Roll No…….. **Total No. of Printed Pages: [01]**
Total No. of Questions: [09]

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