22672

22223

3 Hours / 70 Marks   Seat No.

Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1.   **Attempt any <u>FIVE</u> of the following:**   **10**

a) List components of spectrophotometer.

b) State primary colours in substractive colour mixing.

c) Define the term standard observer.

d) List terms used to express colours by CIE.

e) Define numerical standards.

f) Define 'K/S' value.

g) State formula to calculate total colour difference.

Marks

2. **Attempt any THREE of the following:** **12**

a) With neat sketch describe primary and secondary colours by additive and substractive colour mixing.

b) Define metamerism. Describe types of metamerism.

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

d) What are challanges for using recipe formulation application for blended fabrics.

3. **Attempt any THREE of the following:** **12**

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

b) Identify features and limitations of CIE system.

c) Describe procedure and precautions to be taken for sample measurement.

d) Describe inputs given to system to use pass / fail application.

4. **Attempt any THREE of the following:** **12**

a) Interpreat the results

dl : 12.5

da : 2.3

db : 4.3

Also calculate total colour difference.

b) Describe limitations of computer colour matching system.

c) Describe criterias for selection of recipe from recipe formulation output.

d) Describe significance of batch correction application.

e) Write formula for whiteness index and yellowness index.

5. **Attempt any TWO of the following:** 12

a) Describe precautions to be taken during k/s data generation.

b) With neat sketch of reflectance curves describe the terms while blank, bright and dull shades.

c) Describe the method to analyse the dyes samples to find its strength w.r.t. standard sample.

6. **Attempt any TWO of the following:** 12

a) Describe main features of modern spectrophotometer.

b) Differentiate physical standard with numerical standards.

c) If l, c, h values of standard and sample are as follows:

	Std.	Sample
l	62	48
c	5.7	6.2
h	105	125

Find total colour difference and also interpreate variation in tone, brightness and depth.

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