



Progressive Education Society's  
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16  
(Autonomous)  
End Semester Examination: Mar/Apr 2025  
Faculty: Science and Technology

Program: B. Sc. Biotech (04)

Semester: VI

SET: A

Program (Specific): Biotechnology

Course Type: Core

Class: T. Y. B. Sc.

Max. Marks: 35

Name of the Course: Agriculture Biotechnology

Course Code: 24BBT-602

Time: 2 Hrs

**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 any FIVE of the following (Attempt any 5/6)**

**5**

1. Define genome editing of plants.
2. What is e-agriculture?
3. Write two examples of commercially grown transgenic crops.
4. What are herbicides?
5. Give 2 examples of microbial species used as biofertilizers.
6. Enlist any 2 applications of agriculture biotechnology.

**SECTION: B**

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

**10**

1. Explain the concept of Urban agriculture.
2. Compare Classical Vs Modern Agricultural Biotechnology.
3. Give any **FOUR** uses of ICT in agriculture.
4. Explain what are non-conventional fertilizers.
5. Give the importance of *Agrobacterium* in Agriculture biotechnology.
6. Comment on “the current challenges for agriculture and biotechnology based solutions” to overcome the challenges.

**[P.T.O.]**

**SECTION: C**

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

1. Discuss biotechnological tools for plant disease diagnosis.
2. Explain the concept, importance, and applications of greenhouse technology.
3. Discuss the use of Agriculture Biotechnology in developing herbicide-resistant crops.
4. Describe various gene transfer techniques in plants.

**SECTION: D**

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

1. Elaborate the concept, scope & application of biopesticides.
2. What are molecular markers? Add a note on marker-assisted plant breeding.
3. Discuss the use of genetically engineered microbes for the improvement of biofertilizers.
4. What are transgenic plants? Describe the development of transgenic plants for abiotic stress-tolerant varieties.