

22672

24225

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 answer 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**
- a) State the primary colours in additive colour mixing theory.
 - b) Define the term “Metamerism”.
 - c) State the significance of fastness rating in colour assessment.
 - d) State the advantages of “Recipe Prediction” application using C.C.M.
 - e) List out the components of electromagnetic spectrum.
 - f) Mention the key elements in assessing colour difference in a computer colour matching system.
 - g) State the key factors in sample preparation for colour standards.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Distinguish between Physical standards and numerical standards.
 - b) List out the various features and the limitations of the CIE system.
 - c) Describe the process of calibration of a Spectrophotometer and give its significance.
 - d) Explain the role of standard illuminants in colour specifications and also mention its attribution.
- 3. Attempt any THREE of the following:** **12**
- a) With a neat sketch, describe the construction and working of reflectance spectrophotometer.
 - b) Explain the different types of Metamerism.
 - c) Describe the importance of k/s data in colour recipe formulation.
 - d) How is the Colour Inconstancy Index (CII) interpreted, and describe its importance in ensuring colour consistency.
- 4. Attempt any THREE of the following:** **12**
- a) Interpret reflectance curves and explain their role in analysing colour properties.
 - b) Describe the features and significance of Whiteness Index and Yellowness Index.
 - c) Describe the process of calculating total colour difference using lab values.
 - d) List out four limitations of Computer Colour Matching System.
 - e) Explain the process of batch correction and the factors affecting the correction to achieve accurate shade matching.
- 5. Attempt any TWO of the following:** **12**
- a) With a neat block diagram, describe the function of the main components of a Computer Colour Matching System.
 - b) Choose a suitable standard for a situation and justify the selection with appropriate seasoning?
 - c) Explain the process of k/s data generation and its role in determining colour difference.

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

- a) Explain the significance of Pass/Fail and shade sorting program in a computer colour matching system.
 - b) Explain the CIE Lab Colour Space and its importance in colour difference assessment.
 - c) Choosing a suitable blended fabric, explain the process of recipe prediction for a suitable shade.
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