

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2023

Subject Code: 3152303

Date:11-12-2023

Subject Name: Plastic Recycling & Waste Management

Time:10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

	MARKS
Q.1 (a) Why Plastics Recycling is necessary ?	03
(b) What are Biodegradable Polymers? Give its benefits.	04
(c) Write short notes on various Plastics Recycling codes and applications of these plastics.	07
Q.2 (a) What do you meant by Incineration of Plastics ?	03
(b) Describe Float/Sink Process for Separation Of Mixed Plastic Waste.	04
(c) Write short note on : Chemical Recycling of Plastics.	07
OR	
(c) With a neat flow diagram explain Cryogenic Grinding for Plastics Waste.	07
Q.3 (a) Differentiate Thermoplastic and Thermosetting Plastics.	03
(b) Short note on: “Waste to Energy” concept for Solid Waste Management.	04
(c) Describe Recycling of Plastics Waste by Co-extrusion and Co-injection molding.	07
OR	
Q.3 (a) What is Biomedical Waste ? How it hazardous to environment.	03
(b) Which Plastics are used in Medical industries? Describe in details.	04
(c) List and explain important steps in PET Recycling Process.	07
Q.4 (a) Enlist Plastics Waste Management Rule made by Government of India	03
(b) Describe the Waste Management Of Plastics with four R’s.	04
(c) How Plastic Waste is used in Road construction? Discuss	07
OR	
Q.4 (a) Write short notes on Agglomeration.	03
(b) Explain the Recycling of Polypropylene with a flow diagram.	04
(c) Describe about Granulators Used In Primary Recycling Of Plastics.	07
Q.5 (a) How Plastics Waste is used as Fillers? Discuss.	03
(b) Discuss Physical Recycling Technique.	04
(c) What is Landfill? Explain the Sanitary Land filling in brief.	07
OR	
Q.5 (a) What is Nuisance Plastic?	03
(b) Describe Electrostatic Separation Technique For Mix Plastics Waste.	04
(c) Define Secondary Recycling. Enlist techniques to separate Plastics Waste.	07