

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID-SEMESTER EXAMINATION SP/2025)

CLASS: B.TECH
BRANCH: CHEMICAL ENGINEERING

SEMESTER : IV
SESSION : SP/2025

SUBJECT: CL233 WASTE MANAGEMENT

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates

		CO	BL
Q.1	Discuss the NITI Aayog's Methanol Economy Programme and how it aims to reduce India's dependence on fossil fuels while promoting clean energy alternatives.	[5] 1	3,4
Q.2	Provide a comprehensive explanation of the Biomethanation process, detailing each stage of converting organic waste into biogas.	[5] 1	2,3
Q.3	Discuss the advantages and disadvantages of the thermal and catalytic pyrolysis processes for treating waste plastic.	[5] 2	2,3
Q.4	Briefly describe the solvent-targeted recovery and precipitation (STRAP) process for recycling multilayer plastic waste generated from postindustrial and postconsumer sources with a neat and well-labeled block flow diagram.	[5] 2	2,3
Q.5	What is E-waste, and discuss the significance of e-waste recycling? List the different electrical and electronic equipment categories covered under the E-waste (Management) Rules, 2022.	[5] 3	2,3

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