

Printed Pages: 02

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**B. Tech.**  
**(SEM VI) THEORY EXAMINATION 2017-18**  
**PLASTICS PROCESSING -II**

**Time: 3 Hours****Total Marks: 100****Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

**1. Attempt all questions in brief.****2 x 10 = 20**

- a. Define the term "Plastication"
- b. PP has a specific gravity of 0.90. It is to be molded in an injection molding machine with a shot wt. of 80gm (in PS). Calculate new shot wt.
- c. How do you eliminate weld line in injection molding process?
- d. State the various mould materials used in blow molding.
- e. What is Parison programming?
- f. Define Pultrusion.
- g. Write any two defects in Thermoforming process and discuss their remedies.
- h. Define rotational molding cycle.
- i. Cushion and drooling
- j. State the advantages of Hydraulic clamping system.

**SECTION B**

**2. Attempt any three of the following:****10 x 3 = 30**

- a. What are the important process variables used in injection molding process? Draw the neat sketch of an injection-molding machine along with latest application.
- b. Discuss the difference between Extrusion blow molding and Injection blow molding along with application.
- c. What do you mean by Stretch blow molding? What are its advantages?
- d. What do you mean by Plug assist and drape forming? How process variable affecting the product quality?
- e. Write in brief about welding of plastics. What are the advantages & disadvantages of rotational molding?

**SECTION C**

**3. Attempt any one part of the following:****10 x 1 = 10**

- a. Describe the reaction injection molding process with the help of diagram. Discuss the advantages and disadvantages of RIM process with application.
- b. Describe the process of manufacturing of PET bottle of 1 Lit capacity with neat sketch. Give its uses.

**4. Attempt any one part of the following:****10 x 1 = 10**

- a. Explain types of injection unit used in injection molding process. How process variable affect the product quality. Compare hydraulic clamping system with Toggle clamping system.
- b. Discuss the difference between rotational molding and blow molding along with applications.

5. **Attempt any *one* part of the following:** **10 x 1 = 10**
- a. Classify Thermoforming processes. Explain the process of plug-assisted forming with merits over vacuum forming.
  - b. Explain Rotational molding process with neat sketch . How process variable affect the product quality. Give its application.
6. **Attempt any *one* part of the following:** **10 x 1 = 10**
- a. Describe the process of Injection molding of Thermoset with the help of suitable diagram along with its application.
  - b. What are the various processes of welding of plastics?
7. **Attempt any *one* part of the following:** **10 x 1 = 10**
- a. Write Short notes
    - i. Filament Winding
    - ii. Joining of Plastics
  - b. What are FRPs? Explain the process of hand lay up and spray up for manufacturing of FRP.