

P-1056

Total Pages : 3

Roll No.

ES-553

Water and Waste Water Treatment Technologies

M.Sc. Environmental Science (MSCES)

2nd Year 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. Discuss about various sources of water? Explain various sources of impurities in water. Discuss the various physical, chemical and biological tests to know the quality of water.

2. What is filtration? Discuss about the chemicals used in water treatment also discuss about the classification of rapid sand filters.
3. Discuss about the characteristics of waste water. Explain self purification in a stream and also discuss about dissolved oxygen in waste water.
4. What do you understand by disinfection of water? Explain the various types of disinfection and also discuss the process of chlorination.
5. Discuss composition of waste water. What do you understand by the conservation of water ? Discuss about the pollution prevention measures with cleaner technologies.

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)

1. What is corrosion? Explain the preventive measures for corrosion?

2. What is aeration? Explain its theory and limitations.
 3. Briefly discuss about septic tank, its advantages and disadvantages.
 4. Discuss various designs of Aerators.
 5. Write a brief note on sedimentation with flocculation.
 6. Differentiate between the primary and secondary treatment of sewage.
 7. Discuss briefly about the anaerobic digestion of sludge.
 8. Discuss in detail about the various methods used for removal of odour and colour.
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