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BWA–003

**CERTIFICATE IN SOLID WASTES
TREATMENT TECHNIQUES
(CSWATT)**

Term-End Examination

June, 2024

**BWA–003 : SOLID WASTES PROCESSING AND
TREATMENT TECHNIQUES**

Time : 3 Hours

Maximum Marks : 70

Note : (i) Attempt any **five** questions.

(ii) All questions carry equal marks.

(iii) Use of calculator is permitted.

1. What is meant by integrated solid waste management (IWSM) system ? Discuss the waste management strategies in IWSM approach. 10
2. The amount of solid waste applied to a rotary screen is 100 tonne/hour. The percentage of gain in solid waste is 9%. The total weight of

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material in underflow is 10 tonne/hour and weight of glass in screen underflow is 7.2 tonne/hour. Determine the recovery efficiency and effectiveness of the screen. 10

3. What is meant by composting ? With the help of a neat sketch, describe the windrow method of composting. 10
4. What are different processes involved in anaerobic digestion ? How do the organic load and hydraulic retention time affect the anaerobic digestion process ? 10
5. Describe various objectives of Mechanical Biological Treatment (MBT). Also, describe its advantages over bioreactor landfills. 10
6. What is Incineration ? What are the main products of incineration ? Discuss each of them in detail. 10
7. Briefly describe the process of gasification. Also, describe various advantages and limitations of this process. 10

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8. What do you understand by E-waste ? Describe a suitable strategy to handle with this type of waste. 10
9. What is meant by Biomedical Wastes ? Discuss various methods that may be used for treatment/disposal of biomedical wastes. 10
10. Write short notes on the following : $4 \times 2.5 = 10$
- (a) Chemical volume reduction
 - (b) Vermi-composting
 - (c) Waste to energy recovery
 - (d) Radioactive wastes