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RN-8237

B. E. - II (Sem. IV) (Textile Processing) Examination

May / June – 2010

Scouring & Bleaching - II

(New Scheme)

Time : **3** Hours] [Total Marks : **100**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ B. E. - 2 (Sem. 4) (T. T.)

Name of the Subject :

☛ Scouring & Bleaching - 2 (New)

☛ Subject Code No. : 8 2 3 7 ☛ Section No. (1, 2,.....) : 1&2

Seat No. :

Student's Signature

(2) Answers to the **two** sections must be written in **separate** answer books.

(3) Figures to the right indicate full marks.

(4) Tie **two** sections **separately**.

SECTION - I

1 (a) Answer the following objective questions : **10**

(i) Which scouring method of wool is industrially popular ?

(ii) Which bleaching agent is used for synthetics ?

(iii) _____ gum is removed during degumming of silk.

(iv) Explain carbonization.

(v) What do you understand by suint ?

(vi) Define caustic reduction.

(vii) The hydrolysis of polyester during caustic reduction undergoes through _____ substitution.

(viii) Give the name of catalyst which increases the speed of weight reduction of polyester.

(ix) Show the reaction scheme of hydrolysis of polyester with NaOH.

(x) What is the effect of caustic reduction on denier ?

(b) Describe various technical aspect of polyester scouring and bleaching. **10**

2 Discuss various parameters that influence the weight reduction of polyester. **15**

OR

2 (a) Describe various methods of scouring of loose wool. **10**

(b) Explain peracetic bleaching. **5**

3 Write short notes on any **three** of the following : **15**

(a) Degumming of silk

(b) Applications of weight reduction and aminolysis of polyester

(c) Carbonization of wool

(d) Mechanism of caustic reduction of polyester.

SECTION - II

4 (a) Answer the following objective questions : **10**

(i) Give the equation of barium activity number.

(ii) During mercerization, the fibre swells _____ and shrinks _____.

(iii) Cresylic wetting agents have higher wetting efficiency than non cresylic wetting agent. True or False.

(iv) Define axial ratio.

(v) What is surface tension of mercerizing liquor ?

(vi) The luster of mercerized fabric is attributed to _____ reflectance of light.

(vii) The luster during mercerization is maximum at _____ ^{o}tw alkali.

(viii) State the function of recuperator during mercerization.

(ix) If the temperature and alkali concentration are lower, the luster produced is lower. True or False.

(x) Name two physical methods for evaluation of degree of mercerization.

(b) Explain each and every aspect of caustic recovery process. **10**

5 (a) Why wetting agents are necessary in mercerizing liquor ? **10**
Discuss different types of wetting agents in detail.

(b) Explain various process parameters for mercerization of cotton. **5**

OR

5 Describe all the aspect involved with the theory of swelling.

6 Write short notes on any **three** of the following : **15**

(a) Recuperator

(b) Slack mercerization

(c) Warp mercerization

(d) Effect of caustic concentration on tensile strength, moisture regain.