Seat No.:	Enrolment No.

Subject Code: 2712401

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER I - EXAMINATION – SUMMER 2017

Date: 09/05/2017

Subject Name:Plastics Materials 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. (a) What are the differences between Chain and Step polymerization processes? **Q.1** 07 **(b)** Explain the manufacturing process of Melamine Formaldehyde (MF) resin 07 Write in details manufacturing process, properties and applications of PET 07 0.2 Explain the properties and application of Poly Methyl Methacrylate (PMMA). 07 (b) How Novalac resins are produced and give their properties 07 0.3 Write down the important properties and processing characteristics and applications **07** of PEEK. (b) Write about the polymerization, structure and properties of PP 07 0.3 Differentiate in between LDPE, HDPE, and LLDPE. 07 (a) **(b)** How Nylon 6 and Nylon 66 are prepared and give their applications? 07 **Q.4** Discuss in detail about Emulsion Polymerization Technique. 07 (a) (b) Write down the hardening agent for Epoxy Resin and also explain the properties and 07 applications of these cured resins. OR What are "LCP" and "Conducting polymers"? Discuss in detail 0.4 07 **(b)** Give the structure of polysulphone and give their characteristics and applications 07 (a) How styrene is made and describes the methods of producing Polystyrene (PS)? 07 0.5 **(b)** Explain the properties and applications of PPO. 07 OR (a) Why polyimide (PI) is called a high performance polymer? Give detailed properties 07 Q.5 and applications of polyimide. 07 (b) Write down the important properties, processing characteristics and applications of Polyacetal.
