

Code: 23EC2601

**III B.Tech – II Semester - Regular Examinations – APRIL 2026****E-WASTE MANAGEMENT  
(Common for ALL BRANCHES)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This question paper contains two Parts A and B.

2. Part-A contains 10 short answer questions. Each Question carries 2 Marks.

3. Part-B contains 5 essay questions with an internal choice from each unit. Each Question carries 10 marks.

4. All parts of Question paper must be answered in one place.

BL – Blooms Level

CO – Course Outcome

**PART – A**

		BL	CO
1.a)	What is mechanical processing in E-waste recycling?	L2	CO1
1.b)	State two principles of E-waste management.	L2	CO1
1.c)	What is India's policy regarding hazardous E-waste import?	L2	CO2
1.d)	Mention two metro cities in India with significant E-waste generation.	L2	CO2
1.e)	What is meant by monitoring compliance of E-waste rules?	L2	CO3
1.f)	Write a short note on Extended Producer Responsibility (EPR).	L2	CO3
1.g)	List the salient features of the E-Waste Rules, 2016.	L2	CO4

1.h)	Write short notes on government assistance for Treatment, Storage and Disposal Facilities (TSDFs).	L2	CO4
1.i)	Define the Rotterdam Convention.	L2	CO4
1.j)	Mention two objectives of the Basel Convention.	L2	CO4

### PART – B

			BL	CO	Max. Marks
<b>UNIT-I</b>					
2	a)	Explain the hazardous properties of E-waste and their environmental implications.	L2	CO1	5 M
	b)	Describe the steps involved in recycling and recovery of materials from E-waste.	L2	CO1	5 M
<b>OR</b>					
3	a)	Discuss the major components involved in an effective E-waste management system.	L2	CO1	5 M
	b)	Analyze the effects of E-waste pollutants on human health.	L4	CO1	5 M
<b>UNIT-II</b>					
4	a)	Describe the essential factors influencing the global waste trade economy.	L2	CO1	5 M
	b)	Discuss the methods used for estimation of E-waste generation in metro cities of India.	L2	CO2	5 M
<b>OR</b>					

5	a)	Discuss waste trading as an important component of electronic recycling.	L2	CO1	5 M
	b)	Illustrate the import of hazardous E-waste in India and its environmental implications.	L3	CO2	5 M
<b>UNIT-III</b>					
6	a)	Explain the importance of cooperation among the producers, public, and government in managing E-waste.	L2	CO3	5 M
	b)	Discuss the procedures and regulations related to the import of E-waste in India.	L2	CO3	5 M
<b>OR</b>					
7	a)	Explain the mechanisms for monitoring compliance of E-waste management rules in India.	L2	CO3	5 M
	b)	Discuss the need for stringent health safeguards and environmental protection laws in India for E-waste management.	L2	CO3	5 M
<b>UNIT-IV</b>					
8	a)	Illustrate the importance of government assistance for Treatment, Storage and Disposal Facilities (TSDFs) in managing hazardous waste.	L3	CO1	5 M
	b)	Explain the E-Waste (Management and Handling) Rules, 2011 and their significance in E-waste management in India.	L2	CO4	5 M

<b>OR</b>					
9	a)	Differentiate the E-Waste Rules, 2011 and E-Waste Rules, 2016 with respect to scope, responsibilities and implementation.	L4	CO1	5 M
	b)	Explain the role of producers under the E-waste management rules.	L2	CO4	5 M
<b>UNIT-V</b>					
10	a)	Discuss the importance of international legislation in controlling global E-waste generation and trade.	L2	CO4	5 M
	b)	Explain the Restrictions of Hazardous Substances (RoHS) Directive and its importance in reducing toxic materials in electronic products.	L2	CO4	5 M
<b>OR</b>					
11	a)	Discuss the Bamako Convention and its significance in preventing hazardous waste dumping in Africa.	L2	CO4	5 M
	b)	Discuss the Waste Electrical and Electronic Equipment (WEEE) Directive in the European Union and its impact on E-waste management.	L2	CO4	5 M