[Total No. of (i) Printed Pages 4 (ii) Questions 9]

Sub Code : 0550 (1048) **Exam Code :** 0006

Exam : B.A./B.Sc. (General), 6th Semester

Subject : Botany

Paper : Paper: A Plant Physiology-II

Time : 3 Hours ***Maximum Marks : 36***

Note: Attempt **5** questions is all. Question **I** is compulsory consisting of **12** questions of **1** mark each. Attempt **4** more questions selecting **one** from each unit. Draw Neat & labelled diagrams.

1. Multiple Choice Questions : 6×1=6

(i) In C_4 Plants, the substrate of dark reaction is :

(a) OAA

(b) RuBP

(c) PEP

(d) PGA

(ii) Glycolysis occurs in :

(a) Cytoplasm

(b) Mitochondria

(c) ER

(d) all

P.T.O.

(iii) Which Plant hormone counteracts the effect of Apical Dominance :

(a) Auxin

(b) Gibberellin

(c) Cytokinin

(d) Ethylene

(iv) Large Central Vacuole is formed in which phase :

(a) Formative phase

(b) Elongation phase

(c) Maturation phase

(d) in all the phases.

(v) Plant Part used for the start of tissue culture is :

(a) Seed

(b) Explant

(c) Culture

(d) Starter

(vi) Which enzyme joins DNA fragments

(a) Ligase

(b) Polymerase

(c) Primase

(d) Gyrase

Fill in the blanks : 6×1=6

(i) $FADH_2$ on oxidation releases ----- ATP.

(ii) Law of Limiting Factors is proposed by ----------.

(iii) Fruit Ripening Hormone is ----------.

(iv) Which Bacteria is called Natural Genetic Engineer---------.

(v) The organisms carrying Foreign genes are called ---------- .

(vi) Extra chromosomal double stranded circular DNA found in Bacteria is called ----

UNIT - I

2. Explain Non Cyclic Photo phosphorylation in Plants. Why is this process called so ? 6

3. Write Short Notes on : 3×2=6

(a) Black Man's law of Limiting Factor

(b) Photo System

(c) Absorption Spectrum

UNIT - II

4. Describe the steps in Anaerobic respiration starting from Glucose. 6

5. Write Short Notes on : 3×2=6

(a) Respiratory Substrate

(b) Energy Currency of Cell

(c) Link Reaction between Glycolysis and Kreb's cycle.

UNIT - III

6. What are Auxins ? Describe the Physiological Role and applications of Auxins. 6

7. Write Short Notes on : 3×2=6

(a) Vernalization

(b) Phases of Growth

(c) Law of compound Interest in Growth

UNIT - IV

8. What is Plant Tissue Culture ? Describe the important aspects of it. 6

9. Write Short Notes on : 3×2=6

(a) Protoplast Culture

(b) Transgenic Plants.