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Total Pages: 3 Roll No.

ESC-603

Water and Waste Water Treatment Technologies-I

M.Sc. Environmental Science (MSCES)

3rd Semester Examination, 2023 (June)

Time: 2 Hours] [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 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 Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only.

(2×9½=19)

1. Explain in detail about the various sources of water in the earth.

- **2.** What is disinfection? Explain the methods of disinfection in detail.
- **3.** What are the different characteristics of sewage? Discuss in detail.
- **4.** What is septic tank? Discuss in detail about the disposal of septic tank effluent.
- **5.** Discuss in detail about the solid waste management in metropolis.

SECTION-B

(Short Answer Type Questions)

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. (4×4=16)

- **1.** What is pipe corrosion? Discuss in detail.
- **2.** Discuss the sources and causes of water impurities.
- **3.** Write a brief account on chemical and biological tests of water quality.
- **4.** Discuss about the various types of filters.

- **5.** Write a brief account of diffused air aerator.
- **6.** Draw and explain the layout of water treatment plant.
- **7.** Explain the theory of filtration in detail.
- **8.** What are asbestos cement pipes? Discuss its advantages and disadvantages.