

B.TECH.**THEORY EXAMINATION (SEM-IV) 2016-17
TECHNOLOGY OF BLEACHING AND MERCERIZATION****Time : 3 Hours****Max. Marks : 100****Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.****SECTION-A****1 Explain the following: (10×2=20)**

- a) Write down natural and added impurities presence in the cotton fabric?
- b) What is the object of singeing?
- c) What does bleaching do with the fabric?
- d) What do you understand with soft water?
- e) Name the enzyme used in desizing of cotton
- f) What will happen if the wool is treated with highly alkaline solution?
- g) What is the application of carbonizing process in wool?
- h) What is the difference between scouring and souring?
- i) What is slack mercerizing?
- j) Give at least three examples of each natural and synthetic fibres

SECTION-B**2 Attempt any five of the following : (10×5=50)**

- a) What is desizing process? How do you carried out desizing of cotton fabric?
- b) How do you scour cotton fabric? How do you check whether the fabric is scoured or not?
- c) Explain bleaching process of cotton using hydrogen peroxide? Give Mechanism of bleaching with hydrogen peroxide also.
- d) Describe in details the process of scouring carried out in Kier with a suitable diagram.
- e) Describe in detail the process of bleaching carried out in J box with a suitable diagram
- f) Discuss physical and chemical changes occur in cotton due to mercerization.
- g) What types of impurities are present in the silk fibres? Discuss bio-polishing process?

SECTION-C**Attempt any two of the following: (15×2=30)**

- 3** How do you determine degradation of cotton due to scouring and bleaching using **any two of the following** methods:
 - i) Copper number'
 - ii) Methylene blue absorption method
 - iii) Cuprammonium fluidity test
- 4** What types of impurities are present in the wool fibres? How do you process wool fibres to make it suitable for dyeing? Also discuss decatizing process.
- 5** Describes the objective of singeing and various types of singeing technology using suitable diagram with their limitations.