Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY

**BE - SEMESTER-III (New) EXAMINATION - WINTER 2015** 

Subject Code:2132904 Date:21/12/2015

**Subject Name: Textile Processing- I** 

Time: 2:30pm to 5:00pm Total Marks: 70

**Instructions:** 

1. Attempt all questions.

- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

			MARKS
Q.1		Attempt the following objective questions.	14
۷.1	1	Singeing process removes dirt and oil from fabric, true or	4.
		False?	
	2	What is meant by saponification?	
	3	What is detergency?	
	4	Give mathematical formulae to calculate % wet pick up.	
	5	Define % shade.	
	6	Presence of starch on fabric is tested bysolution.	
	7	Mercerization improves theof cotton yarn/ fabric.	
	8	dyes possess poor wash fastness.	
	9	Dichlorotriazene dyes arebrand reactive dyes.	
	10	Which class of dyes possesses good all-round fastness?	
	11 12	Name the two classes of water insoluble dyes.	
	14	Name the dyes most commonly used for producing blacks on cotton.	
	13	Silk fiber can be dyed with basic dyes, true or false?	
	14	Why reactive dyes possess good wash fastness on cotton?	
Q.2	(a)	Discuss the importance of wet processing in context with	03
<b>~</b>	(4)	properties of grey fabric.	00
	<b>(b)</b>	What is singeing? Why and when it is necessary? Give	04
	` /	sketch of gas singeing process.	
	<b>(c)</b>	Give classification of desizing methods used for cotton	07
		fabric. Describe any one method of desizing in detail	
		with its merits and demerits.	
OR			
	<b>(c)</b>	Describe the process of scouring cotton fabric using	07
0.3	( )	pressure kier.	0.2
Q.3	(a)	Explain the principle of mercerization with its	03
	<b>(b)</b>	significance in wet processing of cotton textiles.	04
	<b>(b)</b>	Give comparison between hypochlorite bleaching and peroxide bleaching.	V <del>4</del>
	(c)	Describe in detail the process of peroxide bleaching of	07
	(C)	cotton fabrics explaining the chemistry involved in it.	07
OR			
Q.3	(a)	Give any one method for improving wash fastness of	03
~	\·-/	direct dyes on cotton.	-
	<b>(b)</b>	Describe the process of dyeing cotton fabric with direct	04
		dyesdyes.	
		Dyes.	

	(c)	What are hot brand reactive dyes? Describe exhaust	07
Q.4	(a)	method for applying these dyes on cotton fabrics. Give major point of comparison between direct dyes and reactive dyes on cotton fabric. What is a hydrolysed reactive dye?	03
	<b>(b)</b>	Enlist various processing equipments/machineries in context with the form of the textile material to be	04
	(c)	processed and continuous or batch type of process.  Describe the process of dyeing vat colours on cotton fabric with the chemical reactions involved in it.  OR	07
Q.4	(a)	Discuss the merits and demerits of using sulphur dyes on cotton materials.	03
	<b>(b)</b>	Describe in brief the process of dyeing cotton fabric with sulphur dyes.	04
	(c)	Describe in detail the process of producing azoic colours on cotton fabric with its merits and demerits.	07
Q.5 (a)	Name the dyes used for dyeing of Nylon. State the parameters used for dyeing of nylon with most commonly used class of dyes.	03	
	<b>(b)</b>	Give the highlights of pretreatment process for polyester fabrics.	04
	(c)	Classify the methods used for dyeing of polyester fabric  Describe the method used most commonly for dyeing of polyester fabrics.	07
		OR	
	(a)	Name the protein fibres. Enlist the dyes used for dyeing of protein fibres.	03
	<b>(b)</b>	Describe the process of applying most commonly used dyes on silk.	04
	(c)	Give the various combination of dyes used for dyeing of polyester/cotton blend. Describe the method for dyeing P/C blend using any suitable combination of dyes.	07

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