Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI • EXAMINATION – SUMMER • 2015

Subject Code: 163608 **Date:14/05/2015**

Subject Name: Principles of Dyeing and Printing

Time:10.30am-01.00pm **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)**	Draw a flowsheet of fabric dyeing	**07**
	(b)	Describe various thickening agents	**07**
Q.2	**(a)**	Write a note on jigger and padding mangle	**07**
	(b)	Write short note on (i) Technique of printing (ii) Rope dyeing and jet dyeing	**07**
		OR	
	(b)	What are the different type of machinery available for loose cotton dyeing	**07**
Q.3	**(a)**	What are the different methods of printing ?	**07**
	(b)	Describe block printing and resist printing.	**07**
		OR	
Q.3	**(a)**	Explain roller printing in detail?	**07**
	(b)	Give the structure of wool and silk. Explain different bonding in wool and fibre and their importance.	**07**
Q.4	**(a)**	Write note on (i) Block printing (ii) Discharge printing	**07**
	(b)	(i) Explain the concept of yarn, cheese, hank and cop.	**04**
		(ii) Write a note on physicochemical equilibrium of dyeing.	**03**
		OR	
Q.4	**(a)**	(i) What is the role of humectants and reducing agents in printing paste?	**04**
		(ii) What do you mean by affinity and subtantivity?	**03**
	(b)	Describe various material of construction of vessels and their compatibility with dyes.	**07**
Q.5	**(a)**	(i) Classify vat dyes and explain the principle and process of vat dyeing.	**04**
		(ii) Explain Zwitter ion, Keratinisation and Mordant dyeing.	**03**
	(b)	What do you mean by Kier boiling? Draw the structure of cotton fibre and flow diagram of its pretreatment.	**07**
		OR	
Q.5	**(a)**	What are the different types of hank dyeing available?	**07**
	(b)	Explain tie and dye method in detail.	**07**

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