Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
End Semester Examination: Jan.2022
Faculty: Science and Technology

Program: B. Sc. **Semester: I** **SET: C**
Program (Specific): Biotechnology **Course Type: Core**
Class: F. Y. B. Sc. **Max. Marks: 35**
Name of the Course: Plant Science I
Course Code: 22 BBT 106 **Time: 2 Hr**
Paper: -

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

Q1) Answer the following (Attempt any 5/6) **5**

1. Based on the presence or absence of flower, plants are divided into which two classes?
2. What are halophytes?
3. What is the sporophyte?
4. Enlist the components of plasma membrane of the plant cell.
5. What are the essential and non-essential floral whorls.
6. Define secondary growth in plants.

SECTION: B

Q2) Answer the following (Attempt any 5/6) **10**

1. Enlist any two divisions of algae along with their characteristic pigments.
2. Describe the mode of nutrition of fungi.
3. Give any two differences between the dicot and monocot plants.
4. What is meristematic tissue? Enlist different types of meristems present in plants.
5. Define vascular and cork cambium.
6. Explain in brief the formation of annual rings.

SECTION: C

Q3) Answer the following (Attempt any 2/4) 8

1. What are the gymnosperms and angiosperms. State two examples of each gymnosperm and angiosperm.
2. What are plastids? Explain the chloroplast as an important plant cell organelle.
3. Describe root as a plant organ. Give any three root modifications in plants.
4. What is heartwood and sapwood? Diagrammatically show the location of heartwood and sapwood in the wood section.

SECTION: D

Q4) Answer the following (Attempt any 2/4) 12

1. Give the detailed classification of kingdom plantae based on the characters: (a) differentiated plant body, (b) vascular tissues and (c) reproductive organs.
2. Enlist different components of plant cell wall along with their interlinking during the plant cell wall formation. Give any four functions of plant cell wall.
3. Explain in detail various types of phloem elements present in plants.
4. Diagrammatically explain the internal organization of dicot and monocot shoot with respect to various tissue types.