

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER- VI EXAMINATION –Summer- 2019**

**Subject Code: 3362304****Date: 16-05-2019****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.

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|------------|---|-----------|
| <b>Q.1</b> | Answer any seven out of ten.  | <b>14</b> |
|            | <ol style="list-style-type: none"> <li>1. Give Full form: (i) A.S.T.M. (ii) I.S.</li> <li>2. Define: Standard, Specification</li> <li>3. What is the difference between hardness Hardness and Toughness?</li> <li>4. Draw stress strain curve for P.C..</li> <li>5. Give Full form: (i) S.P.C. (ii) S.Q.C.</li> <li>6. Which flow tests are used for thermoset materials?</li> <li>7. Define: Creep, Oxygen Index</li> <li>8. List factors affecting Izod impact strength test result.</li> <li>9. List factors affecting MFI test.</li> <li>10. List types of failures.</li> </ol> |           |
| <b>Q.2</b> | (a) Define Die electric strength. Explain its test with neat sketch.  | <b>07</b> |
|            | OR  |           |
|            | (a) Explain stress strain curve.  | <b>07</b> |
|            | (b) Explain Oxygen index test with neat sketch.   | <b>07</b> |
|            | OR  |           |
|            | (b) Explain MFI test with neat sketch.  | <b>07</b> |
| <b>Q.3</b> | (a) Explain importance of quality control.  | <b>07</b> |
|            | OR  |           |
|            | (a) Explain Cup flow test.  | <b>07</b> |
|            | (b) Explain ESCR test with neat sketch.   | <b>07</b> |
|            | OR  |           |
|            | (b) List various failure analysis techniques. Explain any one of them.  | <b>07</b> |
| <b>Q.4</b> | (a) Define Flexural strength. Explain its test.   | <b>07</b> |
|            | OR  |           |
|            | (a) Write short note: Arc resistance  | <b>07</b> |
|            | (b) Explain VST test with neat sketch.  | <b>07</b> |
| <b>Q.5</b> | (a) Explain Rockwell hardness test with neat sketch.  | <b>07</b> |
|            | (b) Define Testing. Give reasons for testing.   | <b>07</b> |

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