

Roll No. :

Total No. of Questions : 16]

[Total No. of Printed Pages : 3

SEME-411

M.Sc. (IVth Semester) Examination, 2022

ENVIRONMENTAL SCIENCE

Paper - ESEO-403 (b)

(Waste Management)

Time : 1½ Hours]

[Maximum Marks : 40

Note :- The question paper contains three Sections.

Section-A

(Marks : 1 × 10 = 10)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **1** mark.

Section-B

(Marks : 3 × 5 = 15)

Note :- Answer any *five* questions by selecting at least *one* question from each Unit (Answer limit **200** words). Each question carries **3** marks.

Section-C

(Marks : 5 × 3 = 15)

Note :- Answer any *three* questions by selecting *one* question from each Unit (Answer limit **500** words). Each question carries **5** marks.

Section-A

1. Attempt all questions.

(i) Define Waste Generation Rate.

BI-252

(1)

SEME-411 P.T.O.

- (ii) Give examples of residential and commercial solid wastes.
- (iii) Define calorific value.
- (iv) Write the composition of municipal solid waste.
- (v) Define waste disposal.
- (vi) What is transfer station ?
- (vii) Give definition of pyrolysis.
- (viii) What is RDF ?
- (ix) What is biomedical waste ?
- (x) Write the composition of fly ash.

Section-B

Unit-I

- 2. Discuss the factors affecting the generation of solid waste.
- 3. Explain sampling of solid waste.
- 4. Write the sources of solid waste.

Unit-II

- 5. Write a short note on recycling of solid waste.
- 6. List out the factors to be considered for improving collection efficiency of waste.
- 7. List out the factors to be considered in selecting solid waste collection equipment.

Unit-III

- 8. Give the classification of hazardous waste.
- 9. Write a short note on plastic waste disposal.
- 10. Discuss electronic waste disposal methods.

Section–C

Unit–I

11. Define solid waste. Give a detailed note on waste characteristics.
12. Explain types of waste. Discuss proximate and ultimate analysis of solid waste.

Unit–II

13. Give a detailed note on Waste to Energy Conversion Technologies.
14. Describe the design and operation of a sanitary landfill with a neat sketch.

Unit–III

15. What are the different methods used for hazardous waste treatment ? Discuss in detail.
16. Explain the various methods used for treatment and disposal of Biomedical Waste.