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Total No. of Questions: [09]

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B. Tech. (Civil Engineering) (Semester – 6th)
SOLID AND HAZARDOUS WASTE MANAGEMENT
Subject Code: BCIED1652
Paper ID: [19110731]

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A

(2 marks each)

- Q1. Attempt the following:
- a) Enumerate the alternative techniques adopted for collection of solid waste.
 - b) Distinguish between reuse and recycle.
 - c) Explain the necessity of waste landfill remediation.
 - d) State the factors governing the selection of landfills.
 - e) Discuss the need for solid waste management.
 - f) Illustrate the means to handle hazardous waste.
 - g) State the responsibilities of industries towards reduction of E-waste.
 - h) Differentiate industrial solid wastes and hazardous wastes.
 - i) Define radioactive waste.
 - j) What is the significance of recycling?

Section – B

(5 marks each)

- Q2. What is transformation? Write down the importance of waste transformation.
- Q3. Discuss in detail the need and methods adopted for storage and processing of solid waste.
- Q4. What is pyrolysis? In what way is it related to solid waste? Explain.
- Q5. Discuss the problems associated with E-waste. Describe the management of E-waste.
- Q6. What are the regulatory aspects of bio medical waste management? Explain.

Section – C

(10 marks each)

- Q7. Explain the types of waste collection systems based on their mode of operation with a neat sketch.
- Q8. Define hazardous waste. List various categories of hazardous waste and explain any two in detail.
- Q9. Explain the following terms with reference to processing of Municipal Solid Waste:
- a) Shredding
 - b) Pulping
 - c) Granulating
 - d) Solidification
 - e) Sorting