

Total No. of Questions : 8]

SEAT No. :

P734

[Total No. of Pages : 2

[5870]-1019

T.E. (Civil)

Solid Waste Management

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

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 with sketch the Bangalore Method of composting. [6]
- c) State the terms related to Solid waste management [6]
- i) Segregation
 - ii) Recovery
 - iii) Recycling

OR

- Q2)** a) Write a note on material recovery facility. [6]
- b) Specify the role of transfer station in municipal solid waste management. [6]
- c) Explain integrated waste management. [6]

- Q3)** a) What are the factors affecting anaerobic digestion? [6]
- b) Write environmental impacts of waste to energy system. [6]
- c) What are the different types of incinerators? Explain any one. [5]

OR

- Q4)** a) Describe the incineration technologies and air emissions and its control in detail. Explain the following: [6]
- i) Pyrolysis

P.T.O.

- 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) Write short note on legacy waste management. [6]
- b) Write methods of slope stability analysis. [6]
- c) Describe the factors which affect production of leachate and landfill gas in the landfill? [6]
- OR
- Q6)** a) What is engineered landfill? Why it is essential? Explain in brief different methods of landfilling. [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) Write objectives and major provision in construction and demolition (C&D) waste management rules - 2016. [6]
- c) Suggest various management technologies for biomedical waste. [5]
- OR
- Q8)** a) Explain any one case study of material recovered from e-waste. [6]
- b) Explain any one case study of processing and reuse of construction & demolition waste. [6]
- c) Write objectives and major provision in plastic waste management rules -2016. [5]

