

GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016

Subject Code: 2722405**Date: 24/05/2016****Subject Name: COMPOSITES MATERIAL TECHNOLOGY****Time: 10:30 am to 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) Which are the principle ingredients in the preparation of Unsaturated polyester resin? Explain. **07**
- (b) Discuss about Epoxy Resins in detail. **07**
- Q.2** (a) To Manufacture Profiles with composite material, suggest and discuss a suitable manufacturing method in detail. **07**
- (b) Classify Glass fibres and explain manufacturing process of glass fibre with neat sketch. **07**
- OR**
- (b) Explain manufacturing of carbon fibres with flow diagram **07**
- Q.3** (a) What is RTM? Discuss **07**
- (b) Give classification of composite. What are the role of matrix and reinforcement in composite? **07**
- OR**
- Q.3** (a) What is the role of accelerators? Give detail description on various accelerators used in resin system. **07**
- (b) Discuss applications of natural fibers in Composite Manufacture **07**
- Q.4** (a) Write a note on Acousto- Ultrasonic test method for non-destructive testing of composites **07**
- (b) Discuss in detail applications of Composites in Marine **07**
- OR**
- Q.4** (a) What is the function of catalyst? Explain room temperature and elevated temperature catalysts. **07**
- (b) Describe Filament winding process with neat sketch and give its applications **07**
- Q.5** (a) Discuss Mechanical test methods for Composites **07**
- (b) What is Pressure Bag Moulding? Discuss **07**
- OR**
- Q.5** (a) Discuss about Hand layup process in detail. **07**
- (b) Define: Curing, Gelation, hardening, half-life, critical temperature, initiators, and inhibitors. **07**
