Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V • EXAMINATION – WINTER • 2014

Subject Code: 152805 **Date: 08-12-2014**

Subject Name: Production and Application of Colorants and Auxiliaries

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)**	Describe Dow and Cummene process in detail with chemical reactions.	**10**
	(b)	What are Intermediates? Give examples of different Intermediates.	**04**
Q.2	**(a)**	Describe oxidation with examples.	**07**
	(b)	What is reduction? Describe Bachamp reduction in detail.	**07**
		OR	
	(b)	Discuss coal tar distillation with neat sketch.	**07**
Q.3	**(a)**	Describe halogination in detail with examples.	**07**
	(b)	Describe Nitration in detail with examples.	**07**
		OR	
Q.3	**(a)**	Discuss the concept of wetting, emulsification and detergency with examples of textile processes.	**07**
	(b)	Explain Sulphonation with suitable examples.	**07**
Q.4		Discuss the chemistry, preparation, properties and applications of anionic surface active agents.	**14**
		OR	
Q.4		Discuss the chemistry, preparation, properties and applications of cationic surface active agents.	**14**
Q.5		Write a short note on any TWO:	**14**
	(a)	Sequestering agents	
	(b)	Leveling Agents	
	(c)	Wetting agents	
	(d)	Discharging agents in printing	

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