

A-1032

Total Pages : 3

Roll No.

ESC-608

M.Sc. ENVIRONMENTAL SCIENCE (MSCES)

(Water and Waste Water Treatment Technologies-II)

4th Semester Examination, Session December 2024

Time : 2:00 Hrs.

Max. Marks : 35

Note :- This paper is of Thirty Five (35) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

Section-A

(Long Answer Type Questions) 2×9½=19

Note :- Section 'A' contains Five (05) Long-answer type questions of Nine and Half (9½) marks each. Learners are required to answer any *two* (02) questions only.

1. What is wastewater ? Explain the primary, secondary, and tertiary wastewater treatment processes ?
2. What is sludge in the context of wastewater treatment, and how is it generated during the treatment process ?
3. Discuss the role of ecosystem services, such as water purification and habitat restoration, in cleaner technology approaches.
4. Explain the role of government policies and regulations in promoting and regulating low-cost waste treatment methods.
5. What are the sustainable forestry and environmental certification schemes that impact wastewater management in the industry ?

Section–B

(Short Answer Type Questions) 4×4=16

Note :- Section ‘B’ contains Eight (08) Short-answer type questions of Four (04) marks each. Learners are required to answer any *four* (04) questions only.

1. What are the primary objectives of conventional biological treatment in wastewater treatment plants ?

2. What is the concept of biological waste treatment ?
3. Explain the role of data collection and documentation in the initial phase of an industrial waste audit.
4. Explain the concept of zero liquid discharge (ZLD).
5. What are the common causes of unpleasant odors in wastewater ?
6. Describe the specific contaminants, such as dyes and chemicals, commonly found in textile industry wastewater ?
7. What do you understand by hazardous waste and non-hazardous waste ?
8. Explain solid waste ? Describe the source of solid waste.
