Register Number.....

B.TECH. DEGREE EXAMINATIONS: NOVEMBER 2009

Fifth Semester

TEXTILE TECHNOLOGY

U07TT504: Textile Chemical Processing – I

Time: Three Hours **Maximum Marks: 100**

Answer ALL the Questions:-

PART A (10 x 1 = 10 Marks)

1. Singeing is carried out to increase

a) Strength of yarn b) Strength of fabric c) Luster of fabric d) Threads per inch

2. Carbonizing of wool is removal of

a) Grease b) Crease c) Foreign fibres d) Vegetable matters

3. pH of sodium chlorite bleaching is

a) 3.5 to 4.0 b) above 9 c) 10.8 to 10.9 d) 7.0 to 8.0

4. Strength of mercerized cotton under tension compared to under no tension

a) Decreases b) Remains same c) Increases d) First increases then decrease

5. Sodium sulfate is added in acid dyeing for

a) Retarding b) Fixing c) Accelerating d) Exhaustion

6. Wool can be preferably dyed with

a) Acid dyes b) Direct dyes c) Basic dyes d) Disperse dyes

7. Mass coloration is primarily mode of coloring for

a) Polypropylene b) Polyester c) Nylon d) Acrylic

8. HTHP dyeing temperature of PET is

a) 100°C b)110°C c)125°C d)150°C

9. Winch is used for processing

a) Woven Fabrics b) Non-woven Fabrics c) Knitted Fabrics d) Garments

10. Function of padding roller is

a) To remove excess liquor b) To penetrate the liquor inside the fabrics

c) To prepare the fabric for padding d) To remove excess liquor and to penetrate the liquor as well

PART B (10 x 2 = 20 Marks)

11. What is saponification?
12. What is the sericin and fibroin composition of raw silk fibre and why shoul compound be removed?
13. What are the advantages of hydrogen peroxide bleaching over hypochlorite blea
14. Why is only cotton mercerized? Can we mercerize silk?
15. Why soaping is carried out after reactive dyeing?
16. Why soaping is carried out after vat dyeing?
17. In HTHP dyeing of polyester why is the heating rate reduced after reaching Tg?
18. What is the role of co-monomer in acrylic dyeing?
19. What are the difference between jigger and winch?
20. What are the essential points to be considered while dyeing garments?

PART C (5 x 14 = 70 Marks)

21 (a) (i) Provide the detailed classification of desizing methods and explain i mechanism of desizing.

(ii) Explain in brief the principle and the process of alkali boiling of cotton.

(OR)

(b) (i) Describe the process of silk degumming with only water, soft soap and

(ii) Describe the process of wool carbonizing.

22 (a) (i) Describe the process of bleaching with sodium chlorite mentioning the a and disadvantages.

(ii) With suitable schematic diagram discuss in detail the change in properties upon mercerization under no tension.

(OR)

(b) (i) Describe the continuous process of scouring and bleaching of polyest blends.

(ii) Describe the liquid ammonia treatment process and compare with merce

dyeing procedure involved in vat dyeing of cotton highlighting the ance of each chemicals and steps. (8)

uss in detail the principle of banning of dyes. (6)

(OR)

plain the dyeing procedure involved in reactive dyeing of cotton highlighting the gnificance of each chemicals and steps. (8)

(ii) List the 22 banned amines whose release from azo dyes is responsible for banning of those dyes. (6)

24 (a) (i) Explain the principle and process of thermosol dyeing of polyester. (7)

(ii) Explain mechanism of dyeing of polyester with disperse dyes through HTHP dyeing. (7)

(OR)

(b) (i) Explain the principle and process of HTHP dyeing of polyester. (7)

(ii) Explain the principle and the need for mass coloration of polypropylene. (7)

25 (a) (i) With neat sketch explain the working principle of package dyeing machine highlighting its advantages and disadvantages. (7)

(ii) With neat sketch explain the working principle of hank dyeing machine highlighting its advantages and disadvantages. (7)

(OR)

(b) (i) With neat sketch explain the working principle of Padding Mangle highlighting its advantages and disadvantages. (7)

(ii) With neat sketch explain the working principle of any one garment dyeing machine highlighting its advantages and disadvantages. (7)

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