

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – WINTER 2013****Subject Code: 153602****Date: 02-12-2013****Subject Name: Technology of Polymeric and Rubber Materials-I****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) Write detailed note on the synthesis of SMA resin, monomers used, properties and application. **07**
(b) Explain in detail synthesis of Kevlar including reaction and its important properties. **07**
- Q.2** (a) Explain in detail production ABS and its important properties & application. **07**
(b) Write short note on the synthesis of (i) PMMA (ii) Polyacrylamide **07**
- OR**
- (b) Write short note on the synthesis of (i) Polyacrylic acid (ii) LDPE **07**
- Q.3** (a) Explain the production of SAN plastic, its application and important properties. **07**
(b) Write a note on the production of PVC and its important properties and major applications. **07**
- OR**
- Q.3** (a) Write general scheme for the synthesis of polyamides. Explain in detail production of Nylon6, 6 and its major usage. **07**
(b) Write short notes on (i) Polyacrylonitrile (ii) HIPS **07**
- Q.4** (a) Write a detailed note on Polyester production. Explain in detail with reaction scheme mechanism of trans-esterification. **07**
(b) Write a detailed note on the synthesis of PES including main monomers used and its important properties **07**
- OR**
- Q.4** (a) Explain in detail Polycarbonate production including monomers used and reaction mechanism involved. **07**
(b) Write short notes on (i) HDPE (ii) PET **07**
- Q.5** (a) Write a detailed note on the synthesis of PEEK including main monomers used and its important properties. **07**
(b) Write in detail about production technology of Nomex and its important properties and applications. **07**
- OR**
- Q.5** (a) Explain in detail production technology for EPDM and its major usage. **07**
(b) Write short notes on (i) Nylon 6 (ii) Nylon 11. **07**
