

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER-6 EXAMINATION –WINTER- 2019**

**Subject Code:3362303****Date: 22-11-2019****Subject Name: PLASTIC MATERIALS-II****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. Define barrier polymer
  2. Define biodegradable polymer
  3. Define water soluble polymer
  4. List types of blend preparation technique
  5. List out any three high performance polymer
  6. Define alloy and blend
  7. List out natural biodegradable polymer
  8. Define electrically conductive polymer
  9. List out types of fire resisting polymer
  10. List out nano composite polymer
- Q.2** (a) Write properties and application of polyarylates polymer **03**  
OR  
(a) Write application of polyimide(PI) **03**  
(b) Write application of liquid crystal polymer(LCP) **03**  
OR  
(b) Write properties of electrical conductive polymer **03**  
(c) Write state application of barrier polymer **04**  
OR  
(c) Write properties biomedical polymer **04**  
(d) State importance of polymer alloy and blends **04**  
OR  
(d) Write state selection criteria of blends composite **04**
- Q.3** (a) Write properties of PCL (polycaprolactom) **03**  
OR  
(a) Write application of natural biodegradable polymer **03**  
(b) Write down properties and application of PC/PBT **03**  
OR  
(b) Write properties of ABS/PVC **03**  
(c) List out types of blend preparation technique briefly explain any one. **04**  
OR  
(c) Write short note on thermoplastic elastomers **04**  
(d) State factor affecting of biodegradable polymer. **04**  
OR

	(d) Write Short note on microbial polymers	<b>04</b>
<b>Q.4</b>	(a) Give classification of biodegradable polymer	<b>03</b>
	OR	
	(a) State sector application of polymer used in building and construction.	<b>03</b>
	(b) Write Short note on chlorinate polymers	<b>04</b>
	OR	
	(b) List out types of polymer used in medical application	<b>04</b>
	(c) Write steps of preparation in polymer blend design.	<b>07</b>
<b>Q.5</b>	(a) List the uses of various polymer used in automotive application.	<b>04</b>
	(b) Write application of water soluble polymer.	<b>04</b>
	(c) List out types of high temperature polymer write any two application	<b>03</b>
	(d) Give properties of PPO/Nylon	<b>03</b>

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