GUJARAT TECHNOLOGICAL UNIVERSITY M. E. - SEMESTER - I • EXAMINATION - SUMMER • 2014

Subject code: 712403N Date: 19-06-2014 **Subject Name: Plastics Mould and Product Design** 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. Q.1 (a) Write short notes on mould venting, mould alignment and mould 07 **(b)** What are the factors to be considered to select machine for injection 07 moulding process? (a) Explain cooling-channel placement and cooling-line configuration. Q.207 (b) Explain mould design considerations for molding undercuts. **07 (b)** Explain the methodical approach to design injection moulds. **07** Q.3 (a) How to design sprues, runners, and gates efficiently. **07 (b)** Explain the types of blow moulds. **07** Explain the concept of extrusion die design. Q.3 07 **(b)** Explain the types of transfer moulds. 07 (a) How will you define the plastic part requirements? **Q.4** 07 **(b)** What are the design considerations for plastic parts? 07 0.4 (a) Explain the design for assembly for plastic components. 07 (b) Explain the factors to be considered for reducing plastic product 07 manufacturing costs. (a) Write about various surface defects of plastic products and explain how Q.5 **07** to avoid them. **(b)** Discuss the influence of product design in tooling economy. **07** Q.5 (a) Explain the design considerations for insert moulding. 07 **(b)** What are the advantages of prototyping? Explain stereo lithography. 07
