

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR (AUTONOMOUS)

(Siddharth Nagar, Narayanavanam Road – 517583)

**QUESTION BANK (DESCRIPTIVE)****Subject with Code:** WASTE RESOURCE MANAGEMENT (20ME0357)**Regulation:** R20**Course & Branch:** B.Tech & All Branches (Open Elective)**Year & Sem:** IV B.Tech & I-Sem**UNIT – I WASTE MANAGEMENT & E-WASTES**

1	(a) Define Waste Management and list the fundamental concepts in waste management.	[L1][CO1]	[6M]
	(b) Explain the types of waste management.	[L2][CO1]	[6M]
2	(a) Why is waste considered one of the major environmental issues?	[L4][CO1]	[6M]
	(b) Describe the waste generation in India.	[L2][CO1]	[6M]
3	Illustrate the salient features of Indian legislation on managing and handling waste.	[L3][CO1]	[12M]
4	(a) Discuss how waste affects the environment.	[L2][CO1]	[6M]
	(b) Lists the merits and demerits of waste resource management.	[L1][CO1]	[6M]
5	(a) What are the technologies that are used for waste minimization?	[L1][CO1]	[6M]
	(b) Illustrate the most harmful type of waste and explain how they impact the environment.	[L3][CO1]	[6M]
6	(a) Describe how to manage electronic waste.	[L2][CO1]	[6M]
	(b) Explain the effects of pollutants on human health and the surrounding environment.	[L2][CO1]	[6M]
7	(a) Describe a brief overview of E-waste pollutants.	[L2][CO1]	[6M]
	(b) What are the main problems of waste management?	[L1][CO1]	[6M]
8	(a) Discuss the classification of Waste Minimization (WM) Techniques.	[L2][CO1]	[6M]
	(b) Explain how manufacturing companies can reduce their waste generation.	[L2][CO1]	[6M]
9	Illustrate the role and E-Waste management Rules in 2016.	[L3][CO1]	[12M]
10	(a) Enumerate the steps in recycling and recovery of materials.	[L1][CO1]	[6M]
	(b) Discuss the relevance of technology in waste management today.	[L2][CO1]	[6M]

UNIT – II SOLID WASTE MANAGEMENT

1	(a) Assess the need for Solid waste management.	[L5][CO2]	[6M]
	(b) State the physical and chemical characteristics of solid waste.	[L1][CO2]	[6M]
2	List out the various types of solid waste management	[L1][CO2]	[12M]
3	Describe the Residential waste and Commercial waste.	[L2][CO2]	[12M]
4	(a) Give a brief note on Municipal solid Wastes and Industrial Solid Wastes.	[L2][CO1]	[6M]
	(b) Illustrate the Agro waste, Construction and Demolition Waste.	[L3][CO2]	[6M]

5	(a) Discuss the excretory products of humans and livestock Wastes.	[L2][CO2]	[6M]
	(b) Distinguish between merits and demerits of solid waste management.	[L4][CO2]	[6M]
6	List out the factors affecting the generation of solid waste.	[L1][CO2]	[12M]
7	How does incineration help in the management of solid waste? Describe the considerations, concerns, and advantages in detail.	[L2][CO2]	[12M]
8	(a) Explain the concept of "zero waste."	[L2][CO2]	[6M]
	(b) Describe a challenging situation faced in solid waste management and how it was resolved.	[L2][CO2]	[6M]
9	Illustrate the following: (a) Pyrolysis, (b) Open dumping, and (c) Bio-Gasification	[L3][CO2]	[12M]
10	(a) State the key role of the public in solid waste management.	[L1][CO2]	[6M]
	(b) Compose brief summaries on the legal considerations related to solid waste disposal.	[L5][CO2]	[6M]

UNIT – III BIOMEDICAL WASTE

1	(a) Define biomedical waste. What are the main aspects of biomedical waste?	[L1][CO6]	[6M]
	(b) What are the types of biomedical waste? List out the different colors introduced by CPBC to dispose of biomedical waste.	[L1][CO3]	[6M]
2	Discuss the classification of Biomedical Waste and its uses.	[L2][CO3]	[12M]
3	Define waste segregation. Explain the steps involved in medical waste segregation.	[L1][CO3]	[12M]
4	(a) Explain about the effects of biomedical waste.	[L2][CO3]	[6M]
	(b) List the sources of biomedical waste.	[L1][CO3]	[6M]
5	Illustrate the categories of biomedical waste and their components.	[L3][CO3]	[12M]
6	(a) Justify the need for blood banks and dental clinics.	[L5][CO3]	[6M]
	(b) Discuss the limitations of biomedical waste.	[L1][CO3]	[6M]
7	(a) Explain the terms autopsy centers and paramedics.	[L2][CO3]	[6M]
	(b) Describe the methods of liquid waste disposal in the hospital.	[L2][CO3]	[6M]
8	Explain briefly the labelling hazards of biomedical waste and its limitations.	[L2][CO3]	[12M]
9	(a) What standards are followed for medical waste disposal in India?	[L1][CO3]	[6M]
	(b) Justify the necessity for disposal of biomedical waste.	[L5][CO3]	[6M]
10	(a) Discuss the problems associated with biomedical waste.	[L2][CO3]	[6M]
	(b) List out the challenges of biomedical waste during the COVID-19 pandemic.	[L1][CO3]	[6M]

UNIT – IV HAZARDOUS WASTE MANAGEMENT

1	(a) Outline hazardous? How can hazardous waste be treated?	[L2][CO4]	[6M]
	(b) Describe briefly the factors influencing hazards.	[L1][CO4]	[6M]
2	(a) Illustrate the types of hazardous and non-hazardous waste.	[L3][CO4]	[6M]

	(b) Why are volatile organic compounds (VOC) considered hazardous gases? List out the health effects.	[L4][CO4]	[6M]
3	Describe radioactive waste and chemical waste with their categories.	[L2][CO4]	[12M]
4	Illustrate the corrosive waste and explosive waste. Explain how it impacts the environment.	[L3][CO4]	[12M]
5	(a) What are the essential steps to prevent chemical waste management?	[L1][CO4]	[6M]
	(b) List the challenges and opportunities for epidemiology from hazardous waste sites.	[L1][CO4]	[6M]
6	Explain the toxic waste. Describe its negative effects on the environment and human health briefly.	[L2][CO4]	[12M]
7	Discuss briefly the export of hazardous waste issues in India.	[L2][CO4]	[12M]
8	(a) What is a secure hazardous waste landfill?	[L1][CO4]	[6M]
	(b) Discuss the India's laws and rules against hazardous waste dumping? How much hazardous waste is generated in India.	[L1][CO4]	[6M]
9	List out the essential characteristics of industrial hazardous waste management.	[L1][CO4]	[12M]
10	Explain the public health and the environmental effects of hazardous waste.	[L2][CO4]	[12M]

UNIT – V WASTE COLLECTION, RECYCLING & DISPOSAL

1	(a) Define waste collection and list out the waste collection methods.	[L1][CO5]	[6M]
	(b) What are the different environmental issues associated with the choice of waste collection methods?	[L1][CO5]	[6M]
2	Illustrate and explain the types of waste collection.	[L3][CO5]	[12M]
3	Discuss the waste collection components and explain them briefly.	[L2][CO5]	[12M]
4	(a) List out the common types of storage containers?	[L1][CO5]	[6M]
	(b) Illustrate the benefits and limitations of recycling wastes.	[L3][CO5]	[6M]
5	(a) Why it is important to use waste selection criteria? Classify the selection criteria.	[L4][CO5]	[6M]
	(b) Explain the types of collection systems.	[L2][CO5]	[6M]
6	Describe and briefly explain types of waste collection system design.	[L2][CO5]	[12M]
7	(a) Why is it essentially required for the recycling of waste?	[L4][CO5]	[8M]
	(b) Elucidate about Swachh Bharat Abhiyan's mission in India.	[L2][CO5]	[4M]
8	What options are there for disposal of waste? Explain briefly.	[L1][CO5]	[12M]
9	(a) Define Waste sanitary. Describe the overview of waste sanitary landfill operations.	[L1][CO5]	[6M]
	(b) List out the environmental effects of landfills.	[L1][CO5]	[6M]
10	Explain briefly each key issues in the disposal of waste.	[L2][CO5]	[12M]