

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject code: 1722401

Date: 16-06-2014

Subject Name: Plastics Testing Technology

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) Draw a typical Stress-Strain Curve of plastics and explain. **07**
(b) Define flexural strength. What are the factors affecting the values of flexural strength and explain. **07**

- Q.2** (a) Why testing is necessary? Explain specification and standard. **07**
(b) What is conditioning? Why it is necessary? Explain. **07**

OR

- (b) Explain how will you measure tensile strength along with factors affecting the test results? **07**

- Q.3** (a) Define hardness. Write various methods of measuring hardness of plastics. **07**
(b) Define arc resistance. Explain a method to determine arc resistance of plastics. **07**

OR

- Q.3** (a) Define dielectric strength. How do you determine it for plastics? **07**
(b) Define density of plastics. How do you determine it for plastics as per ASTM D792? **07**

- Q.4** (a) Explain Izod impact strength test in detail. **07**
(b) Define VST. Describe ASTM method to measure VST. **07**

OR

- Q.4** (a) What is HDT? Describe the test method as per ASTM D 648 and what are the factors affects on HDT? **07**
(b) What is ESCR? Explain ESCR test for plastics. **07**

- Q.5** (a) Write a short note on DSC. **07**
(b) Define haze and gloss. Explain the test procedure for determination of gloss. **07**

OR

- Q.5** (a) Enlist the various tests conducted on plastic films and explain. **07**
(b) Explain accelerated weather resistance test. **07**