

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2013****Subject code: 1722408****Date: 05-06-2013****Subject Name: Plastics Waste Management and Recycling****Time: 10.30 am – 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.

Q.1 (a) List out the various recycling techniques. Discuss in detail about the primary recycling method. **07**

(b) Discuss in detail about the various sources of plastic waste. **07**

Q.2 (a) Give the classification code of different plastic materials with its properties and applications. **07**

(b) How the plastic waste can be separated by float and sink method? Explain with suitable diagram. **07**

OR

(b) Explain in detail about separation of resin and fibre from FRP waste. **07**

Q.3 (a) Write a short note on tertiary recycling of plastic waste. **07**

(b) Define the terms- Plastic Recycling, Commingled Plastics, Purge, Reclaimed materials, Virgin Plastics, Recyclate Plastics. **07**

OR

Q.3 (a) Write a short note on i) plastic waste as a filler and ii) life cycle analysis of polymer. **07**

(b) Explain the Secondary Recycling of Plastics waste by Co-Extrusion and Co-Injection Moulding. **07**

Q.4 (a) Discuss in detail about the effects of recycling of plastics waste on Environment. **07**

(b) Write a short note on biodegradable plastics. **07**

OR

Q.4 (a) Write a short note on quaternary recycling technique. **07**

(b) Discuss in detail about the landfilling of plastic waste. **07**

Q.5 (a) Explain the chemical recycling of PBT. **07**

(b) List out the different types of incinerators use for the incineration of plastic waste and discuss about the batch incinerator. **07**

OR

Q.5 (a) Which are the problems associated with the incineration of pure plastic waste. **07**

(b) Discuss in detail about the pyrolysis of plastic waste. **07**
