[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
(2123)

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B. Tech 5th Semester Examination

Textile Chemical Processing-I (O.S.)

TE-5002

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

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt one question each from section A, B, C, D and Section E is compulsory.

SECTION - A

1. Make a flow sheet for pretreatments of 65/35 polyester/cotton blended fabric and discuss choice of dyes for both components. **(15+5=20)**

2. Discuss the different desizing methods and compare their results. Give your views on synthetic sizing materials. **(15+5=20)**

SECTION - B

3. Discuss the various process parameters of calcium hypochlorite bleaching of cotton fabric, compare with hydrogen peroxide bleaching. **(15+5=20)**

4. What are the different methods to remove sericin material from material silk fabric. Explain scrooping treatments. **(15+5=20)**

SECTION - C

5. Compare the mercerizations effects of chainless with chain type. Discuss ammonia mercerization treatment. **(14+6=20)**

6. How dimensional stability can be imparted to 65/35 polyester/cotton blended fabric. **(20)**

SECTION - D

7. Describe hnc, value and chroma of color and explain tristimulus values of color. **(10+10=20)**

8. Discuss the various types of bonds which have their role in dye fixation within fibre. **(20)**

SECTION - E

9. (i) Explain shearing and croping.

   (ii) Write the kubelka music function and explain.

   (iii) Write the different methods of polyester dyeing.

   (iv) Discuss the additive color mixing.

   (v) Write the difference between steaming and curing.

   (vi) Discuss the role of Na_2CO_3 in H_2O_2 bleaching.

   (vii) Define centre to selvedge variation.

   (viii) Discuss the milling treatments.

   (ix) Explain drawbacks of sodium chlorite bleaching.

   (x) Write the role of sodium silicate in H_2O_2 bleaching.

(10×2=20)