

Total No. of Questions : 8]

SEAT No. :

PB-3761

[Total No. of Pages : 2

[6262]-19

T.E. (Civil Engg.)

SOLID WASTE MANAGEMENT

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

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.No.1 or Q.No. 2, Q.No. 3 or Q.No. 4, Q.No. 5 or Q.No. 6, Q.No. 7 or Q.No. 8.
- 2) Figures to the right indicate full marks.
- 3) Draw neat figures wherever necessary.
- 4) Assume suitable data if necessary.
- 5) Use of scientific calculator is allowed.

- Q1)** a) Suggest and justify the criteria adopted for the execution of vermicomposting. [6]
- b) Explain the mechanical volume reduction method of processing technique. [6]
- c) State the terms related to Solid waste management [6]
- i) Segregation
 - ii) Recovery
 - iii) Recycling
 - iv) Reuse

OR

- Q2)** a) What is the importance of 3R principle in solid waste management? [6]
- b) Specify the role of transfer stations in municipal solid waste management. [6]
- c) Explain the integrated waste management. [6]
- Q3)** a) What are the factors affecting anaerobic digestion? [6]
- b) Write the environmental impacts of waste to energy system. [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
 - iii) Bio gasification
- b) How to estimate of low and high heating value of any material. [6]
- c) Write working principle, advantages and disadvantages of anaerobic digestion process. [5]

- Q5)** a) Explain area method of landfilling and state the factors to be considered for site selection. [6]
- b) Write methods of slope stability analysis. [6]
- c) Describe the factors that affect the production of leachate and landfill gas in the landfill. [6]

OR

- Q6)** a) Write short notes on legal aspects of solid waste disposal. [6]
- b) Enlist methods of Biomining and explain any one method of it. [6]
- c) Identify the adverse effects of a landfill leachate and list appropriate control measures. [6]

- Q7)** a) Suggest the appropriate method for disposal of industrial solid waste and need of its recycling. [6]
- b) List the sources of generation of biomedical waste. [6]
- c) Suggest various management technologies for biomedical waste. [5]

OR

- Q8)** a) Discuss the current scenario of recycling of E-waste in India. [6]
- b) Explain any one case study of processing and reuse of construction & demolition waste. [6]
- c) Write short note on to life cycle assessment (LCA) in solid waste management. [5]

