

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

Dec.-22-0228

TE-503 (Textile Chemical Processing-II)

B.Tech. 5th (CBCS)

Time : 3 Hours

Max. Marks : 60

*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 five questions in all, selecting one question from each section A, B, C & D. Question no. 9 is compulsory.

#### SECTION - A

1. Elaborate colour theories with appropriate illustration. Describe principle involved in computer colour matching with neat diagram of machine. (10)
2. Write detail note on vat dye, their chemical structure, recipe, procedure of dyeing and precautionary measures. (10)

#### SECTION - B

3. Classify the blends and mention the various effects (such as shade) achieved by taking single or combination of dyes. Give brief detail on dyeing of P/W blend. (10)
4. Elaborate the washing and finishing operation of denim. (10)

#### SECTION - C

5. Explain various styles of printing on cotton. Explain recipe and procedure of printing for each style choosing suitable dye or combination of dyes. (10)
6. Discuss rotary screen with neat diagram. Compare this printing method with roller printing machine. (10)

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#### SECTION - D

7. Explain mechanism of washing in different sort of washing ranges/ machines with neat line diagram. Justify that washing and drying operations are very important in textile wet processing. (10)
8. Elaborate the procedure of identification of dyes on dyed synthetic textiles. (10)

#### Compulsory Question

9. (a) Define free volume theory.  
(b) Enumerate some of the important terminology in study of kinetics of dyeing.  
(c) Describe merits and demerits of pigment applications in textiles.  
(d) Mention dye combination for Wool/cotton blend for various sort of dyed effects.  
(e) What do you mean by rope form of denim dyeing?  
(f) Brief the printing of polyester with suitable dye.  
(g) What do you mean by transfer printing? Mention its pros and cons.  
(h) Enumerate various reducing and oxidative agents applicable in printing with their chemical formula and properties in brief,  
(i) Why is steaming treatment very important in printing?  
(j) Brief about the properties of sodium alginate and their application in printing. (10×2=20)