

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-V EXAMINATION – SUMMER 2015

Subject Code: 153405

Date:15/05/2015

Subject Name: Plastics Manufacturing Technology (Inst. Elec II)

Time: 2.30PM-5.00PM

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)** Give in detail about the types of processing techniques and the selection criteria for the processing methods. **07**
- (b)** Discuss about the effect of polymer properties on (i) processing behavior (ii) melting and (iii) solidification behavior **07**
- Q.2 (a)** Define- shot capacity, clamping force, injection pressure, runner, gate, sprue, **07**
- (b)** Give detail of selection criteria for an Injection Molding Machine **07**
- OR**
- (b)** How the molding quality will be affected because of the cycle time and pressure variables for the injection molding machine **07**
- Q.3 (a)** With a neat sketch diagram explain the various types of clamping systems **07**
- (b)** Give complete step by step procedure for starting and shut down of an Injection Molding Machine **07**
- OR**
- Q.3 (a)** Describe the various parts and the procedure for an Thermoset Injection Molding Machine. **07**
- (b)** Give the merits and demerits of an Thermoset Injection Molding Machine **07**
- Q.4 (a)** Define- bulk factor, aging of compound, flow curve relationship. Give the details of Cup flow and Spiral flow test and its significance **07**
- (b)** How the parameters like part size, temperature, pressure, configuration etc will affect the operating of an Compression Molding Machine **07**
- OR**
- Q.4 (a)** Discuss the working of Ram Extrusion in detail **07**
- (b)** What do you understand by Transfer Molding Machine? Discuss the various types of machines used for Pot Transfer and Plunger Transfer **07**
- Q.5 (a)** Give details for merits and demerits of Transfer Molding Machine **07**
- (b)** Discuss the Trouble shooting and its remedies for the Transfer Molding Machine. **07**
- OR**
- Q.5 (a)** What are the various types of Blow Molding Extrusion Machines? Discuss the working of an Extrusion Blow Molding Machine in detail **07**
- (b)** What do you understand by Thermoforming? What are the various techniques of thermoforming? Discuss the vacuum forming method in detail **07**
