

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
	1 Singeing process removes dirt and oil from fabric, true or 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 by _____ solution.	
	7 Mercerization improves the _____ of cotton yarn/ fabric.	
	8 _____ dyes possess poor wash fastness.	
	9 Dichlorotriazine dyes are _____ brand reactive dyes.	
	10 Which class of dyes possesses good all-round fastness?	
	11 Name the two classes of water insoluble dyes.	
	12 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 properties of grey fabric.	03
	(b) What is singeing? Why and when it is necessary? Give sketch of gas singeing process.	04
	(c) Give classification of desizing methods used for cotton fabric. Describe any one method of desizing in detail with its merits and demerits.	07
	OR	
	(c) Describe the process of scouring cotton fabric using pressure kier.	07
Q.3	(a) Explain the principle of mercerization with its significance in wet processing of cotton textiles.	03
	(b) Give comparison between hypochlorite bleaching and peroxide bleaching.	04
	(c) Describe in detail the process of peroxide bleaching of cotton fabrics explaining the chemistry involved in it.	07
	OR	
Q.3	(a) Give any one method for improving wash fastness of direct dyes on cotton.	03
	(b) Describe the process of dyeing cotton fabric with direct dyes.	04

- (c) What are hot brand reactive dyes? Describe exhaust method for applying these dyes on cotton fabrics. **07**
- Q.4** (a) Give major point of comparison between direct dyes and reactive dyes on cotton fabric. What is a hydrolysed reactive dye? **03**
- (b) Enlist various processing equipments/machineries in context with the form of the textile material to be processed and continuous or batch type of process. **04**
- (c) Describe the process of dyeing vat colours on cotton fabric with the chemical reactions involved in it. **07**
- OR**
- Q.4** (a) Discuss the merits and demerits of using sulphur dyes on cotton materials. **03**
- (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) 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**
- Q.5** (a) Name the protein fibres. Enlist the dyes used for dyeing of protein fibres. **03**
- (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**
