

Roll No.

313161
S-3198

M. Sc. (Third Semester)
EXAMINATION, 2023-24

BOTANY

(Plant Physiology and Biochemistry)
(C-013)

Time : Two Hours] [Maximum Marks : 60

Note : Attempt any four questions. All questions carry equal marks.

1. What are useful applications of Phytohormones in Agriculture ? Discuss in brief, with specific examples.
2. What are Photo-physiological responses mediated by cryptochromes ? How do they differ from Phytochromes ? Discuss briefly.
3. Why Nitrogen fixation is crucial in nitrogen nutrition of plants in nature ? Discuss the mechanism of Biological Nitrogen fixation in detail.

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4. Write short notes on any *two* of the following :
- (a) Anaerobic respiration
 - (b) Oxidative Phosphorylation
 - (c) Electron transport chain (ETC)
 - (d) Glyoxylate cycle
5. What were experimental supports to suggest that light reaction is a two-step mechanism ? Discuss briefly the outline of the mechanism.
6. What is osmosis ? Explain the phenomenon on the basis of water potential ?
7. Write brief account of any *two* of the following :
- (a) ATP
 - (b) Unique properties of water
 - (c) Monosaccharides
 - (d) Amino acids
8. What are characteristic properties of Enzyme ? Describe in brief the Mode of Enzyme action according to various theories.

313161