

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024
(Third Semester)

Branch - BIOTECHNOLOGY

MAJOR ELECTIVE COURSE – II WASTE MANAGEMENT

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	The organic material of the solid waste will decompose_____. a) By the flow of water b) By the soil particles c) By the action of microorganisms d) By oxidation	K1	CO1
	2	Which of the following can be recycled many times? a) Plastic b) Wood c) Organic materials d) Aluminium	K2	CO1
2	3	Which of the following is true regarding disposal of waste by land filling? a) Economical method b) Preferred in low lying areas c) Foul gases are not produced d) Separation of different types of waste not required	K1	CO2
	4	The density of ash produced in the municipal solid waste is _____ a) 100 kg/m ³ b) 450 kg/m ³ c) 700 kg/m ³ d) 1000 kg/m ³	K2	CO2
3	5	Which of the following is not a waste treatment method for biomedical wastes? a) Incineration b) Chemical disinfecting c) Autoclaving d) Sieving	K1	CO3
	6	Cytotoxic and expired drugs are disposed of by_____. a) Dumping b) Autoclave c) Incineration d) Chemical disinfection	K2	CO3
4	7	Which of the following are the main contributors of the e-waste in the world? I. Refrigerators/freezers, washing machines, dishwashers II. Small household appliances (toasters, coffee makers, irons, hairdryers) III. Personal computers, telephones, mobile phones, laptops, printers, scanners, Photocopiers IV. Gas cylinder, chimneys & home appliances a) Only I, II, III b) Only I & II c) Only I, III, IV d) All of the above	K1	CO4
	8	Which toxic compound is not found in e-waste? a) Mercury b) Cadmium c) Neon d) Lead	K2	CO4
5	9	The Air Act contains_____. a) 5 Chapters b) 6 Chapters c) 7 Chapters d) 8 Chapters	K1	CO5
	10	Penalty for conservation of the provisions of the Forest Act is under_____. a) Section 3A b) Section 4A c) Section 12A d) Section 8A	K2	CO5

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SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Enlist the types of solid wastes and a note on each type.	K3	CO1
		(OR)		
	11.b.	Classify the composition of solid waste and add a note on its characteristics.		
2	12.a.	Examine the mechanism and procedure of composting.	K3	CO2
		(OR)		
	12.b.	Ascertain the role of bioremediation in solid waste management.		
3	13.a.	List out the methods of disposal of biomedical waste and their segregation.	K4	CO3
		(OR)		
	13.b.	Categorize the hazardous waste based on characteristics.		
4	14.a.	Give an outline of the rules for E waste management.	K4	CO4
		(OR)		
	14.b.	Enlist the rules used for plastic management.		
5	15.a.	Explain the air (prevention and control of pollution) act 1981.	K5	CO5
		(OR)		
	15.b.	Evaluate the role of NGO's in Environmental Protection.		

SECTION - C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Examine physical, chemical and biological properties of municipal solid waste.	K4	CO1
2	17	Analyze the pyrolytic processing of municipal solid waste in detail.	K4	CO2
3	18	Evaluate the methods used in disposal of biomedical waste in detail.	K4	CO3
4	19	Explain legal aspects of solid waste management system.	K5	CO4
5	20	Explain in detail about the Environment Protection Act 1986.	K5	CO5

Z-Z-Z

END