

Total No. of Questions : 8]

SEAT No. :

PC1702

[Total No. of Pages : 2

[6353]-19

T.E. (Civil Engg.)

SOLID WASTE MANAGEMENT

(2019 Pattern) (Semester - II) (Elective-II) (301015 f)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6 Q.7 or Q.8.
- 2) Figures to the right indicate full marks.
- 3) Draw neat diagrams wherever necessary.
- 4) Assume suitable data if necessary.
- 5) Use of scientific calculator is allowed.

- Q1)** a) List the tools and equipment's used for storage and collection of Municipal Solid Waste. [6]
- b) Suggest the measures to be adopted in execution of vermicomposting. [6]
- c) State the terms related to Solid waste management. [6]
- i) Segregation
 - ii) Recovery
 - iii) Recycling
 - iv) Reuse

OR

- Q2)** a) Explain the ill effects on the health of persons involved in solid waste collection. [6]
- b) State the Classification of solid waste. [6]
- c) Write a note on material recovery facility. [6]

- Q3)** a) What are the stages of Anaerobic digestion. [6]
- b) Explain any four factors affecting the generation of solid waste. [6]
- c) Suggest the relevant situations for the disposal of solid waste through incineration. [5]

OR

P.T.O.

- Q4)** a) Describe the incineration technologies and air emissions and its control in detail. Explain the following: [6]
i) Pyrolysis
ii) Refuse-derived fuel
b) How does energy recovery relate to renewable energy. [5]
c) State the products of incineration process with their use. [6]

- Q5)** a) Differentiate between Area method and Trench method of Landfill. [6]
b) Write principles of Bioreactor landfill. [6]
c) Draw and explain with neat labeled sketch of any one method of leachate control. [6]

OR

- Q6)** a) State the significance of legal aspects in solid waste management. [6]
b) Specify the role of Transfer station in Municipal Solid waste management. [6]
c) State any two advantages and disadvantages of Landfill method of solid waste disposal. [6]

- Q7)** a) Write objectives and major provision in construction and demolition (C&D) waste management rules -2016. [6]
b) Explain the importance of public participation in solid waste management. [6]
c) Define E-waste and its harmful effects on environment. [5]

OR

- Q8)** a) Explain any one case study of material recovered from e-waste. [6]
b) State classification of biomedical waste as per BMW (Management) Rules, 2016. [6]
c) State control measures taken for industrial waste. [5]

