

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:

6x1=6

(i) In C 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

- (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 :

6x1=6

- (i) FADH 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:

3x2=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 : 3x2=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: 3x2=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 : 3x2=6
- (a) Protoplast Culture
 - (b) Transgenic Plants.