

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VII (NEW) EXAMINATION – WINTER 2020

Subject Code:2172307**Date:30/01/2021****Subject Name:FRP Technology and composites****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any **FOUR** questions out of **EIGHT** questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

	MARKS
Q.1 (a) Explain the Polymer composite with classification.	03
(b) What is fibre and explain the different types of fibre with properties?	04
(c) Define the Selection Criteria for materials and process to manufacturing polymer composite.	07
Q.2 (a) Describe the different types of Molds used for FRP.	03
(b) What is Aramid fibre?	04
(c) Explain the manufacturing process of Glass fibre with neat diagram.	07
Q.3 (a) Discuss the role of Matrix and Reinforcement in composite.	03
(b) Write the types of Natural fibre with advantages and disadvantages.	04
(c) Explain in details Resin Transfer Molding process.	07
Q.4 (a) What is Inhibitors?	03
(b) Explain the Gel-Coat and its importance.	04
(c) Describe the Defects and possible remedies for FRP.	07
Q.5 (a) Define the different types of Curing agents for unsaturated polyester resin.	03
(b) What is Bulk molding compound?	04
(c) Explain Pultrusion process with neat diagram, advantages and disadvantages.	07
Q.6 (a) Explain the Curing reaction in Epoxy resin.	03

- (b) - What is the role and types of Accelerators used for unsaturated polyester resin? **04**
- (c) Describe in details the Filament winding process with neat sketch. **07**
- Q.7** (a) Explain Hand- layup process. **03**
- (b) Write the manufacture process of Sheet molding compounds. **04**
- (c) What are different types of Glycol used in manufacturing of unsaturated polyester resin? **07**
- Q.8** (a) Discuss the Diluents used in Epoxy resin. **03**
- (b) Define the Boron fibre with advantages and disadvantages. **04**
- (c) Explain the Manufacturing process of Epoxy resin. **07**

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