

Code: CE7T4D

**IV B.Tech - I Semester – Regular/Supplementary Examinations  
JANUARY - 2022**

**ADVANCED ENVIRONMENTAL ENGINEERING  
(CIVIL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

**PART – A**

Answer *all* the questions. All questions carry equal marks

11 x 2 = 22 M

1.

- a) Define wet and dry waste.
- b) Define Refuge.
- c) Give any two advantages of Haul container collection system.
- d) Differentiate curb and alley services.
- e) Explain the separation process of MSW.
- f) Write a short note on compaction of MSW.
- g) Explain about the composition of land fill gases.
- h) Give any two examples each for primary and secondary air pollutants.
- i) Explain incomplete combustion.
- j) Define Relative humidity.
- k) Mention the name of best plume behavior in summer.

## PART – B

Answer any **THREE** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain the sources, types and composition of solid waste. What are the effects of improper handling of solid waste on public? 8 M
- b) Explain in detail about the onsite handling of municipal solid waste management. 8 M
3. a) Neatly draw the schematic diagram of Haul container system and stationery container system. 8 M
- b) What is the need for a transfer station? Explain the process of selection of location of a transfer station. 8 M
4. a) How does incineration help in the management of solid waste? Describe the incineration technologies and air emissions and its control in detail. 8 M
- b) Describe the location criteria of a sanitary landfill with a neat sketch. 8 M
5. a) Explain about the classification of air pollutants from the atmosphere and stack. 8 M
- b) Explain how the air pollutants effects the man, material and vegetation? 8 M

6. a) Explain the Gaussian plume dispersion equation for the gaseous pollutants. 8 M
- b) Define the atmospheric stability and types of plume behavior with neat figure. 8 M