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Entry No: *2013TT10965*

TXL 141 Technology of Textile Preparation and Finishing

Minor I

Max Marks-20

2.30-3.30 pm/14-02-2015/VLT1

1. Indicate whether the given statement is true or false with a suitable justification. (3)
- a) In case of polyester, singeing is carried out after dyeing.
  - b) The width control of a cotton fabric during continuous tension mercerization is better with expander rolls than with pin or clips of a stenter.
  - c) Absorbency of cotton improves after beaching with sodium chlorite.
2. M:L ratio in a padding process would be approximately: (0.5)
- a) 1:10      b) 1:20      ☒ c) 1:30      d) 1:1
3. Desizing of a textile material having a non-starch size can be carried out using (0.5)
- a) Acid      b) enzyme      c) Lissapol N      ☒ d) sodium persulphate
4. TEGEWA test is used for determining the efficiency of: (0.5)
- a) Bleaching      ☒ b) desizing      c) scouring      d) other (specify)
5. Water absorbency of wool will improve after (0.5)
- a) Carbonization      b) scouring      ☒ c) bleaching      d) other (specify)
6. Mercerization process treatment time would be (in minutes) (0.5)
- ☒ a) 1-2      b) 5-10      c) 30-40      d) other (specify)
7. On degumming, Moisture regain of silk will (0.5)
- a) Increase      ☒ b) decrease      c) remain same      d) other (specify)
8. State whether the following statement are true or false (with justification) (2)
- a) Mercerization and scouring of cotton can be combined.
  - b) In mercerization of cotton crystallinity actually decreases.
  - c) Winch is a better machine for processing of knitted fabrics as compared to Jigger.
  - d) OBAs are generally applied from bleach bath.
9. Singeing is generally followed by desizing especially in case of cotton. After desizing, the free protruding fibres in warp threads would create problems for which singeing is generally carried out in the first place. Comment. (1)



10. Discuss the mechanism of sodium silicate as stabilizer in  $H_2O_2$  bleaching. What are its drawbacks? (1)
11. What is the reason for increase in strength of cotton fibre upon mercerization? (1)
12. What is HLB value concept? You have two surfactants with HLB values of 12 and 15 respectively. How would you create a system with an HLB value of 13? (2)
13. What will be the effect of water hardness and presence of heavy metals in bleaching with  
(a) Sodium Chlorite (b) Hydrogen peroxide (2)
14. Pectinase enzyme has been successful in scouring of cotton even though it does not attack wax. Comment. (1)
15. Following recipe is to be used for cotton scouring:  
NaOH: 4% (owf). However, the same recipe in another unit of concentration turns out to be 2 gpl NaOH. Find out the M:L ratio. (2)
16. A blend of cotton and viscose is to be mercerized. Draw a process sequence with suitable conditions and proper justification. (2)