

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER – VI • EXAMINATION – SUMMER 2016

Subject Code: 3362304**Date: 19/ 05/2016****Subject Name: Plastics Testing and Quality Management****Time: 10:30 AM to 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.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

- Q.1** Answer any seven out of ten. **14**
1. Define standards and specifications.
 2. Name any four organizations dealing with standards.
 3. Define stress and strain.
 4. Draw tensile test specimen as per ASTM and show its dimensions.
 5. Define HDT and VST.
 6. Explain the terms Haze and Luminous Transmittance.
 7. State types of test use for rheological properties of thermosets.
 8. Define specific gravity. Give the value of specific gravity for Poly Styrene.
 9. Give full form of SQC and SPC.
 10. State types of hardness tests.
- Q.2** (a) What are the reasons for testing? **03**
- OR
- (a) Give conditioning procedure of test samples. **03**
- (b) Define impact strength. Explain the test procedure for measuring impact strength. **07**
- OR
- (b) Define flexural strength. Explain the test procedure for measuring it. **07**
- (c) Explain the factors affecting tensile test results. **04**
- OR
- (c) Explain the significance of dart impact strength test. **04**
- Q.3** (a) Explain the test procedure for measuring HDT. **07**
- OR
- (a) Explain the test procedure for measuring coefficient of Linear Thermal expansion. **07**
- (b) Define dielectric strength. Explain the test procedure for it. **07**
- OR
- (b) What do you mean by arc resistance? Explain the steps for determining it. **07**
- Q.4** (a) Explain importance of weathering properties. **03**
- OR
- (a) Define ESCR. Draw the test assembly for it. **03**
- (b) What do you mean by Oxygen Index? State factors affecting Oxygen Index test results. **04**
- OR
- (b) Explain importance of non destructive tests. **04**
- (c) Explain test procedure for MFI. State factors affecting test results. **07**

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| Q.5 | (a) State types of failures and explain any one. | 04 |
| | (b) Explain SQC in brief. | 04 |
| | (c) State types of failure analysis techniques. State its applications. | 03 |
| | (d) Explain importance of quality control. | 03 |
