

Total Pages : 8

AB-234746

M.Sc. (Semester-II) Examination, June-2025

(Regular/Backlog)

MICROBIOLOGY

(Plant Physiology)

Time Allowed : Three Hours

Maximum Marks : 70

Note : This question paper is divided into four sections. Attempt questions from all four sections as per given directions. Distribution of marks is given in each section.

SECTION-A

(Objective Type Questions)

Note: Attempt **any ten** questions. Each question carries 1 mark. [10x1=10]

AB-234746/170

(1)

[P.T.O.]

1. (i) Cytokinin are synthesized in areas where _____ is occurring.
- (ii) The hormone _____ suppresses the growth of a plant.
- (iii) _____ is shedding of leaves, fruits or flowers by a plant.
- (iv) Most water gets evaporated from the plant from its _____.
- (v) _____ is regarded as father of plant physiology.
- (vi) Phytohormones are :
 - (a) Chemical regulation flowering
 - (b) Chemical regulation secondary growth
 - (c) Hormones regulating growth from seed to adulthood
 - (d) Regulators synthesized by plants and influencing physiological processes
- (vii) Photosynthetic pigments found in the chloroplasts occur in :

AB-234746/170 (2)

- (a) Thylakoid membranes
- (b) Matrix
- (c) Plastoglobules
- (d) Chloroplast envelope.
- (viii) Apical dominance is caused by :
 - (a) Absciscic acid in lateral bud
 - (b) Gibberellin in lateral buds
 - (c) Cytokinin in leaf tip
 - (d) Auxin in shoot tip
- (ix) Highest auxin concentration occurs :
 - (a) In growing tips
 - (b) At base of plant organs
 - (c) In leaves
 - (d) In xylem and phloem.
- (x) Wilting of a Plant is a result of Excessive :
 - (a) Transpiration

AB-234746/170 (3)

[P.T.O.]

- (b) Absorption
 - (c) Photosynthesis
 - (d) Respiration
- (xi) What is the end product of Calvin cycle?
- (a) PGA
 - (b) RuBP
 - (c) ADP+NADP
 - (d) PGAL
- (xii) Plants that open their flowers during the daytime are described as:
- (a) Diurnal
 - (b) Day Neutral Plant
 - (c) Nocturnal
 - (d) None of the above

SECTION-B

(Very Short Answer Type Questions)

AB-234746/170 (4)

Note : Attempt **any five** questions. Each question carries **02** marks. (Word limit 25-30 words). [5x2=10]

2. (i) Define Transpiration Pull.
- (ii) What is Photoconversion?
- (iii) What is Protoplasm?
- (iv) What are Phytochrome?
- (v) What are plant chemical responses to infection?
- (vi) What is meant by Pho-trophism?
- (vii) Write the name of events involved in plant disease development

SECTION-C

(Short Answer Type Questions)

Note : Attempt **any five** questions. Each question carries **04** marks. (Word limit : 250 words) [5x4=20]

3. (i) Explain Passive Transport.
- (ii) What are Plant Receptors?

AB-234746/170 (5) [P.T.O.]

- (iii) What is Plant Cellular Localization?
- (iv) Explain mechanism of action of Auxins.
- (v) Describe vernalization and its importance.
- (vi) Differentiate between long and short day plants.
- (vii) Explain z- scheme of photosynthesis.

SECTION-D

(Essay Type Questions)

Note : Attempt **any three** questions . Each question carries **10** marks. (More than : 500 words) [3x10=30]

4. (i) Describe mechanism of resistance to abiotic stress tolerance in plants.
- (ii) Describe methods of breaking seed dormancy and factors affecting germination in detail.
- (iii) Write a detailed note on photorespiration and photo-oxidation of water.

AB-234746/170 (6)

- (iv) Write a detailed note on importance of various macro and micronutrients.

----x----

AB-234746/170 (7)