Minerals. 5
- (b) What are Hunger Signs ? Write any two with their meaning. 2

UNIT—III

6. What is Biological Nitrogen Fixation ? Write its requirements & Process in side Nodule. 7
7. Write notes on :
 - (a) Saturated & Unsaturated Fatty Acids with examples 4
 - (b) Fats & Oils with examples. 3

UNIT—IV

8. (a) What is Enzyme ? Are all enzymes Proteins ? Clarify it with examples. How enzymes differ from Proteins ? 5
- (b) How Temperature affects the enzymatic activity ? 2
9. (a) What is the Modern system of enzyme Nomenclature ? Classify enzymes with examples. 5
- (b) What are Tertiary Proteins ? Give examples. 2