Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-Vth Examination December 2010

Subject code: 152803

Sub. Name: Analytical Textile Chemistry- I

Date: 16 /12 /2010 **Time: 03.00 pm - 05.30 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 the types of hardness of water. Give the method for determination of total hardness of water.	**07**
	(b)	Give the test methods involved in Proximate analysis of coal with the significance.	**07**
Q.2	**(a)**	Enlist various constituents of water. Discuss the detrimental effect of non metallic and metallic hardness in textile processing.	**07**
	(b)	Discuss the concept of BOD. Give method for determination of BOD of an industrial effluent.	**07**
		OR	
	(b)	Differentiate between BOD and COD. Give the method for determination of COD of an effluent.	**07**
Q.3	**(a)**	Give test methods for determination of consistency and drop point of lubricants.	**07**
	(b)	With significance, describe the test methods for volatility, cloud point and pour point of oils.	**07**
		OR	
Q.3	**(a)**	Write a short note on "Brookfield viscometer in analysis of oils."	**07**
	(b)	Describe the working of Red Wood viscometer and its use in analysis of lubricants and thermic fluid oils.	**07**
Q.4	**(a)**	Give the methods for determination of % purity of Sodium Sulphide and Sodium hypochlorite.	**07**
	(b)	Explain the role of Glass Electrode in determination of pH.	**07**
		OR	
Q.4	**(a)**	Discuss about potentiometric titrations and its significance in analytical chemistry.	**07**
	(b)	Explain the cunductomeric titrations and its practical applications.	**07**
Q.5	**(a)**	Describe the method of TLC and its significance in analytical textile chemistry.	**07**
	(b)	Explain the concept of spectroscopy and its use in field of analytical textile chemistry.	**07**
		OR	
Q.5	**(a)**	Give test methods for identification of Polyester, Nylon and Acrylic.	**07**
	(b)	Describe the method for determining size % add on and residual size content.	**07**

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