B.Sc. (CBCS Pattern) Semester - III

USMBT06 - Microbiology Paper-II : Food, Soil Microbiology and Microbial Ecology

P. Pages : 2 **GUG/S/23/11615**

Time : Three Hours * 1 7 4 6 * Max. Marks : 50

Notes : 1. All questions are compulsory and carries equal marks.
2. Draw the diagram wherever it is necessary.

1. Describe the temperature treatment methods of food preservation. **10**

OR

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

b) Food preservation by U.V. radiation. **2½**

c) Discuss about significance of microorganisms in food. **2½**

d) Write a short notes on Botulism. **2½**

2. Explain aerobic and anaerobic methods of composting. **10**

OR

Write note on followings.

a) Composition of soil. **2½**

b) Phosphorous cycle. **2½**

c) Describe the characteristics of humus. **2½**

d) Describe carbon cycle with the help of diagrammatic representation. **2½**

3. Describe various positive microbial associations with examples. **10**

OR

a) Write short note on nif gene **2½**

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

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

d) Describe the process of nodulation in legume. **2½**

4. Explain in detail bioleaching of the Copper. **10**

OR

Write note on followings.

a) Bioremediation. **2½**

b) MEOR **2½**

c) Discuss in short desulfurization of coal. **2½**

d) Explain biodegradation of xenobiotics. **2½**

5. Attempt **any ten** of the following.

a) What is HACCP? **1**

b) Define intoxication? **1**

c) Define perishable foods. Give example. **1**

d) What is decarboxylation? **1**

e) Write the types of soil. **1**

f) Write applications of compost. **1**

g) What is Leghemoglobin. **1**

h) What is biopesticide? Give example. **1**

i) Write names of non – symbiotic N2 fixing cyanobacteria. **1**

j) Give the name of bacteria involved in uranium bioleaching. **1**

k) Write two names of xenobiotics. **1**

l) Define microbial leaching. **1**

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