Scheme - I
Sample Question Paper

Program Name : **Diploma in Textile Technology**

Program Code : **TC**

Semester : **Sixth**

Course Title : **Computer Aided Colour Science**

Max. Marks : **70**

22672

Time: 3 Hrs.

Instructions:
(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FIVE of the following. **(10 Marks)**

    a. List components in electromagnetic spectrum.

    b. State primary colours in substractive colour mixing theory

    c. Define the term 'Standard Illuminants'.

    d. State formula for total colour difference as per CIE.

    e. List components in spectrophotometer.

    f. State advantages of using 'Recipe formulation' application using CCM.

    g. State limitations of computer colour matching system.

Q.2 Attempt any Three of the following. **(12 Marks)**

    a. With neat sketch describe construction and working of reflectance spectrophotometer.

    b. Define and describe types of metamerism.

    c. Describe inputs to colour matching program for recipe formulation.

    d. Compare recipe formulation and batch correction application.

Q.3) Attempt any Three of the following. **(12 Marks)**

    a. Justify the statement 'reflectance curve is blueprint of colour'.

    b. Identify features and limitations of CIE system.

    c. Differentiate physical standards and numerical standards.

    d. Justify 'K/S data generation is key factor' in recipe formulation.

Q.4) Attempt any Three of the following.   **(12 Marks)**

   a. Define the elements l, a, b values. Write the formula to calculate dl,da and db.

   b. Describe Colour Inconstancy Index (CII).

   c. Describe limitations of Computer Colour Matching system.

   d. Describe working of pass/fail application.

   e. Write the formula for whiteness index and yellowness index.

Q.5) Attempt any Two of the following.   **(12 Marks)**

   a. With neat sketch describe construction and working of reflectance spectrophotometer.

   b. With neat sketch reflectance curves describe the terms white, black, bright and dull shades.

   c. Describe the precautions to measure the colour of sample on reflectance spectrophotometer.

Q.6) Attempt any Two of the following.   **(12 Marks)**

   a. Describe the parameters to be considered during selection of recipe.

   b. If the l, a, b values of standard and sample are as follows

	Std	sample
l	88	82
a	24	22
b	08	10

       find the tonal difference, total colour difference and if tolerance limit of dE is 1, judge the sample for pass or fail.

   c. Describe the method to analyse the dyes samples to find the strength of colour.

Scheme - I
Sample Test Paper - I

Program Name   : Diploma in Textile Technology

Program Code   : TC

Semester   : Sixth

Course Title   : Computer Aided Colour Science

Max. Marks   : 20

$\boxed{\textbf{22672}}$

Time: 1 Hour

Instructions:
(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR.   **(08 Marks)**

    a. State properties of visible light.

    b. Define additive colour mixing.

    c. List applications of substractive colour mixing.

    d. State object of CIE

    e. Define colour space.

    f. List types of illuminants.

Q.2 Attempt any THREE.   **(12 Marks)**

    a. Describe importance of calibration of spectrophotometer.

    b. Describe basic components of reflectance spectrophotometer.

    c. Elaborate l, a, b, c and h values

    d. Describe features and limitations of CIE system.

    e. Describe standard observers.

Scheme - I
Sample Test Paper - II

Program Name : Diploma in Textile Technology

Program Code : TC

Semester : Sixth

Course Title : Computer Aided Colour Science

Max. Marks : 20

Time: 1 Hour

$$\boxed{\textbf{22672}}$$

Instructions:
(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any FOUR. **(08 Marks)**

    a. Define 'Metamerism'.

    b. State advantages of computer colour matching.

    c. State norms for sample size and number of scans.

    d. Define the term 'trial dyeing'.

    e. Define K/S.

    f. State uses of yellowness index.

Q.2 Attempt any THREE. **(12 Marks)**

    a. Justify the importance of sample preparation in CCM.

    b. Differentiate manual shade matching and by using CCM.

    c. Describe advantages of shade sorting application.

    d. Describe the advantages of shade library.

    e. Describe the procedure for shade matching of blended fabric.