

2124

B.A./B.Sc. (General) Fifth Semester
Industrial Microbiology
IMB-501: Biodegradation of Wastes and Pollutants

Time allowed: 3 Hours

Max. Marks: 33

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.

x-x-x

- Q1. a) Name one method used for solid waste disposal.
b) What is the purpose of secondary sewage treatment?
c) Define potable water.
d) Mention one bacterial indicator of water safety.
e) Name a pollutant degraded in oil pollution biodegradation.

5×1=5

(Unit I)

- Q2. a) Explain the process of composting as a method of solid waste disposal.
b) Discuss the advantages and limitations of sanitary landfills.

3½+3½ =7

- Q3. a) Describe the incineration process and its significance in solid waste management.
b) Compare composting and incineration for waste disposal.

3½+3½ =7

(Unit II)

- Q4. a) Explain the steps involved in primary sewage treatment.
b) Discuss the role of disinfection in liquid waste treatment.

3½+3½ =7

- Q5. a) Describe secondary sewage treatment with reference to activated sludge process.
b) Explain the importance of tertiary sewage treatment in water purification.

3½+3½ =7

(Unit III)

- Q6. a) Describe the methods of disinfection of potable water supplies.
b) Explain the significance of bacterial indicators in determining water safety.

3½+3½ =7

- Q7. a) What are the standards for tolerable levels of faecal contamination in water?
b) Discuss the methods to ensure the safety of water supplies.

3½+3½ =7

(Unit IV)

- Q8. a) Explain the microbial biodegradation of alkyl-benzyl sulphonates.
b) Discuss the factors affecting the biodegradation of oil pollutants.

3½+3½ =7

- Q9. a) Describe the environmental impacts of oil pollution.
b) Explain the role of microorganisms in the biodegradation of oil spills.

3½+3½ =7

x-x-x