

S-1177

Total Pages : 3

Roll No.

ES-553

Water and Waste Water Treatment Technologies

M.Sc. Environmental Science (MSCES)

2nd Year 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.

(2×19=38)

1. What are the various sources of impurities in water? What are the good standards for good quality of water? Discuss the various physical, chemical and biological tests to know the quality of water.

2. What are the various stages for treatment of water? Discuss in detail.
3. Why aeration of water is carried out? Discuss the theory of aeration. Also discuss different types of aerators in detail.
4. Write an extended note on sludge treatment and disposal.
5. Discuss in detail the various methods used for removal of odour and colour.

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 discuss:

1. Rapid Sand Filters.
2. Leachate in Landfills.
3. Disinfection of water.
4. Secondary treatment of waste water.

5. Characteristics of sewage.
 6. Sedimentation and flocculation.
 7. Septic tank.
 8. Secondary sewage treatment.
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