

22672

23242

3 Hours / 70 Marks

Seat No.

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- 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 FIVE of the following: **10****
- State any two properties of visible light.
 - State secondary colours in subtractive colour mixing.
 - Define the term-‘Standard Observer’.
 - State the formula for total colour difference using the elements ‘L’, ‘a’ ‘b’
 - State importance of ‘monochromator’ in spectrophotometer.
 - State advantages of recipe formulation application.
 - State limitations of computer colour matching.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) With neat sketches of reflectance curves distinguish the sample for its darkness/lightness and high chroma/low chroma.
 - b) Define and describe types of metamerism.
 - c) Describe the process for K/S data generation.
 - d) Describe importance of 'Batch correction' application.
- 3. Attempt any THREE of the following:** **12**
- a) Describe precautions for spectrophotometer. Use for colour measurements.
 - b) Identify features and limitations of CIE system.
 - c) Identify advantages of numerical standard over physical standards.
 - d) Suggest precautions to be taken during K/S data preparation.
- 4. Attempt any THREE of the following:** **12**
- a) Define the elements L, C, h. Write the formula to calculate dL, dC, dh.
 - b) Describe the colour Inconstancy Index (CII).
 - c) Describe advantages of computer colour matching system.
 - d) Describe working 555 shade sorting application.
 - e) Write the formula for whiteness index and yellowness index.
- 5. Attempt any TWO of the following:** **12**
- a) With neat sketch describe construction and working of single beam spectrophotometer.
 - b) Describe main features of modern spectrophotometer.
 - c) Suggest precautions to be taken during measurement of colour for fabric sample to get accurate results

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

- a) Describe parameters to be consider during selection of recipe given by recipe formulation application.
- b) Consider following data

	Std.	Sample
L	25	32
a	4.2	3.1
b	-6.8	-4.7

- i) Calculate and interpret Lightness / Darkness.
- ii) Plot CIE colour space diagram and interpret hue of the sample.
- iii) Find total colour diference.
- c) Describe the detail procedure to test dyes samples for it's strength and dullness, brightness.
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