S-708

Total Pages: 3 Roll No.

EVS-604

Clean Technologies

M.Sc. Environmental Science (MSCES)

3rd Semester Examination, 2022 (Dec.)

Time: 2 Hours] 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.

SECTION-A (Long Answer Type Questions)

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.

 $(2 \times 19 = 38)$

1. What do you understand by *in-situ* and *ex-situ* remediation technologies? Discuss in-situ remediation technologies in detail.

- **2.** What is meant by contaminated sites? Discuss in detail the remediation method for contaminated Soil and groundwater.
- **3.** Discuss in detail the primary and secondary treatment technologies for wastewater.
- **4.** What do you understand about solid waste management? Discuss in detail the various steps involved in solid waste management.
- **5.** What is hazardous waste? Discuss its treatment technologies in detail.

SECTION-B

(Short Answer Type Questions)

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. (4×8=32)

Briefly explain:

- 1. Cleaner production and sustainable development.
- 2. Bioremediation.
- **3.** Characteristics of contaminated site.

- **4.** Preliminary treatment of waste water.
- **5.** Tertiary treatment of wastewater.
- **6.** Transportation of solid waste from Source to processing site.
- 7. Treatment of human excreta.
- **8.** ECOSAN.