Q.24 Explain Jigger dyeing machines with neat diagram principle and working.

Q.25 What are the various types of acrylic fibers? How would you dye cationic dyeable acrylic fibers using basic dyes?

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Roll No. .....

4th Sem.
Branch : Textile Processing
Sub. 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 Which dyeing method is used for polyester fabrics involving high temperature and high pressure?

a) Carrier dyeing b) HTHP dyeing
c) Thermofixation d) Pad dry cure process

Q.2 What is the role of glass transition temperature in dyeing synthetic fibres?

a) It affects the crystallinity of the fiber
b) It impacts the softness of the fabric
c) In influences the dye absorption rate
d) It determines the fibre's color strength

Q.3 Which type of dyes is primarily used for dyeing acrylic fibers?

a) Disperse dyes b) Reactive dyes
c) Cationic dyes d) Acid dyes

Q.4 Which dye combination is typically used for dyeing a Poly/Wool blend?

a) Disperse/Reactive b) Disperse/Acid
c) Vat/Direct d) Reactive/Basic

Q.5 Which machine is primarily used of fabric dyeing in continuous processes?

a) Hank dyeing machine
b) Jigger machine
c) Hand dyeing machine
d) Cheese dyeing machine

Q.6 What is the primary advantages of using a Kuster Roll Mangle technology in deying?

a) Increased dye absorption
b) Energy and water conservation
c) High-Speed dyeing
d) Reduced fabric tension

SECTION-B

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

Q.7 The role of the _____ in dyeing synthetic fibers is to determine how much the fiber will swell and how easily dyes can penetrate.

Q..8 The method of dyeing polyester that involves using hign temperature and pressure iscalled _____ dyeing.

Q.9 What is the role of a carrier in the dyeing of polyester?

Q.10 Which dyes are used for dyeing nylon fibers?

Q.11 HT/HP stands for _____.

Q.12 Manmade fibres are _____ (difficult/easy) to dye than natural fiber.

SECTION-C

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

Q.13 What is the role of glass transition temperature in dyeing of synthetic fibers?

Q.14 Describe the HTHP dyeing process used for polyester.

Q.15 What are the advantages and limitations of using the thermofixation process for dyeingpolyester?

Q.16 Discuss the types of retarding agents used in dyeing acrylic fibres.

Q.17 Explain the principle behind the cheese dyeing machine and its application.

Q,18 Write five properties of disperse dyes.

Q.19 What are the advantages of blending different fibers?

Q.20 Name and briefly describe a recent development in dyeing techniques for sustainability.

Q.21 Explain the mechanism of dyeing of acrylic fibers with cationic dyes.

Q.22 Name and describe two types of retarders used in acrylic dyeing.

SECTION-D

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

Q.23 Explainany methods used for dyeing polyester fabrics. Discuss the advantages and limitations of high-temperature high pressure (HTHP) dyeing.