

B.Sc. CBCS Pattern Semester-III
**USMBT06 - Microbiology Paper-II : Food, Soil Microbiology
and Microbial Ecology**

P. Pages : 2

Time : Three Hours



GUG/W/23/11615

Max. Marks : 50

-
- Notes : 1. All questions are compulsory.
2. Draw the diagram wherever it is necessary.

1. Describe the physical and chemical methods of food preservation. **10**

OR

- a) Describe different types of food. **2½**
- b) Describe salmonellosis as a food borne infection. **2½**
- c) Write a note on spoilage of food. **2½**
- d) Discuss microbial examination of food. **2½**

2. Describe elemental transformation with respect to nitrogen cycle. **10**

OR

- a) Discuss nature and characteristics of humus. **2½**
- b) Write different types of soil and explain it. **2½**
- c) Describe phosphorus cycle in brief. **2½**
- d) Describe composition of soil. **2½**

3. Describe the mechanism of symbiotic N₂ fixation. **10**

OR

- a) Write short note on nifgene. **2½**
- b) Write note on biofertilizers. **2½**
- c) Describe competition with example. **2½**
- d) Describe synergism with example. **2½**

4. Discuss in detail construction and working mechanism of Biogas plant. **10**

OR

- a) Write a note on Bioremediation. **2½**
- b) Discuss biodegradation of xenobiotics. **2½**
- c) Write a note on MEOR. **2½**
- d) What is microbial leaching? Explain in short bioleaching of copper. **2½**

5. Solve **any ten**.

- a) What is moldy bread? **1**
- b) What is HACCP? **1**
- c) Define intoxication? **1**
- d) Name two biological preservative method. **1**
- e) What is decarboxylation? **1**
- f) Write applications of compost. **1**
- g) What are biopesticides? **1**
- h) What are bacteroid. **1**
- i) Give two example of Biofertiliser. **1**
- j) Define acid mine drainage? **1**
- k) Give two examples of pesticides? **1**
- l) Write two names of xenobiotics. **1**
