Q.27 Explain any two methods of removing permanent hardness?

Q.28 Differentiate between Monochlorotriazine and Dichloro Triazene dyes?

Q.29 Discuss the application of sulphur Dyes on cotton material

Q.30 Write the mechanism of dyeing cotton with direct dyes.

Q.31 Write short note on dyeing with solubilised vat Dyes.

Q.32 Write down the short note on the applications and importance of OBA.

Q.33 Write a short note on Sulphur Black Tendering.

Q.34 Write a short note on Bronziness.

Q.35 Write down the various types of Vat Dyes available for cotton dyeing.

## SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain Vatting , dyeing, oxidation and after treatment steps while dyeing cotton with vat dyes.

Q.37 Explain properties, method of application and classification of reactive dyes.

Q.38 Write a short note on

a) Bronziness

b) Application of acid dyes



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**4th Sem / Text. Design**
**Subject:- Dyeing Technology - I**

Time : 3Hrs. M.M. : 100

## SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 _____ Dyes forms_____bond with cotton.

a) Direct, covalent b) Acid, covalent

c) Reactive, covalent d) Vat, covalent

Q.2 Presence of calcium and magnesium minerals in water cause_____ in water.

a) Softness b) Hardness

c) Vat Dyes d) None of these

Q.3 Polyester materials can dyed with_____ Dyes?

a) Acid Dyes b) Azoic Dyes

c) Disperse d) Basic Dyes

Q.4 Write down the formula of soda ash?

a) $Na_2CO_3$ b) NaOH

c) Nacl d) None of these

Q.5 In cotton processing industry we prefer use of _____?

a) Hard water b) Soft water

c) Both (a) & (b) d) None of these

Q6 Treatment with OBA increases _____?

a) Absorbency b) Dye uptake

c) brightness d) None of these

Q.7 Give examples of Ingrain dyes?

a) Acid Dyes b) Azoic Dyes

c) Remazol Dyes d) Basic Dyes

Q8 Give one example of natural Dye?

a) Reactive Dye b) Henna

c) Remazol Dye d) None of these

Q.9 Give example of an exhausting agent?

a) $H_2O_2$ b) NaOH

c) Nacl d) None of these

Q.10 Naphtholisation and Diazotisation steps are related with_____

a) Acid Dyes b) Azoic Dyes

c) Remazol Dyes d) Basic Dyes

## SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Reduction followed by solubilization is called _____



Q.12 What is affinity of a dye?

Q.13 Why reactive dyes are called so?

Q.14 Bronziness arises in dyeing with_____ dye (Vat / Sulphur)?

Q.15 Pigments are water soluble (T/F)

Q.16 Define Hardness.

Q.17 What is Auxochrome?

Q.18 Why Vat dyes are called so?

Q.19 What is CDFA?

Q.20 Define Dye.

## SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 List four properties of solubilised vat dye and sulphur dyes

Q.22 Explain any three methods by which fastness properties of direct dyed fabric can be increased.

Q.23 Write down the importance of soft water in dye house.

Q.24 Write a short note on coupling.

Q.25 Write down the properties of milling and super milling acid dyes.

Q.26 Explain the Naptholisation and Diazotization process