Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– III EXAMINATION – SUMMER 2015

Subject Code:132803 **Date: 09/06/2015**

Subject Name: Scouring and Bleaching - I

Time: 02.30pm-05.00pm **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)**	Answer the following OBJECTIVE questions:	**10**
	i.	The oily impurities are present in---------- region of cotton fibre.	
	ii.	Calsoline Oil HS is used as----------in scouring bath.	
	iii.	Write the most essential requirement in washing process.	
	iv.	---------- continuous bleaching machine is suitable for processing fabric in rope form.	
	v.	In end-to-end stitching, the thickness near the seam is ---------- that of the fabric.	
	vi.	Define QUENCHING.	
	vii.	Show the reaction scheme of saponification.	
	viii.	State the lime wash composition.	
	ix.	What is the storage pH of hydrogen peroxide?	
	x.	The chemical class of Blankophor-R is ----------.	
	(b)	Describe the functions of sodium silicate in kier boiling.	**04**
Q.2	**(a)**	Explain in detail various impurities present in grey cotton fabric.	**07**
	(b)	Describe with neat diagram the working of tight and slack rope washing machines.	**07**
		OR	
	(b)	Give a critical review on bleaching of cotton fabric with hydrogen peroxide.	**07**
Q.3		Enumerate different types of continuous bleaching ranges. Describe with neat diagram the working of 'J-box'.	**14**
		OR	
Q.3	**(a)**	Write various corrosion problems of sodium chlorite with their remedies.	**07**
	(b)	Discuss different technical criteria involved with scouring of coloured woven goods.	**07**
Q.4	**(a)**	Write an assay on chlorine and chlorite methods of desizing in detail.	**07**
	(b)	State detailed description of most popular method of singeing.	**07**
		OR	
Q.4		Describe in detail various techno-chemical aspects of enzymatic desizing process.	**14**
Q.5	**(a)**	Differentiate between scouring and souring. Explain the souring process in detail.	**07**
	(b)	Correlate the effect of pH on sodium hypochlorite bleaching process in context to the stability.	**07**
		OR	
Q.5	**(a)**	Expand FBA to its full form. Enlist its characteristic features and chemical constitutions.	**07**
	(b)	What is bleaching powder chemically? Explain its bleaching process with associated problems.	**07**

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