

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023
(Second Semester)

Branch – ENVIRONMENTAL SCIENCE

INTEGRATED WASTE MANAGEMENT

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 The process of burning of municipal solid waste at high temperature is called
(i) Incineration (ii) Composting
(iii) Land filling (iv) Shredding
- 2 Which of the following waste will have more density?
(i) Plastic Wastes (ii) Metal Wastes
(iii) Glass Wastes (iv) Food Wastes
- 3 What is the method that fills in gas into the landfills?
(i) Vermicomposting (ii) *In situ* aeration
(iii) Incineration (iv) Recycling
- 4 The hazardous wastes like PCBs can be treated through
(i) Ozonisation (ii) Evaporation
(iii) Fluid Bed Incineration (iv) Carbon Bed Adsorption
- 5 How is High Level solidified nuclear wastes (HLW) stored?
(i) Concrete Tanks (ii) Canisters
(iii) Packed rock salt (iv) Soil bins

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Explain how municipal wastes are classified and mention its composition.
OR
b Explain the factors affecting waste generation rate.
- 7 a State on compositional analysis of solid waste.
OR
b Discuss the methods of waste quantification.
- 8 a Explain the processes of energy generation methods from solid wastes.
OR
b Discuss the impacts of sanitary landfill method.

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- 9 a Classify the types of hazardous waste.
OR
b How secured landfill are suitable for hazardous waste disposal? Justify.
- 10 a Explain the beneficial use of construction and demoloition wastes.
OR
b Evaluate the consequences of plastic wastes on marine environment.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 6 = 30)

- 11 a Enumerate the functional elements of the solid waste management in detail.
OR
b Assess the public attitude and legislative provisions for solid waste generation.
- 12 a Elucidate the chemical characteristics of solid wastes.
OR
b Justify the significance of solid waste processing and recovery.
- 13 a Analyze the types, establishment and management of landfills.
OR
b Justify the significance of circular economy, EPR and CER Concepts in waste management.
- 14 a Evaluate the existing methods of collection & transportation ^{of} hazardous wastes.
OR
b Explain any three methods of hazardous waste treatment.
- 15 a Interpret your views on Social Entrepreneurship in waste management.
OR
b Compare any three case studies for effective waste management.

Z-Z-Z

END