

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VIII • EXAMINATION – WINTER • 2014

Subject Code: 182304**Date: 25-11-2014****Subject Name: Fiber Reinforced Plastics and Composites****Time: 02:30 pm - 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) Define Polymer matrix and reinforcements. Explain role of both in FRP. **07**
 (b) List the advantages, disadvantages and application of FRP. **07**
- Q.2** (a) Explain Pultrusion process with neat sketch. **07**
 (b) List the factors influence the designing of FRP. Explain any one in detail. **07**
- OR**
- (b) Short Note: (1) Prepreg (2) RTM **07**
- Q.3** (a) List the mold material for FRP. Explain about Plaster mold. **07**
 (b) Explain Hand layup process with neat sketch. List advantages and disadvantages of it compare to other process. **07**
- OR**
- Q.3** (a) Explain Foam Reservoir Molding process in detail. **07**
 (b) Short note: Release Agent use for FRP process. **07**
- Q.4** (a) What is Gel-coat? What is the purpose of Gel-coat? Explain about formulation of Gel-coat. **07**
 (b) Explain Sheet Molding Compound (SMC) process with neat sketch. **07**
- OR**
- Q.4** (a) List the types of Fiber used in Polymer Matrix Composites. Explain manufacturing of Carbon fiber with line diagram. **07**
 (b) Short note: (1) Whiskers (2) Extended Chain Polyethylene fiber. **07**
- Q.5** (a) Explain Filament winding process with neat sketch. **07**
 (b) List and Explain about types of Glass fiber according to their application and commercial forms of availability. **07**
- OR**
- Q.5** (a) List causes and remedies of the following faults : (1) Fish eyes or craters (2) Blisters and bubbles. **07**
 (b) Explain about effect of inhibitor on gel time and cure rate of Polyester resins. **07**
