

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2018****Subject Code:2163606****Date:04/12/2018****Subject Name:Compounding & Processing of Plastics & Rubbers-II****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.

		MARKS
Q.1	(a) Write a note on metallization.	03
	(b) How barrier properties can be improved?	04
	(c) Explain Viscosity of Polymers and rubbers, Power law, Melt solutions.	07
Q.2	(a) What are the Types of Welding?	03
	(b) Explain any one method for the preparation of rubber nanocomposites.	04
	(c) Define and compare: Polymer blend vs alloys, Composites vs Nanocomposites.	07
OR		
	(c) Write Detailed note on RTM, DMC and SMC with examples and application	07
Q.3	(a) Write a note on commercial polymer blends.	03
	(b) Write a note on: (a) Two-roll mill (b) Twin screw extruder	04
	(c) What is recycling of polymers mean? Explain in detail about various devulcanization technologies being used for elastomers/rubbers industry	07
OR		
Q.3	(a) Polymers are having brittle nature at room temperature, suggest your views to achieve supper-tough-high modulus polymer.	03
	(b) Explain Calendaring Process with Its Types	04
	(c) Write a detailed note on PC/ABS blends with preparation technique and their applications	07
Q.4	(a) Write major applications of nanocomposites.	03
	(b) How can improve thermal stability of heat sensitive polymer?	04
	(c) Discuss how polymer rheology is important in polymer processing and compounding	07
OR		
Q.4	(a) Write short note on Electroplating.	03
	(b) List the ingredients used in compounding with defining their respective roles.	04
	(c) Discuss importance of Polymer rheology in processing and compounding.	07
Q.5	(a) What is fiber reinforced plastics?	03
	(b) Write short note on microwave curing.	04
	(c) Discuss in detailed with examples about the multiphase polymer system?	07

OR

- Q.5** (a) Write classification of Poly Blends. **03**
(b) Write a Short Note on PVC/ CaCO₃ nanocomposite **04**
(c) Discuss the role of polymeric modifier for achieving improvement in the impact strength, modulus and chemical resistance of the polymer system **07**
