

M.Sc. (Botany) Semester - 3 (CBCS) Examination
OCT/NOV-2024 (AS PER SYLLABUS YEAR JUNE-2019)
Plant Physiology (Core (New))

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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SECTION - I

Q.1 Answer the following

- (a) Write the significance of Mineral nutrition in plants (07)
- (b) Explain in detail the types of Lipids (07)

OR

Q.1 Elaborate the term Water Potential, Water Deficit and Transpiration in context to plant physiology. (14)**Q.2 Answer the following**

- (a) C3 pathway in plants (07)
- (b) Non-cyclic and cyclic photophosphorylation (07)

OR

Q.2 Write a note on 'Glycolysis' and 'TCA' process in plants (14)**Q.3 Answer the following (any seven)** (07)

1. State the difference between adsorption and absorption.
2. Explain relationship of soil-water
3. What is photorespiration?
4. Explain the importance of proteins in Plants cells.
5. State major factors affecting rate of photosynthesis
6. Give any two examples of each of C4 and CAM plants
7. Define the term PS-I and PS-II
8. State the steps involved in Cellular Respiration

SECTION - II

Q.1 What is growth and development in reference to plants? Explain 'Seed Germination' (14)

OR

Q.1 Write short notes on the following hormones

- (a) Auxin application (07)
- (b) Gibberellic acid (07)

Q.2 Describe the role and process of Pr and Pfr. Explain the term 'Phytochrome' (14)

OR

Q.2 Write short note on:

- (a) Photoperiodism (07)
- (b) Heat and water stress (07)

Q.3 Answer the following (any seven) (07)

1. When a seed dormancy?
2. What is saline stress in physiology?
3. Explain the importance of brassinosteroids
4. State the significance of cytokinin hormone in plants
5. Give examples of plant adaptation to tolerance to stress conditions
6. What are growth regulators in plants?
7. What is ABA?
8. Define the term vulnerization.
