

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER – III EXAMINATION – WINTER 2016**

**Subject Code: 332304****Date: 28-11-2016****Subject Name: Plastics Materials****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. Each question carry equal marks (14 marks)

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|------------|--|-----------|
| <b>Q.1</b> | (a) Give the name of thermo plastic materials (at least 14).                         | <b>07</b> |
|            | (b) Write short note: "Two roll mill"  | <b>07</b> |
| <b>Q.2</b> | (a) Compare thermo plastic materials with thermo set materials.                      | <b>07</b> |
|            | (b) Explain properties of High Density Poly Ethylene (HDPE).                         | <b>07</b> |
|            | OR   |           |
|            | (b) Explain temperature and viscosity relationship for plastic.                      | <b>07</b> |
| <b>Q.3</b> | (a) List the types of flow of polymer and explain in brief.                          | <b>07</b> |
|            | (b) Write applications of Poly Vinyl Chloride (PVC).                                 | <b>07</b> |
|            | OR   |           |
| <b>Q.3</b> | (a) Explain visco-elastic behavior of plastic by Maxwell's model.                    | <b>07</b> |
|            | (b) List the additives used in compounding of plastic and explain any one in detail. | <b>07</b> |
| <b>Q.4</b> | (a) List the applications and properties of Phenol Formaldehyde (PF).                | <b>07</b> |
|            | (b) Explain properties of Nylon-6.   | <b>07</b> |
|            | OR   |           |
| <b>Q.4</b> | (a) Give applications of Epoxy material in various fields.                           | <b>07</b> |
|            | (b) List engineering plastic materials. Write applications of Fluorocarbons.         | <b>07</b> |
| <b>Q.5</b> | (a) Give uses of Polycarbonate material (PC) in various applications.                | <b>07</b> |
|            | (b) Write applications of Poly Ether Ether Ketone (PEEK).                            | <b>07</b> |
|            | OR   |           |
| <b>Q.5</b> | (a) Explain properties of PPS.   | <b>07</b> |
|            | (b) Write full form of PPO and explain its properties.                               | <b>07</b> |

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