

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- Vth SEMESTER–EXAMINATION – MAY/JUNE - 2012

Subject code: 152303

Date: 04/06/2012

Subject Name: Plastics Recycling and Waste Treatment

Time: 02:30 pm – 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.**

- Q.1** (a) Define- Additives, Shredding, Virgin material, Fillers **07**
(b) Describe the complete process of “Plastics Coated Cable Scrape” Recycling **07**
- Q.2** (a) Give details of recycling of Polyethylene Terephthalate (PET). List the sources of PET waste. **07**
(b) Give details of Material Identification Marking **07**
- OR**
- (b) Give details of medical fields where plastics are used widely. List the individual plastics material used for particular application in human body **07**
- Q.3** (a) Describe in detail about the Plastics Roads. With the help of flow sheet describe the road manufacturing process, using plastics. **07**
(b) Give details of Plastics used in Orthopedic implants **07**
- OR**
- Q.3** (a) List the various applications of recycled PET **07**
(b) Describe the various plastics used for making amusements / fun articles for garden and amusement parks **07**
- Q.4** (a) Write a short note on “Land fill of Plastics Waste” **07**
(b) Write a short note on application of recycled PVC **07**
- OR**
- Q.4** (a) Discuss the Life Cycle Root of Plastics in India. Give its flow diagram **07**
(b) Give details of Energy recovery from Plastics Waste. Discuss the process “Incineration” in detail **07**
- Q.5** (a) List the sources of generation of waste plastics bottles. Discuss its one of the recycling method. **07**
(b) Explain the “Modifying the properties of Plastics through incorporation of miscellaneous additives. **07**
- OR**
- Q.5** (a) Give the general application of thermoset materials. Give its method of recycling and usage there after **07**
(b) Explain in short about the important thermal conversion technologies of recycled plastics. **07**
