

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE  
SEMESTER END THEORY EXAMINATION

B.Sc.(Hons.) A.B.M.

Semester	: III (New)	Term	: First	Academic Year	: 2022-23
Course No.	: PATH 232	Title	: Agricultural Microbiology		
Credits	: 2 (1+1)	Time	: 09:00-11:00 hrs.	Total Marks	: 40
Day & Date	: Saturday, 04.02.2023				

- Note :
1. Solve ANY EIGHT questions from SECTION 'A'.
  2. All questions from SECTION 'B' are compulsory.
  3. All questions carry equal marks.
  4. Draw neat diagram wherever necessary.

SECTION 'A'

- Q.1 Enlist important branches of microbiology. Write scope and importance of microbiology in agriculture and allied fields.
- Q.2 Explain in detail about nutrition of microorganisms and environmental factors influencing them.
- Q.3 Explain in detail about microbial metabolism.
- Q.4 Explain the factors affecting organic matter decomposition.
- Q.5 Define Rhizosphere. Explain in detail the factors affecting rhizosphere microflora.
- Q.6 What is Bio-fertilizer? Explain various methods of bio-fertilizer application.
- Q.7 Write the principles of food preservation.
- Q.8 Write in detail the role of microorganisms involved in fermentation process to obtain various products.
- Q.9 Give the microbiological standards for various raw processed products and methods to monitor them.
- Q.10 Write short notes on (Any Two):
  - a) Bacterial growth curve
  - b) Mutualism
  - c) Methods of analysis for the presence of microorganisms in agricultural products
  - d) Parasitism

SECTION 'B'

- Q.11 Define the following terms:
  - 1) Decomposition
  - 2) Phyllosphere
  - 3) Agricultural Microbiology
  - 4) Thermophiles
- Q.12 Answer in one sentence:
  - 1) Give any two examples of bio-control agents.
  - 2) Give two examples of water contaminants.
  - 3) Give any two examples of microbes involved in food industry.
  - 4) What is commensalism?

