

**R13**

Code No: 118ER

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, April - 2018

**SOLID WASTE MANAGEMENT**  
(Civil Engineering)

Time: 3 hours

Max. Marks: 75

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART - A**

(25 Marks)

- 1.a) Define solid waste.
- b) Explain different sources of solid waste.
- c) What do you mean by segregation of waste.
- d) What is sanitary land fill?
- e) What is sampling?
- f) Explain the survey analysis of hazardous waste.
- g) Define bio medical waste.
- h) How incineration process is preferable for bio medical waste?
- i) Define e-waste.
- j) Illustrate source generation of e-waste.

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**PART - B**

(50 Marks)

- 2.a) Illustrate the impact on environmental health effects of solid waste.
  - b) Explain the different handling methods of solid waste.
- OR**
- 3.a) Classify the different types of solid waste with examples.
  - b) Explain the composition of domestic solid waste with examples.
- 4.a) Explain various process technologies of solid waste.
  - b) What is composting? And explain in detail about vermicomposting.

[5+5]  
  
  
[5+5]  
[5+5]

**OR**

- 5.a) Explain various regulatory aspects of municipal solid waste management.
  - b) Explain briefly about post closure of environmental monitoring.
- 6.a) Explain 3R system of hazardous waste.
  - b) Explain in detail about the proximate analysis of hazardous waste.

[5+5]  
  
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**OR**

- 7.a) Explain various treatment technologies of hazardous waste.
- b) Illustrate the concept of pyrolysis in hazardous waste management.

[5+5]

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- 8.a) Explain the classification of bio medical waste management.  
b) Write a short note on various collection systems of bio medical waste. [5+5]

OR

- 9.a) Illustrate the radiation standards of bio medical waste?  
b) What are the various health effects for improper disposal of bio medical waste? [5+5]

- 10.a) Explain the characteristic properties of e-waste.  
b) What are the various collection system of e-waste? [5+5]

OR

- 11.a) Explain how the recycling of e-waste can be managed. Explain with examples of case study.  
b) Describe the global strategy of e-waste management? [5+5]

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