Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI • EXAMINATION – WINTER 2013

Subject Code: 160502 **Date: 29-11-2013**

Subject Name: Chemical Process Industries - II

Time: 02:30 pm to 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)**	What is dye? Classify different type of dyes based on its application.	**07**
	(b)	Starting with chemical reaction, describe the manufacturing of H – acid with neat flow diagram and enlist its application.	**07**
Q.2	**(a)**	Describe in detail the manufacturing of sugar from sugarcane with neat and labeled flow – sheet. Also mention major engineering problems associated to it.	**07**
	(b)	Write a short note on "Classification of drugs" based on its application.	**07**
		OR	
	(b)	Describe in detail: Vitamins.	**07**
Q.3	**(a)**	Write a short note on blue pigment and red pigment.	**07**
	(b)	What is paint? Starting with the neat and labeled flow – sheet, explain the manufacturing process for paint.	**07**
		OR	
Q.3	**(a)**	Write a short note on industrial alcohol manufacturing process. Also enlist major engineering problems involved in it.	**07**
	(b)	Describe in detail: manufacturing of beer with neat and labelled flow sheet.	**07**
Q.4	**(a)**	Discuss about manufacturing process of aspirin.	**07**
	(b)	Explain in detail: Oxazine and Thiazine dyes	**07**
		OR	
Q.4	**(a)**	Enlist the uses of citric acid. Describe the production of citric acid by molasses fermentation with a neat flow chart.	**07**
	(b)	Write a short note on absolute alcohol.	**07**
Q.5	**(a)**	Starting with chemical and physical properties, explain the manufacturing process of anthraquinone with flow sheet.	**07**
	(b)	Define: Antibiotics. Explain in brief about Erythromycin, Streptomycin and Penicillin with its uses.	**07**
		OR	
Q.5	**(a)**	Write a note on: Constituents of paints and explain Pigment Volume Concentration (P. V. C.) for paints in brief.	**07**
	(b)	Explain the manufacturing of citric acid by fermentation.	**07**

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