

**K-380**

Total Pages : 3

Roll No. ....

**BOT-504**

**Biochemistry and Plant Physiology**

M.Sc. Botany (MSCBOT)

Ist Year Examination, 2023 (Dec.)

**Time : 2 Hours]**

**Max. Marks : 70**

**Note :** This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

**SECTION–A**

**(Long Answer Type Questions)**

**Note :** Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. Describe the structure, properties and classification of proteins.
2. What is transpiration? Describe the various methods of transpiration in plants.
3. What do you understand by the "light" and "dark" reactions in photosynthesis? Describe their mechanism in detail.
4. What are enzymes? Describe the structure and mode of action enzyme.
5. Define seed dormancy. Describe different types of seed dormancy and their causes.

## **SECTION-B**

### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. What are auxins? Discuss their physiological role in plants.
2. What is photoperiodism? How does it differ from vernalization?

3. Differentiate the following :
    - (a) Nucleotide and Nucleoside.
    - (b) Micronutrients and Macronutrients.
  4. Discuss the mechanism of water absorption by vascular plants.
  5. What are amino acids? Describe their biological role.
  6. Write a short note on double helical model of DNA with diagram.
  7. Write a short note on phospholipids and their occurrence.
  8. What is stress? How do plants respond to water stress?
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