

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: B.TECH.
BRANCH: CHEMICAL ENGINEERING**

**SEMESTER: IV
SESSION: SP/2023**

SUBJECT: CL233 WASTE MANAGEMENT

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	Discuss the steps taken by the Government of India regarding Waste Management.	[4]	1 2
Q.1(b)	Briefly describe the methods for the processing and treatment of municipal solid waste.	[6]	1 2
Q.2(a)	Describe the salient features of the Plastic Waste Management Rule 2022.	[6]	2 2
Q.2(b)	Express your views on "Is the Plastic Pandemic a Greater Threat to Humankind than COVID-19?".	[4]	2 4
Q.3(a)	Express your views on the prominent Challenges of E-waste management in India.	[5]	3 4
Q.3(b)	Describe the Pyro-metallurgy process for the recovery of valuable materials from spent LIBs.	[5]	3 2
Q.4(a)	Differentiate between food loss and food waste. Also, discuss the food waste management hierarchy.	[4]	4 2
Q.4(b)	Briefly describe the process to produce bio-alcohols from food waste.	[6]	4 2
Q.5(a)	Define Bio-medical waste. What are the different categories of Bio-medical waste as per Bio-Medical Waste Management Rules, 2016?	[4]	5 2
Q.5(b)	Briefly describe the various technologies available for Bio-medical waste treatment/disposal.	[6]	5 2

:28/04/2023:M