A–0927

Total Pages : 3 **Roll No. .....**

ENSE-655/EVS-604

M.Sc. (Environmental Science) (MSCES)/ M.A. (Environmental Studies) (MAES)

Clean Technologies

Examination February, 2026

Time : 2:00 Hrs. Max. Marks : 70

Note* :–** This paper is of Seventy (70) 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) (2×19=38)

***Note* :–** Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

1. What is ex-situ remediation ? Discuss in detail the various kinds of ex-situ remediation technologies.

2. Give a detailed account of physico-chemical remediation techniques for metal-polluted water and soil.

3. What are hazardous waste ? Discuss its treatment technologies in detail.

4. What do you understand by ecological sanitation ? Discuss its concept and also discuss nutrients in human excreta and their applications in detail.

5. What is sludge ? Discuss various sludge treatment stages in detail.

Section–B

(Short Answer Type Questions) (4×8=32)

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

1. Explain transportation of solid waste from source to processing site.

2. Briefly discuss the advantages of recycling and reuse of solid wasteland also enlist important recyclable materials.

3. What is bioremediation ? Discuss in-situ bioremediation.

4. Briefly discuss about the recycling of nutrients giving emphasis on nutrients in human excreta.

5. Write a short note on biodegradable and non-biodegradable waste.

6. Briefly discuss the risk assessment of contaminated sites.

7. Discuss preliminary treatment of waste water.

8. Write a short note on storage and segregation of solid waste a source.

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