

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER- VI • EXAMINATION – SUMMER 2015**

**Subject Code: 163602****Date: 12/05/2015****Subject Name: Compounding & Processing of Plastics & Rubbers-I****Time: 10.30AM-01.00PM****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) Describe the process of injection moulding with proper diagram. **07**  
(b) Explain in brief the process for manufacturing of the pipes. **07**
- Q.2** (a) If a manufacturer has to produce a bottle of 6 liter by which method he will produce it. Name the technique and describe it with proper diagram. **07**  
(b) Describe in detail the defects that occur in injection moulding machine. **07**
- OR**
- (b) What do you mean by compounding? Explain in detail. **07**
- Q.3** (a) Write a short note on Compression Moulding Machine. **07**  
(b) Explain in detail the injection stretch blow moulding machine. **07**
- OR**
- Q.3** (a) Describe in detail Injection blow moulding. **07**  
(b) Explain in detail the process of thermoforming with proper diagram. **07**
- Q.4** (a) What do you mean by calendaring? Explain in detail any two types of calendaring process with proper diagram. **07**  
(b) Explain in detail the cycle time of injection moulding. **07**
- OR**
- Q.4** (a) What do you mean by Reinforcement? Explain in detail the Filament winding technique with proper diagram. **07**  
(b) Write in detail about the following fillers Antioxidants, UV stabilizers & Flame Retardants. **07**
- Q.5** (a) What do you mean by fiber spinning? Explain in detail the process of melt spinning for fiber preparation. **07**  
(b) Explain which process will be used for the preparation of water storage tank having capacity of 2000 litre. **07**
- OR**
- Q.5** (a) Write a short note on (with proper diagram) **07**  
    i) Hand layup technique  
    ii) Spray up technique  
(b) Write in detail about Dry spinning and Wet spinning with proper and well labeled diagram. **07**

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