

**GUJARAT TECHNOLOGICAL UNIVERSITY****DIPLOMA ENGINEERING – SEMESTER – III • EXAMINATION – SUMMER 16****Subject Code: 3332304****Date: 24.05.2016****Subject Name: Plastic Material - I****Time: 02:30 PM TO 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.
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. List the type of plastic flow.
  2. Draw the temperature Vs viscosity graph of plastic material.
  3. State the name of any two thermoplastic material.
  4. Write any two application of acrylic material.
  5. What is compounding.
  6. State the name of any two engineering plastic material.
  7. Write the two examples of high performance and heat resistant material.
  8. State the name of any two thermoset plastic material.
  9. List any two additives used for compounding.
  10. Write any two properties of nylon.
- Q.2** (a) Explain any two rheological plastic flow with graph. **07**  
OR  
(a) Explain the Maxwell's model with neat sketch. **07**  
(b) Write properties and applications of polypropylene (PP). **07**  
OR  
(b) Write properties and applications of PVC. **07**
- Q.3** (a) Write properties and applications of polystyrene (PS). **07**  
OR  
(a) Write properties and applications of Epoxy. **07**  
(b) List the type of plasticizer and explain it. **07**  
OR  
(b) Write properties and applications of PTFE (Teflon). **07**
- Q.4** (a) Write properties and applications of polyphenyleneoxide (PPO). **07**  
OR  
(a) Write properties and applications of PET. **07**  
(b) Write properties and applications of polyetherketone (PEK). **07**  
OR  
(b) Explain the two roll mill with neat sketch. **07**
- Q.5** (a) Write properties and applications of polycarbonate (PC). **07**  
(b) Write properties and applications of polyethylene (PE). **07**

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