

DR. B. R. AMBEDKAR OPEN UNIVERSITY, HYDERABAD
FACULTY OF SCIENCE
DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCE
M.Sc. ENVIRONMENTAL SCIENCE, FIRST YEAR, SEMESTER-II
(2025-2026)
C1: WATER & WASTE WATER TREATMENT TECHNOLOGIES

ASSIGNMENT – 1

Maximum Marks: 15

Minimum Marks: 06

Instructions to the Candidate:

- i. Answer all the questions**
- ii. Each question carries 5 marks**

1. Explain in detail the physical, chemical and biological characteristics of water, give the examples and their significance in water quality assessment.
2. Discuss in detail the process of chlorination, including reactions in water, break point chlorination, advantages and limitations.
3. Discuss the major types of sedimentation (free, flocculent, zone, compression) with relevant treatment examples.

ASSIGNMENT – II

Instructions to the Candidate:

Maximum Marks: 15

Minimum Marks: 06

- i. Answer all the questions**
- ii. Each question carries 5 marks**

1. Explain anaerobic digestion in detail, including microbial stages, reactor types, operational factors and advantages.
2. Describe the reporting and implementation process in waste audits.
3. Describe the sequence and objectives of preliminary and primary treatment in wastewater treatment plants.

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C2: AIR POLLUTION AND CONTROL TECHNOLOGIES
ASSIGNMENT – 1

Maximum Marks: 15

Minimum Marks: 06

Instructions to the Candidate:

- i. Answer all the questions**
- ii. Each question carries 5 marks**

1. Discuss in detail determine and monitoring the air quality.
2. Explain primary and secondary meteorological parameters.
3. Give a detailed account of National Ambient Air Quality.

ASSIGNMENT – II

Instructions to the Candidate:

Maximum Marks: 15

- i. Answer all the questions**
- ii. Each question carries 5 marks**

Minimum Marks: 06

1. Explain the ways to reduce the urban pollution in India.
2. Describe the sources of vehicular pollution
3. Explain the working principle of the Electrostatic precipitator.

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C3: GEOMATICS
ASSIGNMENT – 1

Maximum Marks: 15

Minimum Marks: 06

Instructions to the Candidate:

- i. Answer all the questions**
- ii. Each question carries 5 marks**

1. Explain in detail the vector and raster data models with advantages, disadvantages and applications.
2. Discuss the major global navigation systems (GPS, GLONASS, Galileo, BeiDou, NavIC)
3. Discuss the fundamental laws governing radiant energy and explain their role in understanding remote sensing measurements.

ASSIGNMENT – II

Instructions to the Candidate:

Maximum Marks: 15

- i. Answer all the questions**
- ii. Each question carries 5 marks**

Minimum Marks: 06

1. Explain how Remote sensing and GIS contribute to Water Resource Management.
2. Explain the different types of data storage models used in GIS.
3. Discuss the process and significance of ground truthing in GIS and Remote sensing.

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C4: EIA AND ENVIRONMENTAL AUDIT
ASSIGNMENT – 1

Maximum Marks: 15

Minimum Marks: 06

Instructions to the Candidate:

- i. Answer all the questions**
- ii. Each question carries 5 marks**

1. Described the various steps involved in the EIA process for groundwater.
2. Describe the purpose of assessing the Air Environment in EIA.
3. Discuss the major components of Environmental and Health Impact Assessment (EHIA) in Municipal Solid Waste Management projects.

ASSIGNMENT – II

Instructions to the Candidate:

Maximum Marks: 15

- i. Answer all the questions**
- ii. Each question carries 5 marks**

Minimum Marks: 06

1. Describe the various types of Environmental Audit.
2. Explain the significance of raw materials audit in a manufacturing industry.
3. Describe coastal zone management plans (CZMPs)