

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV • EXAMINATION – WINTER 2013****Subject Code: 143404****Date: 30-12-2013****Subject Name: Plastic Materials****Time: 02:30 pm to 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) What is polymer? Give the difference between amorphous and crystalline polymer. **07**
(b) What is the difference between Thermoplastic and Thermoset with example **07**
- Q.2** (a) Write down the preparation, structural properties and applications of polypropylene **07**
(b) Write down the preparation, structural properties and applications of PS **07**
- OR**
- (b) Write down the structure, manufacturing methods, properties and application of PVC **07**
- Q.3** (a) Write down the properties and application of ABS and polycarbonate. **07**
(b) Write down the manufacturing methods, properties and application of PET and PBT **07**
- OR**
- Q.3** (a) Mention the general structure, properties and application, density and Tg of PVF and PTFE **07**
(b) Write down the manufacturing methods, properties and application of poly acetal **07**
- Q.4** (a) List out the polymerization techniques? Explain any two polymerization techniques **07**
(b) Write down the properties and application of polyimide and polyamide **07**
- OR**
- Q.4** (a) Write down the properties and application of thermoset materials **07**
(b) Mention the manufacturing methods, properties of silicones and polyurethane **07**
- Q.5** (a) What is the recycling code of commodity, engineering and thermoplast materials **07**
(b) Explain briefly notes on (a) Bio degradable polymer (b) Water soluble polymer **07**
- OR**
- Q.5** (a) Explain the application of plastics in aerospace and packaging fields **07**
(b) Explain the application of plastic in medical and sports fields **07**
