

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – WINTER • 2014****Subject Code: 2132303****Date: 20-12-2014****Subject Name: Basic of Plastic Material Testing****Time: 02.30 pm - 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 Basic concept of testing and purpose of testings? List out the national and international standards. **07**
- (b) Explain Purpose of Specification and standards. **07**
- Q.2** (a) Explain procedure, equipments and factors affecting of contour cutter for specimen preparation from rigid sheet. **07**
- (b) Explain the significance, equipments, procedure and factor affecting of injection moulding for specimen preparation of thermoplastic materials **07**
- OR**
- (b) Explain the significance, equipments, procedure and factor affecting of Compression moulding for specimen preparation. **07**
- Q.3** (a) Explain the water absorption test in details. **07**
- (b) What is test condition and conditioning process. **07**
- OR**
- Q.3** (a) Explain the copper wire test and floatation test for the identification analysis of plastic. **07**
- (b) Explain the Specific gravity test in details as per ASTM D 792. **07**
- Q.4** (a) What is Flexural strength? Explain the test procedure and factors affecting on test results as per ASTM D 790. **07**
- (b) What is Impact Strength? List out types of it? Explain Izod Impact Test **07**
- OR**
- Q.4** (a) What is Tensile Strength? Explain Tensile Test in detail. **07**
- (b) Define Proportional Limit, Secant Modulus & Yield Point. Show and explain the stress-strain behavior of various types of plastic material. **07**
- Q.5** (a) Explain Rockwell hardness test in detail. **07**
- (b) Explain the test method, procedure and factors affecting of cup flow test. **07**
- OR**
- Q.5** (a) Explain the test method, procedure and factors affecting of spiral flow test. **07**
- (b) What is MFI? Explain test procedure and factors affecting on test results. **07**
