

- (iii) What is Finishing ? What is carbonization process of wool ? How is it carried out ?
- (iv) What is Bleaching ? Define the objectives of bleaching.
- (v) What is Bioscouring ? Write down the name of enzyme which is used for bioscouring.
- (vi) How many types of finishing according to durability ?
- (vii) How does scouring affect the cotton fabric ?
- (viii) How do you test whether the fabric is scoured or not ?
- (ix) What is BAN number and its value required for a good mercerized fabric ?
- (x) Explain heat setting process of polyester fabric.

10×1½=15

Roll No.

Total Pages : 04

Sep-21-00055

B.Tech. EXAMINATION, 2021

Semester IV (CBCS)

TEXTILE CHEMICAL PROCESSING-I

TE-402

Time : 2 Hours

Maximum Marks : 60

The candidates shall limit their answers precisely within 20 pages only (A4 size sheets/assignment sheets), no extra sheet allowed. The candidates should write only on one side of the page and the back side of the page should remain blank. Only blue ball pen is admissible.

Note : Attempt *Four* questions in all, selecting *one* question from any of the Sections A, B, C and D.
Q. No. **9** is compulsory.

Section A

- 1.** What are the pretreatment processes required for cotton and wool material ? **15**

Or

What is the main objective of heat setting ? Write down the concept and mechanism of heat setting of synthetics. Explain the working of stenter machine ?
15

2. How do you carried out enzymatic desizing ? Explain its mechanism with suitable example. **15**

Section B

3. Write down the limitations of plate and roller singeing machine. Describe working of gas singeing machine. **15**
4. (a) Give the classification of finishing process. Explain zero-zero finish in detail. **7½**
(b) Explain the role of pH and temperature in sodium hypochlorite bleaching. Describe sodium hypochlorite bleaching process. **7½**

Section C

5. What is the role of stabilizer and sequestering agent in peroxide bleaching ? Explain the bleaching process of cotton with peroxide. **15**

6. (a) Describe the mechanism of size removal by enzymes. What are the important parameters ? **7½**
(b) Describe the working of a chainless mercerization and state its important parameters. **7½**

Section D

7. What are the physical changes occur after mercerization ? Discuss role of concentration of caustic soda and temperature in detail. **15**
8. (a) Write down natural and added impurities in the wool, silk and synthetic fabric ? **7½**
(b) Write down the short notes on any *three* of the following :
(i) Degumming
(ii) Sanforizing
(iii) Scouring
(iv) Plasma finishing. **7½**

(Compulsory Question)

9. Attempt all questions : **10×1½=15**
(i) What is TEGWA solution ?
(ii) What is Slack mercerization ?