2012

CHEMICAL PROCESSING OF TEXTILES-IV

Time Allotted : 3 Hours   *Full Marks :* 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words

as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

$10 \times 1 = 10$

i) When two colours have same tristimulus values the

colours will look

a) Always alike

b) Alike under certain condition

c) Not necessarily alike

d) Never alike.

ii) The example of visually uniform colour scale is

a) *X, Y, Z* b) *Y*, *x*, *y*

c) $L*$, $a*$, $b*$ d) None of these.

iii) Subtractive primaries of colour mixing are

a) Purple, yellow and cyan

b) Red, green and blue

c) Red, yellow and blue

d) Red, yellow and green.

iv) The number of unique hues in Munsell system is

a) Three b) Four

c) Five d) Six .

v) After resin finishing the tensile strength of cotton

material

a) Increases

b) Decreases

c) Remains same

d) Occasionally increases.

vi) In water repellent finished fabric

a) Both water and air can penetrate

b) Both water and air cannot penetrate

c) Water can penetrate, but not the air

d) Air can penetrate, but not water.

vii) Energy required for foam finishing is

a) High

b) Low

c) Moderate

d) Same as conventional finish.

viii) Rigmel finish is a / an

a) Antishrink finish b) Anticrease finish

c) Water repellant finish d) None of these.

ix) Biopolishing finish is carried out with

a) Amylase enzyme b) Pectinase enzyme

c) Cellulase enzyme d) Lipase enzyme.

x) Antistatic finishing is essential for

a) Polyester b) Cotton

c) Silk d) Wool.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Describe Munsell colour order system briefly.

3. Describe Beer's and Lambert's laws briefly. What is meant by optical density ?

4. Describe chromaticity diagram, dominant wavelength and excitation purity.

5. Describe antistatic finish briefly.

6. What is the object of calendaring finish ? Describe various calendaring finishes.

7. What are the objects of textile finishing ? Classify textile finishes.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

8. What are the relation between colour and chemical constitution of colouring matters ? Describe chromophores, auxochromes and solubilising groups present in organic dyes. What are the fastness properties a dyestuff should have for being suitable for application on textile materials.

9. Describe how the Kubelka-Munk function is derived. State basic principle of colour matching program. Describe the flow sheet of matching program briefly.

10. How tristimulus values are derived from reflectance values ? What they signify ? How uniform colour scales are derived ? Describe a popular uniform colour scale.

11. What are the advantages of using foam in textile finishing ? What are meant by blow ratio and half-life of foam ? Describe foam generating and foam application equipment.

12. Why creases are formed on textile materials especially on cotton materials ? How crease recovery properties can be improved ? Describe various types of resins used for the

purpose. Describe a method of resin finishing briefly.

13. What are the essential properties of a textile softener ?

Classify textile softeners and describe each class briefly.

Compare their properties.