



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Programme 6th Semester Examination, 2022

**EVSGDSE03T-ENVIRONMENTAL SCIENCE (DSE2)**

Time Allotted: 2 Hours

Full Marks: 50

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.*

1. Answer any **ten** questions from the following: 1×10 = 10
- (a) What do you mean by Integrated waste management?
  - (b) Define anaerobic digestion.
  - (c) Give an example of e-waste.
  - (d) Mention drawbacks of waste management techniques in India.
  - (e) Mention types of Industrial waste.
  - (f) Define incineration.
  - (g) What is leachate?
  - (h) Give an example of waste to wealth technique.
  - (i) What is the composition of biogas?
  - (j) State the major benefit of dual fuel engine.
  - (k) In which year the Hazardous Waste (Management and Handling Rule) was introduced in India?
  - (l) Which is the key-species in vermiculture technique?
2. Answer any **five** questions from the following: 2×5 = 10
- (a) Define Biomedical waste.
  - (b) Mention two impacts of solid waste on environment.
  - (c) Describe the process pyrolysis.
  - (d) Classify solid wastes on the basis of their sources.
  - (e) How ground water is polluted by solid waste?
  - (f) Why LCA is considered as Cradle-to-Grave approach?
  - (g) Discuss the difference between effluent treatment plant and sewage treatment plant.

3. Answer any *six* questions from the following: 5×6 = 30
- (a) Describe the process of Sanitary landfill. 5
  - (b) Write a short note on '4R'. 5
  - (c) Briefly describe the steps of municipal solid waste management. 5
  - (d) How mining waste leads to land degradation? 5
  - (e) Discuss different steps of LCA. 5
  - (f) What are the various environmental threats related to mining waste? 5
  - (g) Why stack emission monitoring is necessary? What are the different ways to control stack emission?  $2\frac{1}{2} + 2\frac{1}{2}$
  - (h) Discuss the mechanical biological treatment of wastewater. 5

**N.B. :** *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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