

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (OLD) - EXAMINATION – SUMMER 2017****Subject Code: 152301****Date: 05/05/2017****Subject Name: Injection Moulding Technologies****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.

- Q.1** (a) Explain injection molding cycle time with proper diagram. **07**
(b) Define Screw Output. What are the factors that can affect the screw output? **07**
- Q.2** (a) Explain principle & working of any one hydraulic pump with Advantages and limitations. **07**
(b) Compare Hydraulic and Toggle Clamping System. **07**
- OR**
- (b) Draw a General Purpose Styrene Screw and define its terminology. **07**
- Q.3** (a) Explain different process variables that can affect our molded product. **07**
(b) What is Troubleshooting? Explain Shrinkage, Warpage And Short Shots. **07**
- OR**
- Q.3** (a) Differentiate thermoplastics and thermoset injection molding machine. **07**
(b) Explain pressure profile curve in cavity. **07**
- Q.4** (a) Explain temperature profile curve in cavity. **07**
(b) What do you mean by directional control valve? Explain 3/3 direction control valve with hydraulic circuit to operate a cylinder. **07**
- OR**
- Q.4** (a) What are the functions of pressure control valve? Explain pressure relief valve in detail. **07**
(b) Define Daylight in injection molding. Explain different types of daylight. **07**
- Q.5** (a) Explain pressure profile curve in Gas Assisted Injection Molding machine. **07**
(b) What do you mean by Tie bar? Explain merits and demerits of Tie bar less injection molding machine. **07**
- OR**
- Q.5** (a) Enlist post process operations in injection molding machine. Explain any one in detail. **07**
(b) Explain different types of injection screw with its terminology. **07**
