

JK Lakshmipat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination, Dec 2022
B. Tech. in Civil Engineering, Semester VII

Roll No.....

Course Code and Name : CE1207
Integrated Waste Management for Smart Cities

Time: 2.5 hours Max. Marks: 30

Instructions to students:

1. Do not write anything other than your roll number on question paper.
 2. Assume suitable data wherever required and mention it clearly.
 3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.
 4. **Write your answers in detail and it should be appropriate to the marks assigned for that question.**
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1. TCLP test is one of the important tests in solid waste management. Describe in detail that for what purpose this test is performed. (3)
CO1
2. With the increase in the age of concrete building, in future it is required to demolish number of buildings each year. It will create a lot of demolition waste. However, there are various methods of reuse it. Describe in detail these methods. (3)
CO 3
3. Jaipur is the capital and biggest city of Rajasthan and house of around 40 lac people. It is expected that population may increase by 2.5 % each year. After 20 year a land fill site is planned for safe disposal of solid wastes. The average solid waste generated per person per day is X (assume a suitable value in the range of 400-600 gm). The specific gravity of solid waste is 2.5. Find the area of Landfill site in Hectare if the maximum height of the hump is 15 m and maximum width of the hump is 300. The reopening period of hump is 16 years, and one hump is used for storage of 2-year waste. (6)
CO 3
4. In last few years Indian government take lot of measures in proper solid waste management. Still, there are various issues in this sector. Describe in detail the important issues related to solid waste management in our cities (At least 3). (6)
CO 4
5. What do you understand by E-Waste? (2)
What are the various hazards of E-Waste? (2)
What are the various initiatives by which E – Waste can be properly managed? (2)
CO 3
6. Describe in detail the major observations of MSW rules 2016. (6)
CO 4