Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER II- EXAMINATION - WINTER - 2016

	•	Name: Additives & Compounding	10
Tir	ne: 2 cructio	2:30 pm to 5:00 pm Total Marks:	70
	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Describe in detail, the role of impact modifiers on PVC. What are Antioxidants? Give Mechanism of Action.	07 07
Q.2	(a) (b)	Classify Flame retardant. How chlorinated flame retardant works? Give brief classification of additives. How you will select best additives for plastics. Explain criteria.	07 07
	(b)	Explain with Examples (i) Lubricants (ii) Methods for incorporation of additives on polymers.	07
Q.3	(a) (b)	Explain steps involved in PVC compounding in details. Write down the various functional elements of a single screw extruder with a neat diagram.	07 07
		OR	
Q.3	(a) (b)	Briefly explain the batch mixers and continuous mixers. Explain the various steps involved in compounding process of plastics by banbury mixer.	07 07
Q.4	(a) (b)	Explain how High speed mixture works. Write down the name of the plastics which are used very frequently for food packaging and medical applications.	07 07
Q.4	(a)	OR Why PVC is self extinguish properties. Explain in detail.	07
γ.,	(b)	Draw a schematic diagram of an intensive mixer, indicating the various parts. Explain their functions and applications.	07
Q.5	(a) (b)	How additives affect properties of plastics material. Discus with examples. Explain (i) Nucleating agents (ii) Blowing agents. OR	07 07
Q.5	(a) (b)	Write down the uses of plastics in medical and agriculture. Write a brief notes on Plastic Gears	07 07
