

**P-506**

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## **EVS-604**

### **Clean Technologies**

M.Sc. Environmental Science (MSCES)

3rd Semester Examination, 2023 (June)

**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. Candidates should limit their answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

### **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.

(2×19=38)

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

2. Write an extended note on tertiary wastewater treatment methods.
3. What is sludge? Discuss various sludge treatment stages in detail.
4. Write an extended note on Solid waste management.
5. What do you understand by ecological sanitation? Discuss its concept and also discuss nutrients in human excreta and their applications 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)

#### **Write short note on:**

1. Remediation methods for Soil and groundwater.
2. Primary treatment of wastewater.
3. Secondary treatment of wastewater.
4. Ion. exchange method for wastewater treatment.

5. Hazardous waste and its classification.
  6. Treatment of Hazardous waste.
  7. Recycling and reuse of waste.
  8. Land disposal of hazardous waste.
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