

GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. - SEMESTER – VII • EXAMINATION – WINTER 2012

Subject code: 172305**Date: 28/12/2012****Subject Name: Plastic Testing and Instrumental Analysis****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Enlist all the environment factors that affect Plastic and explain them in detail. **07**
- (b)** Define Following **07**
- | | |
|-----------------------|--------------------------|
| 1. Proportional Limit | 2. Secant Modulus |
| 3. Strain | 4. Modulus of Elasticity |
| 5. Stress | 6. Toughness |
| 7. Elongation | |
- Q.2 (a)** Explain Izod & Charpy test in detail. **07**
- (b)** What is MFI? Explain process steps of test. **07**
- OR**
- (b)** Explain Rockwell hardness test in detail. **07**
- Q.3 (a)** Explain Vicat Softening Temperature test. **07**
- (b)** Explain Compressive Properties of Plastic in detail. **07**
- OR**
- Q.3 (a)** What is Accelerated Weathering Test? Explain Carbon Arc Lamps Test. **07**
- (b)** Explain Outdoor Accelerated Weathering test. **07**
- Q.4 (a)** Explain in detail Dielectric Constant & Dissipation factor. **07**
- (b)** What is Refractive Index? Explain Refractometric Method in detail. **07**
- OR**
- Q.4 (a)** Explain Thermo-mechanical Analysis in detail. **07**
- (b)** Explain Solvent Stress Cracking Resistance Test. **07**
- Q.5 (a)** Explain Tensile Test in detail. **07**
- (b)** What is DSC? Explain DSC in detail. **07**
- OR**
- Q.5 (a)** What is Flexural Strength? Provide the steps for performing flexural test. **07**
- (b)** Explain Capillary Rheometer test in detail. **07**
