

- Q.20 Explain the common dyeing terms: MLR, Chromophores, Exhaustion, Dyes Fastness.
- Q.21 Write the stepwise process of cotton dyeing with reactive dyes.
- Q.22 Describe the construction and working of padding mangle.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Describe the complete dyeing process of wool with acid dyes including mechanism, pH control, temperature, and after-treatments.
- Q.24 Explain polyester dyeing with disperse dyes using (a) Carrier method and (b) High temperature method.
- Q.25 Define mercerization. Write its objectives. Explain mercerization process done on cotton.

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Sem. 2nd/ Text. Tech. Sub. : Dyeing & Pre-Treatments

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 Which is the first step of textile wet processing?
- a) Bleaching b) Scouring
- c) Singeing d) Mercerization
- Q.2 Which chemical is commonly used in carbonization of wool?
- a) Sulphuric acid b) Acetic Acid
- c) Hydrogen Peroxide d) Sodium bisulphite
- Q.3 Reactive dyes are mainly suitable for _____.
- a) Wool b) Polyester
- c) Cotton d) Nylon

- Q.4 The typical temperature for polyester high temperature dyeing is ____.
- a) 60°C b) 100°C
c) 130°C d) 180°C
- Q.5 Which type of dye is mainly used for silk?
- a) Disperse dyes b) Acid dyes
c) Sulphur dyes d) Vat dyes
- Q.6 The purpose of desizing is to remove ____.
- a) Natural oils b) Starch size
c) Color impurities d) Vegetable matter

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 Singeing is done to remove ____ from fabric surface. (Hairy fibres / Fabric colour)
- Q.8 In enzymatic desizing, generally ____ enzymes are used. (Amylase / Sulphuric Acid)
- Q.9 The optimum pH for hydrogen peroxide bleaching is about _____. (10.5/4.5)

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- Q.10 Mercerization improves both dye affinity and ____ of cotton. (Lusture / Elasticity)
- Q.11 Metal complex dyes used for wool are also called ____ dyes. (Chrome / Vat)
- Q.12 In a padding mangle, liquor pick-up is usually controlled around ____%. (70%/20%)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 List the natural and added impurities present in cotton and wool.
- Q.14 Explain the principle, types, and precautions of singeing.
- Q.15 Describe the enzymatic methods of desizing.
- Q.16 Explain the scouring process of cotton with typical recipe and conditions.
- Q.17 Compare bleaching with sodium hypochlorite and hydrogen peroxide.
- Q.18 Explain the physical and chemical changes during mercerization of cotton.
- Q.19 Classify dyes with examples.

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