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10CV757

Seventh Semester B.E. Degree Examination, Dec.2015/Jan.2016
Solid Waste Management

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART - A

- 1 a. Define Land Pollution. What are the effects and control methods of Land Pollution? (10 Marks)
- b. List out different sources of Municipal Solid Waste. Explain briefly. (10 Marks)
- 2 a. Explain with the aid of neat sketches, Hauled container system and stationary container system of collection of Municipal wastes. (10 Marks)
- b. Describe Route Optimization process. (10 Marks)
- 3 a. Brief out what do you mean by Mechanical volume reduction and Chemical volume reduction. (10 Marks)
- b. Give list of component separation techniques. Explain them. (10 Marks)
- 4 a. Define Incineration. Sketch and explain a typical Municipal Incinerator. (10 Marks)
- b. What are 3T's of Incineration process? Explain. (05 Marks)
- c. Explain Pyrolysis process with applicable to incineration process for Municipal solid waste. (05 Marks)

PART - B

- 5 a. Describe different design components which are to be considered for Aerobic composting process. (10 Marks)
- b. With the aid of neat sketch, explain the Bangalore Process of composting. (10 Marks)
- 6 a. Explain the factors that govern the selection of site for Sanitary Land filling. (10 Marks)
- b. What are the sanitary land filling methods? Explain briefly. (10 Marks)
- 7 a. Highlight the Open dumping method of disposing Municipal Solid waste with its advantages and disadvantages. (10 Marks)
- b. Determine the land fill area required for a municipal solid waste management system with a population 50000, given that :
 - i) Solid waste generation = 350 gm/person/day.
 - ii) Compacted density of landfill = 504 kg/m³.
 - iii) Average depth of compacted solid wastes = 3m. (10 Marks)
- 8 a. Explain briefly the Biomedical waste classification and disposal. (10 Marks)
- b. Write a short note on Plastic waste, its environmental significance and reuse. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. -8 = 50, will be treated as malpractice.