

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM-VII Examination-Nov/Dec.-2011

Subject code: 172301

Date: 19/11/2011

Subject Name: Advanced Plastics Processing

Time: 10.30 am-01.00 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 complete Special Co- Extrusion Process for making corrugated pipes. **07**
(b) Explain complete Post Extrusion Foaming Process in detail. **07**

- Q.2** (a) What is Calendaring Process? Discuss Compound Formulation Preparation (Blending and Geletion) in detail. **07**
(b) List the various types of Calendars. Give complete detail of Trouble Shooting in Calendaring Process. **07**

OR

- (b) What do you understand by Casting Process of plastics? Describe various types of casting processes in short. **07**

- Q.3** (a) Give advantages, disadvantages and limitation of Rotational Molding Method. **07**
(b) With the help of figure, explain the complete Rotational Molding Process. Give details of Heating. **07**

OR

- Q.3** (a) Explain in short about the various Mechanical Connections used for joining and assembling of plastics **07**
(b) Explain Solvent Bonding and Adhesive Bonding techniques for Gluing for assembling of plastics parts. **07**

- Q.4** (a) Discuss various theories of Adhesion. Give advantages and disadvantages of Chemical Bonding Theory. **07**
(b) List various Welding Methods. Explain in detail about theory, equipments and limitations of Vibration Welding. **07**

OR

- Q.4** (a) Give a list of various mechanical methods of machining of plastics. Explain Drilling and Reaming in detail. **07**
(b) Give a list of various pre treatment methods of surface treatment of plastics. Explain Corona Treatment and Plasma in detail. **07**

- Q.5** (a) List various techniques of Metallization of plastics. Explain Vacuum Metallization in detail. **07**
(b) List various techniques of Coating Process of plastics. Explain Extrusion Coating with its advantages and limitations. **07**

OR

- Q.5** (a) Give important reasons for printing of plastics. Discuss various types of printing with special emphasis to Pad Printing. **07**
(b) Explain the principle of Deep Molding of plastics. Explain in short about the various machines used in Deep Molding of plastics. **07**
