

Code No:R164201C

R16

Set No. 1

IV B.Tech II Semester Advanced Supplementary Examinations, Aug/Sep - 2022
SOLID AND HAZARDOUS WASTE MANAGEMENT

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B

Answer ALL sub questions from Part-A

Answer any FOUR questions from Part-B

PART-A(14 Marks)

1. a) List the components of ISWM. [3]
b) Describe the onsite treatment of solid waste. [3]
c) What is the major role of MRF? [2]
d) How is MSW aerobically converted into a resource? [2]
e) Why there is a need to manage solid waste? [2]
f) Define: Hazardous waste, Biomedical waste. [2]

PART-B(4x14 = 56 Marks)

2. a) Explicit the different parameters and characteristics of solid waste? [7]
b) Illustrate a flow chart of material flow and solid waste generation. [7]
3. a) State and discuss the different elements used to prioritize the onsite processing of solid waste. [7]
b) Discuss different collection systems of municipal solid waste. What type of waste collection system is there in India? [7]
4. a) What is the transfer station? How can a properly designed transfer station help to improve the efficiency of the solid waste management system? [7]
b) What is recycling? How source segregation will help in the same? Discuss in detail. [7]
5. a) Illustrate the anaerobic method of material and energy recovery system with a neat sketch. [7]
b) Describe TCLP test. State its significance in detail. [7]
6. a) Draw a schematic diagram of the landfill. An explicit essential component of it. [7]
b) Elaborate 4R's principle of solid waste management. [7]
7. a) Explain different characteristics of hazardous solid waste in detail. [7]
b) Explicit different color coding of biomedical waste. How does plasma pyrolysis work? [7]

