



JOIN
VIT QUESTION PAPERS
ON TELEGRAM



SCHOOL OF CIVIL ENGINEERING

Continuous Assessment Test – I

Programme Name & Branch: B. Tech. (Civil Engineering)

Course Name & Code: SOLID WASTE MANAGEMENT (CIE2020)

Class Number: 3530 Slot: G1 Exam Duration: 90 mins. Maximum Marks: 50

- | S. No. | Question | Marks |
|--------|---|-------|
| 1. | Describe the historic development of formulation of solid waste management rules in India. (6 Marks) | 6 |
| 2. | How is municipal solid waste classified? Why characterization of solid waste is to be done? (8 Marks) | 8 |
| 3. | Explain the importance of recycling. How the role of shipbreaking industry in recycling and reuse of waste. (6 Marks) | 6 |
| 4. | If you were asked to determine the solid waste composition and generation of VIT campus, what steps would you follow? (6 Marks) | 6 |
| 5. | What are the environmental pollutions associated with Ganesh Festival and idol immersion. Delineate the possible solutions to reduce the environmental pollution. (8 Marks) | 8 |
| 6. | Determine as-discarded density of the given waste sample (6 Marks) | 6 |

Component	Dry Mass (kg)	Moisture content (%)	Density on Wet Basis (kg/m ³)
Food waste	4.5	70	290
Paper	42.3	6	85
Cardboard	9.5	5	50
Plastics	9.8	2	65
Garden Trimmings	4.8	60	105
Wood	6.4	20	240

7. Municipal Corporation of Vellore had spent 2 crores in construction of an incinerator. The idea was to burn 1000 kg of waste that is generated from Vellore and generate energy. The design of the incinerator was by a German company. Energy content while designing the incinerator was taken as 24 MJ/kg. This incinerator worked hardly for two weeks and the Municipal Corporation of Vellore decided to close this unit because of the cost incurred towards burning the waste. A committee was set to find the reason behind this and you were assigned the task to find the reason for failure of this incinerator. After the preliminary study it has been found that the ash content of the waste is 5%. The composition of the waste generated in Vellore is given in the table below. Find the reason for the failure of the incinerator giving proper reason. (10 marks)

Component	Wet mass (kg)	Moisture Content (%)	Ash %	Energy (MJ/kg)
Food Waste	15	70	5	4.55
Paper	35	6	6	16.75
Cardboard	12	5	5	16.30
Plastics	11	2	10	32.60
Garden Trimmings	17	60	4.5	6.50
Wood	10	20	1.5	18.60

SEARCH VIT QUESTION PAPERS
ON TELEGRAM TO JOIN