

B.Sc. (C.B.C.S. Pattern) Sem-III
**USMBT06 - Microbiology Paper-II Food, Soil Microbiology and
Microbial Ecology**

P. Pages : 2

Time : Three Hours



GUG/W/19/11615

Max. Marks : 50

Notes : 1. All questions are compulsory and carry equal marks.

1. Describe different types of food spoilage with suitable examples. **10**

OR

a) Describe different types of food. **2½**

b) Write biological methods of food preservation. **2½**

c) Write SPC method for microbial examination of food sample. **2½**

d) Describe salmonellosis as a food borne infection. **2½**

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

OR

a) What are different types of soil. **2½**

b) Discuss nature and characteristics of humus. **2½**

c) Give diagrammatic representation of Sulphur cycle. **2½**

d) Write aerobic method of composting. **2½**

3. Discuss mechanism of symbiotic N_2 fixation and DNA technology in N_2 fixation. **10**

OR

a) Describe Syntrophism with examples. **2½**

b) Write short note on mycorrhizae. **2½**

c) Write note on biofertilizers. **2½**

d) Write note on nitrogenase enzyme. **2½**

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

OR

- a) What is microbial leaching? Explain in short bioleaching of copper. **2½**
- b) Add a note on microbial enhanced oil Recovery. **2½**
- c) Discuss in short desulfurization of coal. **2½**
- d) Explain biodegradation of xenobiotics. **2½**

5. Attempt **any ten** 1 mark each.

- a) What is moldy bread? **1**
- b) What is HACCP? **1**
- c) Define intoxication? **1**
- d) What are components of soil? **1**
- e) Name two chemical preservatives? **1**
- f) What is decarboxylation? **1**
- g) Define commensalism. **1**
- h) What are biopesticides? **1**
- i) What is nif gene. **1**
- j) Define acid mine drainage? **1**
- k) Give two examples of pesticides? **1**
- l) Give the name of bacteria involved in uranium bioleaching. **1**
