

Q.21 What is the typical weave used in denim fabric?

Q.22 What is the function of alkali in indigo dyeing?

SECTION-D

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

Q.23 Discuss the mechanism of enzyme washing, including factors controlling enzyme activity and its advantages.

Q.24 Compare rope and sheet dyeing machines, explaining their merits and demerits.

Q.25 Describe the factors affecting dye buildup and penetration in indigo dyeing. Explain the effects of indigo concentration, immersion time, oxidation time, number of dips, temperature, and pH

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No. of Printed Pages : 4

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Roll No.

5th Sem / Textile Processing

Subject : Denim Processing

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

Q.1 The synthetic production of indigo was developed by:

- a) Adolf von Baeyer b) Louis Pasteur
- c) William Perkin d) Michael Faraday

Q.2 Indigo dye is categorized as:

- a) Reactive dye b) Vat dye
- c) Direct dye d) Acid dye

Q.3 Indigo dyeing is usually carried out at:

- a) pH 4-6 b) pH 7-8
- c) pH 11-13 d) pH 14

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- Q.4 Denim is generally woven in which weave?
 a) 2/2 balanced twill b) 3/1 warp-faced twill
 c) 4/4 satin d) 2/1 weft-faced twill
- Q.5 The Sanforsat process is primarily used for:
 a) Skew correction
 b) Pre-shrinking of denim
 c) Printing denim
 d) Indigo reduction
- Q.6 In denim dyeing, indigo dyes are usually applied in:
 a) Acidic pH b) Strong alkaline pH
 c) Neutral pH d) Enzymatic medium

SECTION-B

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

- Q.7 Leuco-indigo is _____(soluble/insoluble) form of indigo dye in alkaline solution.
- Q.8 Modified ring dyeing for quick wash denim results in _____ (Deep dye penetration / Surface dyeing only)
- Q.9 Rope dyeing is preferred for denim because It gives better ring -dyeing effect.(True/False)

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- Q.10 In indigo dyeing, sodium dithionite functions as _____ (Oxidizing agent/ Reducing agent)
- Q.11 Cotton-spandex is commonly used to make stretch denim (True/False)
- Q.12 Indigo dye is categorized as _____ (Reactive dye / Vat dye)

SECTION-C

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

- Q.13 What is the role of sodium dithionite in Indigo dyeing.
- Q.14 How does immersion time of yarn in the dye bath influence dye uptake?
- Q.15 Why is oxidation time between dips important in indigo dyeing?
- Q.16 Write two precautions to be followed while handling indigo dyeing machines.
- Q.17 Compare between warp-faced and weft-faced twills.
- Q.18 What is over-dyed denim used for?
- Q.19 List two yarn-related defects in denim fabric.
- Q.20 Explain purpose of sizing in denim weaving.

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