KUMARAGURU
college of technology
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Register Number: ……

B.TECH DEGREE EXAMINATIONS: NOV/DEC 2014

(Regulation 2009)

Fifth Semester

TEXTILE TECHNOLOGY

TTX110: Textile Chemical Processing II

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

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Which one of the dye is suitable for sublimation transfer printing of polyester
   a) Reactive dyes b) Acid dyes
   c) Vat dyes d) Disperse dyes
2. For obtaining bright and clear prints in pigment printing, the thickener should
   a) Have a good binding power b) Have a zero solid content
   c) Form an elastic film d) Form a transparent film
3. The highest rate of production in printing is obtained on
   a) Block printing b) Digital printing
   c) Flat bed printing d) Rotary printing
4. The purpose of steaming of printed textile material is to
   a) Dry the print paste b) Fix colour into fabric
   c) Heat the fabric d) Reduce the moisture absorption of fabric
5. The efficacy of the wash-n-wear treatment can be estimated by measuring its
   a) Bending length b) Dye uptake
   c) Crease recovery d) Tensile strength
6. The role of magnesium chloride in Urea formaldehyde finishing of cotton fabric is
   a) Catalyst b) Fixing agent
   c) Exhausting agent d) Levelling agent
7. Compounds based on combination of nitrogen and phosphorous are used as
   a) Antimicrobial agents b) Antistatic agents
   c) Flame retardants d) Water proofing agents

8. The typical enzyme used for bio-polishing is

a) Amylase b) Cellulase

c) Peptidase d) Mixture of peptidase and cellulase

9. The optimum conditions for bleaching cotton with hydrogen peroxide are

a) 60°C, pH 7 b) Boil Temperature, pH 7

c) 60°C, pH 10 d) Boil Temperature, pH 10

10. Identify one of the factor which decides the selection of textile wet processing machinery

a) Processing time b) pH

c) Temperature d) M:L ratio

PART B (10 x 2 = 20 Marks)

11. Differentiate the discharge style of printing from resist style of printing.
12. State the qualities of dyestuff required for vapour transfer printing of polyester.
13. Classify the ink jet printing.
14. Contrast the beater bar method from electrostatic method of printing.
15. State the functions of softener in finishing of textile goods and give its types.
16. What is the principle of controlled compressive shrinkage machines?
17. Enlist the enzymes used in finishing of textile goods.
18. What do you meant by UPF and SPF?
19. State the importance of process control in textile chemical processing unit.
20. State the process variables that influence the quality of dyed material.

PART C (5 x 14 = 70 Marks)

21. a) (i) Outline the mechanism of steam fixation process in printing. (4)

(ii) Describe the role of each ingredients present in print paste. (10)

(OR)

b) (i) Explain the printing of cotton with reactive dyes for resist and discharge styles. (8)

(ii) Discuss in detail the production of cotton printed goods using pigments. (6)

22. a) Explain in detail the working principle of rotary screen printing machine with a neat sketch.

(OR)

b) i) Compare the roller printing machine with screen printing (rotary and flat) for its merits. (4)

ii) Briefly discuss the screen preparation process for flat bed printing machine. (10)

23. a) Explain with neat sketches, the working principles of various calendaring methods.

(OR)

b) (i) State the reasons for crease formation in cotton materials. (4)

(ii) Discuss in detail the crease proof finishing of cotton materials using dimethylol dihydroxy ethylene urea (DMDHEU). (10)

24. a) Discuss in detail the theory and mechanism of durable and non durable flame retardant finishing of cotton materials.

(OR)

b) (i) Explain the concept of water repellent finishes on textile materials. (7)

(ii) Explain the mechanism of durable and non-durable antistatic finishing. (7)

25. a) Explain the effect of auxiliary chemicals and process parameters in chemical processing of cotton materials.

(OR)

b) Discuss in detail the various process control measures to be implemented in the preparatory process of cotton materials.

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