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December–2023

M.Sc. (Physics) IIIrd SEMESTER

WASTE MANAGEMENT IN OUR DAILY LIFE

(OES-301A)

Time : 3 Hours] [Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part–A in short.*
2. *Answer any four questions from Part–B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART–A

1. (a) What is waste? What are its types? (1.5)

(b) Give the composition of Municipality solid waste. (1.5)

(c) Why segregation of waste at the point of generation is important? (1.5)

(d) What is 3R principle? (1.5)

(e) What are the harmful effects of open burning of solid wastes? (1.5)

(f) How usage of polythene carry bags can be reduced? (1.5)

(g) Differentiate composting and vermicomposting. (1.5)

(h) What are the possible uses of fly ash? (1.5)

(i) What is pyrolysis? (1.5)

(j) How land is selected for sanity landfilling? (1.5)

PART–B

2. (a) Explain different types of bins used for solid waste collection. (10)

   (b) What types of vehicles are used for solid waste transportation? (5)

3. (a) How waste generation can be prevented? Explain with examples. (5)

   (b) Define recycling. What are its advantages? Explain the recycling of any two materials. (10)

4. Explain different methods used for waste size and volume reduction. (15)

5. (a) What are the best practices for solid waste disposal? (5)

   (b) Explain different methods used for its safe disposal. (10)

6. Explain different methods used to recover energy from the waste. (15)

7. Define anaerobic digestion. Explain the process of biogas production using a labelled diagram. (15)
