GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–V (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 152803   **Date: 01/05/2017**

Subject Name: Analytical Textile Chemistry - I

Time: 02:30 PM to 05:00 PM   **Total Marks: 70**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4.

Q.1	**(a)**	Describe the method for determination of purity of acetic acid and soda ash.	**07**
	(b)	Give the test method for determination of alkalinity in a water sample.	**07**
Q.2	**(a)**	Describe the process for determination of acidity in a water sample.	**07**
	(b)	Describe the test method for determination of purity of NaOCl and Na_2S.	**07**

OR

	(b)	Describe the method for determination of total hardness in water.	**07**
Q.3	**(a)**	With neat sketch, discuss the construction and working of bomb calorimeter with the calculations involved for determination of calorific value of coal.	**07**
	(b)	Discuss the working of Penetrometer with neat sketch.	**07**

OR

Q.3	**(a)**	Explain the principles and chemical reactions involved in determination of Copper content and Silica content in water.	**07**
	(b)	Explain the use of conductivity titrations by giving any two examples.	**07**
Q.4	**(a)**	Give the test methods for determination of Flash Point and fire point of oil.	**06**
	(b)	Discuss the principles of Chromatography and Spectroscopy.	**08**

OR

Q.4	**(a)**	Discuss the principle and test procedure to obtain dissolved oxygen present in water sample.	**07**
	(b)	Give test methods to test lubricant oils for their aniline point and cloud point.	**07**
Q.5	**(a)**	Describe the principle and method for determination of COD of an effluent sample.	**07**
	(b)	Name various viscometers. Discuss the working of viscometer which gives direct and absolute measure of viscosity.	**07**

OR

Q.5	**(a)**	Write a note on "Thin layer chromatography and its use in Textile chemistry".	**07**
	(b)	Describe the test methods involved in Proximate analysis of coal.	**07**

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