

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

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- 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
