

[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
(2125)

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B. Tech 5th Semester Examination
Textile Chemical Processing-I (OS)
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 from each of the sections A, B, C and D. Section E is compulsory.

SECTION - A

1. Discuss the different parameters of singeing m/c. Explain the treatments to remove surface fibre bio-chemically. (14+6=20)
2. Express your views on oxidative desizing methods. Compare the acid desizing with oxidative desizing. (14+6=20)

SECTION - B

3. Explain the following solutions:

- (a) True solution
- (b) Colloidal solution
- (c) Emulsion.

Briefly explain solvent scouring of wool. (16+4=20)

4. Describe the H_2O_2 bleaching with their chemical recipe and discuss the bleaching of wool fabric. (12+8=20)

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SECTION - C

5. Explain the relation between heat setting temp. and exhaustion of disperse dye in polyester fabric dyeing. (20)
6. How alkali treatment of cotton changes internal structure of fabric? Explain chain mercerizing m/c. (10+10=20)

SECTION - D

7. Write the definition of textile dyes and explain following terms:
 - (a) Affinity of dyes
 - (b) Entropy of dyeing
 - (c) Heat of dyeing. (5+15=20)
8. Discuss the choice of dyes for nylon fibre dyeing and write the methods of dyeing nylon with acid dyes. (8+12=20)

SECTION - E

9.
 - (i) Discuss the carrier method of polyester dyeing.
 - (ii) Write the role of NaCl in reactive dyeing.
 - (iii) Discuss the properties of enzymes.
 - (iv) Explain 20 volume H_2O_2 .
 - (v) Explain available Cl_2 in bleaching powder.
 - (vi) Write the diazotization reaction.
 - (vii) Explain cold method to dissolve the Maphthol.
 - (viii) Discuss the scouring recipe of wool fibre.
 - (ix) Explain sonforization treatment.
 - (x) Write the classification of vat dyes. (2×10=20)