

Microbiology (P.G.)**[CBCS]****M.Sc. Third Semester End Examination-2024****(Regular & Supplementary Paper)****PAPER-MCB-304****[Environmental Microbiology]****Full Marks: 40****Time: 02 Hrs.***The figures in the right hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.**Illustrate the answers wherever necessary.*

- 1. Answer any five questions of the following: 5x2= 10**
- a) Write the cause of eutrophication? 2
 - b) Write the composition of municipality waste water. 2
 - c) What is bioaugmentation? 2
 - d) Why are faecal coliforms used as indicators of water quality? 2
 - e) Explain the role of composting microbes in organic waste management. 2
 - f) What is generation of biodiesel? 2
 - g) Write down the names of the human transmitted diseases. 2
 - h) Write the nutrient value of vermicompost. 2

2. Answer any four questions of the following: 4x5= 20

- a) What is solid waste? Write about the solid waste management.
1+4
- b) Write down the activated sludge methods to treat the waste water.
5
- c) What are the advantages of microbial biodiesel over conventional one?
5
- d) Schematically represent the biodegradation of aromatic compounds.
5
- e) What are air pollutants? Write down the different source of air pollution.
1+4
- f) How do algal blooms contribute to water quality deterioration?
5

3. Answer any one question of the following: 1x10=10

- a) Schematically represent the secondary and tertiary treatment of waste water. Name two microbes associated with waste water treatment.
8+2=10
- b) Write down the process to production of vermicompost.
Difference between traditional compost and vermicompost.
Write down fungal mechanism to act as a biopesticide.
5+2+3=10