

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – WINTER • 2014****Subject Code: 153602****Date: 01-12-2014****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)** Describe in detail the preparation method of Polyethylene (PE) and Low density Polyethylene (LDPE) as well as properties and application. **07**
- (b)** Explain in detail the synthesis of High Density Polyethylene (HDPE) and Linear Low Density Polyethylene (LLDPE) with its properties and applications. **07**
- Q.2 (a)** Write in short the history and preparation of Polyvinyl Chloride (PVC). **07**
- (b)** Explain in detail the preparation method of Polyvinyl Alcohol and Polyvinyl Acetate with common structure. **07**
- OR**
- (b)** Write the properties and applications of the Polyvinyl Chloride, Polyvinyl Acetate and Polyvinyl Alcohol. **07**
- Q.3 (a)** Explain the preparation of the Acrylonitrile Butadiene Styrene (ABS) and also give information of its properties and uses. **07**
- (b)** Describe the preparation of the polystyrene (PS) and explain its properties and applications. **07**
- OR**
- Q.3 (a)** Write the properties, applications and also the preparation of High Impact Polystyrene (HIPS). **07**
- (b)** What is Styrene Acrylonitrile (SAN)? Explain the preparation of it with their properties and uses. **07**
- Q.4 (a)** Explain in detail the raw materials used in the preparation of Nylons. **07**
- (b)** Describe in detail the preparation of Nylon 6, 10 and Nylon 11. **07**
- OR**
- Q.4 (a)** Write in detail in the preparation of Nylon 6. **07**
- (b)** Describe the method of preparation of Nylon 6, 6 with proper reactions. **07**
- Q.5 (a)** Explain in detail the preparation, properties and applications of polyesters. **07**
- (b)** Write in short the properties, applications and method of preparation of Polymethyl Metha Acrylate (PMMA). **07**
- OR**
- Q.5 (a)** Write in detail the history, preparation and properties and applications of Poly Ether Ether Ketone (PEEK). **07**
- (b)** Describe in detail the method of preparation of Poly Ether Sulfone (PES)? Also mention their properties and application. **07**
