

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2022
(Second Semester)

Branch – ENVIRONMENTAL SCIENCE

SOIL POLLUTION AND SOLID 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. Which horizon helps to determine the pH of the soil?
(i) A (ii) B (iii) C (iv) O
2. Which of the following is correct regarding the disposal of waste by landfilling?
(i) Economical method
(ii) Foul gases are not produced
(iii) Preferred in low lying areas
(iv) Separation of different types of waste not required
3. What is the hazardous pollutant released from LED's?
(i) Cobalt (ii) Barium (iii) Arsenic (iv) Cadmium
4. When did The Environment (Protection) Act, 1986, come into force?
(i) 01 April 1986 (ii) 01 May 1986
(iii) 01 March 1986 (iv) 19 November 1986
5. Which of the following is not a high heat system for treating biomedical waste?
(i) Hydroplaning (ii) Autoclaving
(iii) Dry heat sterilization (iv) Incineration

SECTION - B (15 Marks)

Answer ALL Questions

ALL questions carry EQUAL marks (5 x 3 = 15)

6. a. State the significance of soil pH on crop production.
OR
b. Explain the different types of soil erosion.
7. a. Differentiate the Refused Derived Fuel (RDF) and Solid Recovered Fuel (SRF).
OR
b. Evaluate the significance of C:N ratio in composting.
8. a. State the responsibilities of industries towards reduction of e-waste.
OR
b. Illustrate the characteristics of hazardous waste.
9. a. Classify the microorganisms according to Rules for the Manufacture, Use, Import, Export and Storage of Hazardous micro-organisms/Genetically engineered organisms or cells.
OR
b. Explain the utilization of fly ash in embankment construction according to MoEF&CC.
10. a. 'Incineration is an ideal method for biomedical waste management' – Justify.
OR
b. State the procedure for storage of e-waste.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 6 = 30)

11.a Elucidate the sources and impacts of various intensive agricultural practices on terrestrial environment.

OR

b Analyze the significance of soil micronutrients for plant productivity.

12.a Assess the challenges and barriers of source segregation in MSW.

OR

b Critically analyze the pros and cons of sanitary landfill method.

13.a Classify the different lists of hazardous waste with examples.

OR

b Explain the different methods of hazardous waste disposal.

14.a Enumerate the powers ensure to prevent environmental pollution according to Chapter III of The Environment (Protection) Act, 1986.

OR

b Discuss the opportunities for circular economy according to the Battery Waste Management Rules.

15.a Explain the various categories of biomedical wastes.

OR

b Critically analyze the existing legal instruments to curb plastic wastes.

Z-Z-Z

END