

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGG – SEMESTER – VI • EXAMINATION – SUMMER - 2017

Subject Code: 3362303**Date: 15-05-2017****Subject Name: PLASTIC MATERIALS-II****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. List any two Fire resisting polymers.
 2. Write any two applications of Biodegradable polymers.
 3. State any two properties of polymers used in Textile packaging.
 4. Write any two characteristic properties of Thermoplastic Elastomers.
 5. Write any two characteristic properties of Cellulose.
 6. State any two properties of polymers used in Automotive industry.
 7. List any two examples of Liquid Crystal Polymers.
 8. Write full form of: (1) PCL (2) PHA
 9. List any two polymers used in Sports.
 10. List any two barrier polymers.
- Q.2** (a) State various applications of Polyarylates. **03**
OR
(a) Write properties of Chlorinated Polyether. **03**
(b) State various properties of Biomedical Polymers. **03**
OR
(b) State various properties of Barrier Polymers. **03**
(c) Write a brief note on Liquid Crystal Polymers. **04**
OR
(c) State any two properties and any two applications of Electrically Conductive Polymers. **04**
(d) Compare properties of Polyimides with Polyetherimides. **04**
OR
(d) Write structure, properties and any two applications of Polyamide-imide. **04**
- Q.3** (a) Give classification of Biodegradable Polymers. **03**
OR
(a) State characteristic properties of Microbial Polyesters. **03**
(b) List various Natural Polymers. Write any three applications of them. **03**
OR
(b) Write short note on “water Soluble Polymers”. **03**
(c) State characteristic properties and any two applications of “Polylactic Acid”. **04**
OR
(c) State and explain various factors affecting Biodegradability. **04**
(d) Write short note on “Polymer Nano Composites”. **04**
OR

	(d) List various high temperature polymers. Write specific applications of any two of them.	04
Q.4	(a) Define: (1) Polymer Alloys (2) Polymer Blends	03
	OR	
	(a) Write properties of PC/ABS blend.	03
	(b) Write short note on "Melt Blending".	04
	OR	
	(b) Write short note on "Solution Blending".	04
	(c) Write various steps involved in Polymer Blend design.	07
Q.5	(a) Write properties and applications of PPO/Nylon blend.	04
	(b) State characteristic properties of polymers used in Aerospace application.	04
	(c) List any three polymers used in Food packaging.	03
	(d) List any three polymers used in Medical application.	03
