Seat	Su	GUJARAT TECHNOLOGICAL UNIVERSITY M. E SEMESTER – II • EXAMINATION – SUMMER • 2014 bject code: 1722408 Date: 23-06-2014	
	Ti	bject Name: Plastics Waste Management and Recycling me: 02:30 pm - 05:00 pm Total Marks: 70 tructions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.	
Q.1	(a)	Define the terms- plastic recycling, commingled plastics, purge,	07
	(b)	reclaimed materials, virgin plastics, recyclate plastics. List out the various methods used to separate different plastics. Explain in detail about float and sink method.	07
Q.2	(a)	Explain the recycling process of woven sack plastics waste.	07
		Explain in detail about separation of resin and fiber from FRP waste. OR	07
	(b)	Discuss the various problems associated with the Incineration of pure plastics waste.	07
Q.3	(a)	List out the various recycling techniques. Discuss in detail about the primary recycling method.	07
	(b)	Write a short note on tertiary recycling of plastic waste. OR	07
Q.3		Discuss in detail about the land-filling of plastic waste.	07
	(b)	Discuss the recycling of PET using hydrolysis and Methanolysis processes.	07
Q.4	(a)	Write a short note on life cycle analysis of plastics waste.	07

(b) Discuss in detail about the effects of recycling of plastics waste on

(b) List out the different types of incinerators use for the incineration of

plastic waste and discuss about the batch incinerator.

(a) Write a short note on quaternary recycling technique.

(a) Discuss about separation technologies of waste plastics.

(b) Explain in detail about the chemical recycling of plastics waste.

(b) Write short note on agglomeration of plastics.

OR

(a) How we can separate plastics from plastics waste using solvent extraction

environment.

and solvent separation method?

Q.4

Q.5

Q.5

07

07

07

07

07

07

07