Printed Pages : 1 **Roll No.** | | | | | | | | | | | **EC403**

B.TECH.

THEORY EXAMINATION (SEM–IV) 2016-17

TECHNOLOGY OF DYEING

Time : 3 Hours ***Max. Marks : 100***

Note : *Be precise in your answer.*

SECTION-A

1 **Explain the following:** **(10×2=20)**

a) What is the difference between dyes and pigments?

b) What are chromophores & auxochromes?

c) What are Vinyl Sulphone dyes?

d) What are chrome mordant dyes?

e) What do you mean by reduction clearing process?

f) Differentiate between 1:1 metal complex dye and 1:2 metal complex dyes.

g) What types of dyes can be used for acrylic fabric dyeing?

h) What is moiré effect in dyeing?

i) What is required pH of dyeing for reactive dyes?

j) Write down the sequence of vat dyeing process.

SECTION-B

2 **Attempt any five of the following:** **(10×5=50)**

a) How do you classify dyes according to the method of application?

b) Differentiate between batch wise, semi continuous and continuous method of dyeing.

c) How do you dye cotton fabric with direct dye? Discuss in detail the dyeing mechanism. Why colour fastness to washing of direct dye is poor?

d) Give a fundamental mechanism of wool dyeing with acid dyes. Discuss in detail.

e) Discuss in detail the dye-fibre interactions with suitable examples.

f) What are carriers? Discuss their role in polyester dyeing.

g) How do you dye cotton with sulphur dyes? What is Bronziness and tendering?

h) Write a short note on acrylic dyeing with basic dyes.

SECTION-C

Attempt any two of the following: **(15×2=30)**

3. What is vatting process? Discuss in detail the role of caustic and hydros in vat dyeing with suitable reactions. Also discuss in detail the classification of vat dyes on the base of application.

4. Why azoic dyes are called Ice colors? Discuss in detail the dyeing mechanism of cotton with azoic colors with suitable reactions.

5. Discuss in detail the classification of reactive dyes along with their reactions with cellulose. Also discuss in detail the role of salt and alkali in reactive dyeing.