

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. - SEMESTER – VII • EXAMINATION – WINTER 2012****Subject code: 172802****Date: 31/12/2012****Subject Name: Computer Aided Designing and Computer Colour Matching (CAD/CCM)****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

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

- Q.1 (a)** Answer the following **objective** questions. **10**
- i. What is D-65?
 - ii. What are K and S in K/S?
 - iii. Reflectance varies linearly with concentration of dyes on fabric, true or false?
 - iv. K/S has the property of additivity, true or false?
 - v. If D_a is -ve then sample is _____ than standard and if D_b is -ve then sample is _____ than standard.
 - vi. Differentiate between 2 degree and 10 degree observer.
 - vii. Name two widely used whiteness indices.
 - viii. What does RGB indicate?
 - ix. What do you mean by a pixel?
 - x. Name any 2 softwares used for developing dobby designs.
- (b)** Justify the need for objective color assessment. **04**
- Q.2 (a)** What is the need for chromaticity co ordinates? Explain the CIE chromaticity diagram with its merits and demerits. **07**
- (b)** Describe the process of deriving color matching functions of eye from the real primaries. **07**
- OR**
- (b)** Discuss the hardware components used in CAD system used for Textile Designs. **07**
- Q.3 (a)** Discuss the concept of Black body radiation. Explain how color temperatures are assigned to various illuminants with the help of plots. **07**
- (b)** Justify the position of opponent color system in Computer Color matching. **07**
- OR**
- Q.3 (a)** Show Hue circle and discuss about its significance. **07**
- (b)** Explain how color difference measurement can be used to precisely assign the fastness rating. **07**
- Q.4 (a)** Describe the process of developing & constructing printed designs using any CAD software. **07**
- (b)** Discuss the input and output devices used in CAD system used for Textile Designs. **07**
- OR**
- Q.4 (a)** Discuss the concept of acceptability and perceptibility. Enlist the various systems for color difference measurement. Explain how color difference can be measured using co ordinate geometry. **07**
- (b)** What is shade sorting? Explain the steps involved in shade sorting based on 555 shade sorting program. **07**
- Q.5 (a)** Write a brief note on “Use of CAD in Digital printing”. **07**
- (b)** Explain briefly the steps for developing a jacquard design using CAD software. **07**
- OR**
- Q.5 (a)** Describe the different tools of any image processing software used for developing Textile Designs. **07**
- (b)** Discuss the salient features of Texprint and Cad vantage Win Printex. **07**
