

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2024****Subject Code: 3172314****Date: 22-05-2024****Subject Name: Secondary Plastics Processing Techniques****Time: 02:30 PM TO 05:00 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) Discuss about Solvent Bonding and list the types of Solvents use for plastic solvent bonding.	03
	(b) Define and Explain the Corona Discharge technique for surface treatment of plastics.	04
	(c) Explain the Electrostatic Fluidized Bed Coating technique with a neat sketch	07
Q.2	(a) Explain the Hot Gas Welding technique for Plastics Products.	03
	(b) Explain In Mold decoration methods used for plastics product.	04
	(c) List the powder coating methods .Explain the Fluidized Bed Coating technique.	07
or		
	(c) Explain the basic principle of Adhesive Bonding for Plastic. Explain the selection criteria for adhesives.	07
Q.3	(a) List the materials for Powder Coating.	03
	(b) Explain briefly the following operations i) Drilling ii) Tumbling iii) Threading.	04
	(c) Explain working of Hot Stamping process for Plastics with neat sketch.	07
or		
Q.3	(a) Explain in brief about Molded in inserts and Post-molding inserts.	03
	(b) What is Electroplating? Explain briefly the Electroplating technique for Plastics.	04
	(c) Discuss the role of jigs and fixtures used in machining of plastics.	07
Q.4	(a) List the various welding techniques for Plastics.	03
	(b) Define Screen Printing. List the equipments and advantages of screen printing process.	04
	(c) Explain the Hot Plate welding technique with a neat sketch.	07
or		
Q.4	(a) What is surface treatment? List various surface treatment methods for plastics.	03
	(b) List the advantages of polymer coatings over other coatings.	04
	(c) Write a short note on the Ultrasonic welding technique.	07
Q.5	(a) Explain Flame treatment technique for surface treatment plastics.	03
	(b) Write a short note on High Frequency Welding technique and its uses	04

(c) Explain the Rotogravure printing technique with suitable diagram. **07**

or

Q.5 (a) What is Flocking? Explain it briefly. **03**

(b) Write a short note on Water Transfer process. **04**

(c) Explain the Vacuum metalizing technique with a neat sketch. **07**
