B. Tech.

(SEM. VIII) EXAMINATION. 2006-07

DEVELOPMENT IN WET PROCESSING

Time : 3 Hours] [Total Marks : 100

Note : Attempt all questions. All questions carry equal marks.

1. Attempt any two parts of the following :
   (a) Give the composition of cotton. Illustrate the chemistry of removal of natural and added impurities from cotton.
   (b) With the help of line diagram illustrate the industrial process of scouring and bleaching of cotton using J-Box.
   (c) What practical problems are faced during mercerization of tubular knit fabric. Describe an industrial process for mercerization tubular knit fabric along with practical difficulties.

2. Attempt any two parts of the following :
   (a) What is the difference between application of chemicals by padding and coating techniques? Describe a method of application of rubber coating to textiles.

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(b) Explain the chemistry of the action of cellulose enzyme on cotton. Why the treatment of cotton with cellulose enzyme is known as bio-polishing?

(c) Discuss the chemistry of wool setting. Describe any one method for imparting permanent set to wool.

3. Attempt any two parts of the following:
(a) Give the list of chlorinated solvent suitable for scouring of cotton. Describe an industrial process for solvent scouring of cotton.
(b) Under what circumstances the process of mass colouration is adopted? What are the merits and demerits of mass colouration? How would you carry out mass colouration of polyester?
(c) Give the classification of texturing methods. Illustrate any one method in detail.

4. Attempt any two parts of the following:
(a) With the help of suitable line diagrams briefly discuss the different types of padding mangles.
(b) Give the classification of transfer printing methods. Explain the principle involved in each method.
(c) What is Vigreaux printing? How it is carried out on industrial scale?

5. Write short notes any two of the following:
(a) Caustic soda recovery after fabric mercerization.
(b) Dot or powder coating method
(c) Application of micro and nano silicone emulsions for finishing of textiles.
(d) Continuous dyeing of cotton with reactive dyes.