Seat No.: Enrolment No. GUJARAT TECHNOLOGICAL UNIVERSITY M. E. - SEMESTER - II • EXAMINATION - SUMMER • 2014 Subject code: 1722404 Date: 25-06-2014 **Subject Name: Secondary Plastics Processing Techniques** Time: 02:30 pm - 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. Describe in detail about the Filament winding process. Explain the advantages and **07** Q.1 (a) disadvantages of Filament winding process. List the various FRP processing methods. Explain Hand Layup Process Method with **07 (b)** neat sketch and give its advantages and disadvantages. **07 Q.2** (a) Discuss in detail about the Solvent Cementing Process. Explain Hot Stamping Process in detail. 07 **(b)** Describe the process of Roto-Moulding with a neat sketch and give its merits and demerits. **(b)** Explain about the Fluidized Bed Coating Process in details. **07** Q.3 Give complete details of Electrostatic Powder Gun Coating & its applications. 07 (a) Describe the Casting Process in detail. Give advantages of Casting. **07 (b)** Q.3 Explain Calendaring Process in detail with neat sketch. 07 (a) **(b)** Discuss in details about the types of Calendar rolls, employed in Calendaring 07 process. **Q.4 07** Explain advantages, disadvantages and applications of Calendaring. (a) With neat sketches, explain the following forming process (1) Straight Pressure **(b) 07** forming (2). Straight vacuum forming OR Q.4 Explain (1) Low pressure foam molding and (2) Plug Assisted Forming with neat 07 (a) sketch. Explain Drape Forming and Snap Back Forming with neat sketch. **07 (b)** Q.5 (a) Explain the merits and demerits of Thermoforming. Explain Matched Die Forming. 07 (b) Write short note on- (1) Material selection criteria for the Thermoforming process (2) 07 Vacuum Bag with neat diagram List the processes to create foam in resin and explain them briefly. Q.5 **07** (a) Describe process for making FRP profiles. 07 (b)
