

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

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

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

Q.1 Which dye is used to dye silk?

- a) Vat
- b) Disperse
- c) Sulphur
- d) Acid

Q.2 Which dye forms covalent bond with cotton?

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

Q.3 Which of the following is a natural dye?

- a) Indigo
- b) Basic
- c) Reactive
- d) Vat

Q.4 Mordants are used in \_\_\_\_\_ dyeing?

- a) Acid
- b) Basic
- c) Natural
- d) None

- Q.5 Fixation of reactive dye happens at \_\_\_\_\_ pH?  
a) Acidic                          b) Alkaline  
c) Neutral                        d) None of these

- Q.6 Bronziness of shade is related to \_\_\_\_\_ dye?  
a) Vat                              b) Direct  
c) Reactive                        d) Sulphur

### SECTION-B

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

- Q.7 List any two water soluble dyes?  
Q.8 List any two dyes used to dye cotton?  
Q.9 List any two dyes used to dye silk?  
Q.10 What is function of retarders in dyeing?  
Q.11 What is 1:1 metal complex dye?  
Q.12 Name any one exhausting agent.

### SECTION-C

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

- Q.13 How fastness of direct dyed good are improved?  
Q.14 Discuss method of application of direct dye on cellulosic material?

- Q.15 Discuss pad batch dyeing process for reactive dye on cellulosic material?  
Q.16 List any four properties of vat dyes?  
Q.17 Explain concept of solubilisation, development and oxidation for vat dyes?  
Q.18 Give reasons for bronzing of shades in sulphur dyeing?  
Q.19 What causes sulphur black tendering?  
Q.20 Write a brief note on natural dyes?  
Q.21 Write any four properties of reactive dyes?  
Q.22 Explain the term hydrolysis in reactive dyeing?

### SECTION-D

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

- Q.23 Explain the principal, construction and working of jigger?  
Q.24 Describe method of application of reactive dye to cotton?  
Q.25 Name the chemicals used in dyeing and explain their functions in brief?