

- Q.21 What are the benefits of using supercritical dyeing technology?
- Q.22 Explain the mechanism of dyeing of nylon with metal complex dyes.

SECTION-D

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

- Q.23 Discuss the concept of sustainable textile wet processing and the recent developments that have contributed to it
- Q.24 What are different approaches for dyeing of polyester? List three advantages and disadvantages of carrier dyeing.
- Q.25 Explain the working principle of a Jigger dyeing machine, including a detailed description with a clear diagram.

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No. of Printed Pages : 4
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4th Semester/ Textile Processing Subject : Dyeing of Synthetic & Blended Textiles

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

- Q.1 What is the main purpose of carrier dyeing in polyester dyeing?
- To reduce the dyeing temperature
 - To improve dye fixation
 - To increase dye solubility
 - To achieve color fastness
- Q.2 Which technique is associated with sustainable textile wet processing?
- Thermofixation
 - Foam dyeing
 - Vat dyeing
 - Reactive dyeing
- Q.3 What does "HTHP" stand for in the context of polyester dyeing?
- High Temperature High Pressure
 - High Tension High Precision
 - High Transfer High Penetration
 - High Torque High Performance

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- Q.4 Acid dyes are
- a) Anionic dyes b) Cationic dyes
 - c) Non ionic dyes d) None of the above

- Q.5 Silk can be dyes by
- a) Acid dye b) Metal complex dye
 - c) Mordant dyes d) All of the above

- Q.6 Retarding agents acts as
- a) Levelling agents b) Carriers
 - c) Exhausting agents d) None of the above

SECTION-B

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

- Q.7 What type of dye is primarily used for dyeing polyester?
- Q.8 What is the significance of the Kuster Roll Mangle technology in dyeing?
- Q.9 List a common defect in dyeing synthetic fibers and its remedy.
- Q.10 P/V/W is an example of _____ blend.

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- Q.11 Polyester fibre is having affinity for _____. (disperse/reactive) dye.
- Q.12 What is the role of the glass transition temperature in dyeing?

SECTION-C

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

- Q.13 Explain the process of carrier dyeing for polyester.
- Q.14 What are the advantages of blending different types of fibers
- Q.15 Describe two dyeing machines used for yarn dyeing.
- Q.16 Write the difference between disperse and reactive dyes.
- Q.17 How does the thermofixation process work in polyester dyeing?
- Q.18 Write five properties of disperse dyes.
- Q.19 What are the different types of retarding agents used in dyeing? Explain one type in detail.
- Q.20 Differentiate between dyeing at fibre stage and fabric stage.

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