Printed Pages: 4 **ECT-404**

(Following Paper ID and Roll No. to be filled in your Answer Books)	
Paper ID : 164409	**Roll No.**

B.TECH.

Theory Examination (Semester-IV) 2015-16

TEXTILE CHEMISTRY-I

Time : 3 Hours ***Max. Marks : 100***

Section-A

1. Attempt all questions. All questions carry equal marks. Write answer of each part in short. (2×10=20)

(a) Name different desizing methods?

(b) Write the process by which the impurities present in cotton are removed?

(c) Mention the steps involved in gas singeing?

(d) Write the name of shade produced from -

i. Cochineal

ii. Punicagratum

(e) Write the function of prebrushing roll and cooling roller in singeing?

(f) What are natural mordant dyes?

(g) Give two differences between dyes and pigments?

(h) Why is H_2O_2 universal bleaching agent?

(i) What kinds of enzymes are suitable for desizing cotton fabric?

(j) Write the function of salt & soda in direct dyeing?

Section-B

2. Attempt any five parts of the following. (10×5=50)

(a) What are anti-chloring treatment? Describe such a semi-continuous bleaching process in which no separation anti-chloring treatment is given. How does the PH plays role in cotton bleaching with Hydrogen Peroxide?

(b) What do you mean by dynamic equilibrium in dyeing? How are the Direct Dyes anchored inside cellulosics?

(c) Classify the Cationic Dyes. Describe the properties of Basic Dyes & the dyeing procedure of acrylics with these dyes.

(d) Describe the mechanisms involved in cotton scouring. Give the process sequence for P/C blended fabric.

(e) How strength of sodium hypochlorite is determined? Describe the bleaching process of cotton with sodium chlorite. Describe the working of continuous scouring & bleaching by steamer roll bed principle with process parameters.

(f) How are the various impurities of cotton removed in scouring? What are the steps involved in gas singeing. Describe each step with its significance.

(g) What are the steps involved in bulk extraction of natural dyes? Describe the significance of every step.

(h) What are the drawbacks of direct dyes? Describe the various methods for overcoming such problem. Which dyes are most widely used in the industry?

Section-C

Note: Attempt any two parts of the following. (15×2=30)

3. Describe the reactions of Diazotizations and Coupling reaction with suitable examples. State the fastness properties of Azoic colours.

4. Compare between Natural dyes & Synthetic dyes. How can natural dyes be made more reproducible?

5. What are natural mordant dyes? Describe the extraction of natural indigo & application process of it onto cotton fabrics.