

QUESTIONS

1. Define wastewater and describe the typical characteristics of raw wastewater.

2. Design a wastewater treatment plant. Define unit operations—characterize process streams.

3. Define or explain the following terms:

COD

BOD

Total solids

Activated sludge

Screening

Flocculation agent

Suspended solids

Dissolved solids

Coagulation

Nitrification

Ozonation

Chlorination

4. What is the difference between “ Aerobic” and “ Anaerobic” processes in sewage treatment?

5. Many parameters have been used to measure the concentration of organic matter in wastewater. What are the most common methods used? Explain.

6. Determine BOD₅/COD, BOD₅/TOC, TOC/BOD₅ ratios for the following organic compound (C₅ H₇ NO₂). Assume "K" = 0.23d⁻¹ the organic compound is assumed to be completely biodegradable.

7. What is MIP? Explain the molecular imprinting process steps. What are the applications of MIPs in waste water?