

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

Subject code: 172304**Date: 26/11/2011****Subject Name: Manufacturing of Thermoplastic Materials****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) List various processes used to manufacture Polyethylene (PE) and explain Ziegler process. **07**
- (b) Explain manufacturing of Polystyrene (PS) by Tower process along with its applications in various sectors. **07**

- Q.2** (a) Explain manufacturing of PVC along with its properties and applications. **07**
- (b) Describe the manufacturing and properties of PP. **07**

OR

- (b) Explain – (i) Manufacturing of Nylon 6,6 **07**
(ii) Differentiate- LDPE, HDPE, LLDPE

- Q.3** (a) Describe manufacturing of Polycarbonate (PC) by interfacial polymerization along with its properties. **07**
- (b) Explain manufacturing of Nylon 6 and its structure and property relationship. **07**

OR

- Q.3** (a) Write properties and application of Poly ether sulfone (PES) **07**
- (b) Give the structural formula of Polyacetal Homopolymer and copolymer, its manufacturing process and general properties. **07**

- Q.4** (a) Write about copolymers of styrene and their applications. **07**
- (b) Give various applications of :- (i) Nylon 6 & 6,6 (ii) PE (iii) PC **07**

OR

- Q.4** (a) Explain manufacturing of PMMA its general properties and application. **07**

- Q.4** (b) List various Fluorine containing polymers and Explain properties and application of PTFE. **07**

- Q.5** (a) Explain difference in properties of Nylon 6 and Nylon 6,6. **07**
- (b) Give structural formula of PEEK and explain properties and application of PEEK. **07**

OR

- Q.5** (a) What are Liquid crystal polymers? Explain its properties and applications. **07**

- (b) Write a short note on (i) Bio-Polymers. **07**
(ii) Conducting polymer
