Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
End Semester Examination: December 2023
Faculty: Science and Technology

Program: B.Sc. **Semester: III** **SET: A**
Program (Specific): General B.Sc **Course Type:** Core
Class: SY B.Sc. **Max. Marks: 35**
Name of the Course: Plant Physiology
Course Code: 23 - BO - 232 **Time: 2Hr**
Paper: II

Instructions to the candidate:

1) ***There are 4 sections in the question paper. Write each section on separate page.***
2) ***All Sections are compulsory.***
3) ***Figures to the right indicate full marks.***
4) ***Draw a well labelled diagram wherever necessary.***

SECTION: A

Q.1) Answer the following **5**

a) Define plant physiology.

b) What is nitrification?

c) Define transpiration.

d) What is active absorption?

e) Give example of symbiotic nitrogen fixing bacteria.

Q.2) Answer <u>any four</u> of the following **4**

a) Define Guttation.

b) Name the factors affecting water absorption.

c) Name the types of transpiration in plants.

d) Write the role of water in plants.

e) What is switch off/on mechanism of non-symbiotic nitrogen fixation?

f) Define dormancy.

SECTION: B

Q.3) Write short note on <u>any four</u> of the following. **8**

i) Comment on Antitranpirants

ii) What is reductive amination?

iii) What is the significance of transpiration?

iv) Explain the tank method for producing BGA biofertilizer.

v) What are short day plants?

vi) What is stratification?

SECTION: C

Q.4) Answer <u>any four</u> of the following **8**

1) What is florigin? Explain its role in flowering.

2) Explain role of GA3 in seed germination.

3) Explain in detail the process of guttation.

4) What is vernalization? Comment on significance of vernalization.

5) Explain Scarification.

6) Give applications of plant physiology.

SECTION: D

Q.5) Attempt <u>any two</u> of the following **10**

a) Explain transpiration pull theory. Give evidences and objections of theory.

b) Describe the various types of seed dormancy observed in plants.

c) Discuss the role of phytohormones in improving the seed germination

d) Explain the symbiotic nitrogen fixation by Rhizobia. Comment on role of nitrogen in plants.