

**GUJARAT TECHNOLOGICAL UNIVERSITY****B.E SEM-VII Examination-Nov/Dec.-2011****Subject code: 172802****Date: 22/11/2011****Subject Name: Computer Aided Designing & Computer Colour Matching****Time: 10.30 am-01.00 pm****Total marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

**Q.1 (a)** Describe the process of developing & constructing printed designs using any CAD software. **07**

**(b)** What are the errors with subjective assessment? In this context justify the need for objective assessment of color. **07**

**Q.2 (a)** Discuss the hardware components used in CAD system used for Textile Designs. **07**

**(b)** Write a brief note on “Digital printing”. **07**

**OR**

**(b)** Explain briefly the steps for developing a doobby design using CAD software. **07**

**Q.3 (a)** Describe the integrating sphere and optics of spectrophotometer used in CCMS. **07**

**(b)** Explain the functions of monochromator and photo detectors in spectrophotometer used for CCMS. **07**

**OR**

**Q.3 (a)** What are trichromatic co-ordinates? How they can be calculated from tristimulus values? Show the CIE chromaticity diagramme with its merits and demerits. **07**

**(b)** Explain how “Black body radiation” concept is used in standardization of illuminant. **07**

**Q.4 (a)** Give only the mathematical steps involved in “Formulation” done by CCMS software. **07**

**(b)** Justify the position of Kubelka- Munk function in determination of strength of dyes by objective assessment. **07**

**OR**

**Q.4 (a)** Show how the equation for color difference DE is derived using basics of co-ordinate geometry. Give the equations in HUNTERLAB system. Discuss the phenomenon of acceptability and perceptibility with suitable examples. **07**

**Q.4 (b)** Explain the use of color difference measurement for assigning fastness rating using CCMS. **07**

**Q.5 (a)** What is database? How it is prepared for CCMS? What care should be taken while preparing database? **07**

**(b)** Explain “555 Shade Sorting” programme and its significance for trade and industry. **07**

**OR**

**Q.5 (a)** Discuss PASS-FAIL programme with diagrammatic representation and its industrial significance. **07**

**(b)** What is “Metamerism”? Discuss in detail the various types of metamerism and its significance in textile industries. **07**

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