

**GUJARAT TECHNOLOGICAL UNIVERSITY****Diploma Engineering - SEMESTER-VII • EXAMINATION – SUMMER • 2014****Subject Code: 372303****Date: 16/06/2014****Subject Name: High Performance and Green Plastics****Time: 10:30 am – 1:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

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|-------------|---------------------------------------------------------------------------------------------------|-----------|
| <b>Q.1</b>  | (a) List the applications of poly (amide imide).                                                  | <b>07</b> |
|             | (b) Explain properties & applications of PC-ABS.                                                  | <b>07</b> |
| <b>Q.2</b>  | (a) Write advantages & disadvantages of biodegradable polymers.                                   | <b>07</b> |
|             | (b) Explain properties of chlorinated polyether.                                                  | <b>07</b> |
|             | OR                                                                                                |           |
|             | (b) Write properties & applications of Solid Polymer Electrolytes in brief.                       | <b>07</b> |
| <b>Q.3</b>  | (a) List various types of high temperature polymers and explain in brief applications of any one. | <b>07</b> |
|             | (b) Write the short note on “thermoplastic elastomers” (TPE).                                     | <b>07</b> |
|             | OR                                                                                                |           |
| <b>Q.3</b>  | (a) List preparation methods for alloys & blends and explain melt blending.                       | <b>07</b> |
|             | (b) Explain properties & applications of NYLON-PBT.                                               | <b>07</b> |
| <b>Q.4</b>  | (a) Explain properties & applications of PPE-PS.                                                  | <b>07</b> |
|             | (b) Classify biodegradable polymers in detail with example.                                       | <b>07</b> |
|             | OR                                                                                                |           |
| <b>Q. 4</b> | (a) Write properties & applications of Poly lactide.                                              | <b>07</b> |
|             | (b) Explain biological degradation of polymer.                                                    | <b>07</b> |
| <b>Q.5</b>  | (a) Write properties & applications of Poly esteramide (PEA).                                     | <b>07</b> |
|             | (b) Explain the factors affecting biodegradability of polymers.                                   | <b>07</b> |
|             | OR                                                                                                |           |
| <b>Q.5</b>  | (a) Explain injection molding process for biodegradable polymers.                                 | <b>07</b> |
|             | (b) Write short note: “Additives for biodegradable polymer”.                                      | <b>07</b> |

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