

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

P. Pages : 2

Time : Three Hours



GUG/W/22/11615

Max. Marks : 50

1. Give detail account on various physical methods used for food preservation? **10**

OR

a) Discuss the types of food on the basis of its spoilage. **2½**

b) Give brief account on HACCP. **2½**

c) What is the significance of microorganisms in food? **2½**

d) Discuss food poisoning with one example. **2½**

2. Discuss in detail about the aerobic and anaerobic methods of composting. **10**

OR

a) Give diagrammatic representation of carbon cycle. **2½**

b) Explain the characteristics of Humus. **2½**

c) Describe sulphur cycle in brief. **2½**

d) Discuss about different types of soil. **2½**

3. Discuss symbiotic nitrogen fixation in leguminous plants in detail. **10**

OR

a) Explain synergism with one example. **2½**

b) Write short note on Nif gene. **2½**

c) Write a note on Mycorrhizae. **2½**

d) Write short note on Biofertilizer. **2½**

4. Explain the construction and working mechanism of biogas plant. **10**

OR

a) Describe bioleaching of Uranium. **2½**

b) Give an account on Acid mine drainage. **2½**

c) Discuss the process of MEOR in brief. 2½

d) How the biodegradation of cellulose occurs? Discuss in brief. 2½

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

a) Enlist any two chemicals used for food preservation. 1

b) Which method is used for microbial examination of food? 1

c) Give the full form of HACCP. 1

d) Give the composition of soil. 1

e) Define Humus. 1

f) Give the applications of compost. 1

g) What is parasitism? 1

h) Give any two examples of N₂ fixing bacteria. 1

i) What is VAM? 1

j) Define Bioleaching. 1

k) What is Bioremediation? 1

l) Give the examples of xenobiotic compounds. 1
