

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VII(NEW) • EXAMINATION – WINTER 2016

Subject Code:2172802**Date:21/11/2016****Subject Name:Computer Aided Designing & Computer Color Matching****Time:10.30 AM to 1.00 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) Discuss briefly the steps involved in duplication of printed Designs from fabric sample using any CAD software. **07**

(b) Describe any **three** set of tools offered by any CAD software for hobby designs. **07**

Q.2 (a) Draw a neat screen layout of any CAD software for Printed designs and also explain the important components of the same. **07**

(b) Explain with neat sketch, various viewing geometries of CCMS. **07**

OR

(b) In brief, discuss about the functions of various hardware components of spectrophotometer. **07**

Q.3 (a) Give the equations for computing tristimulus values X, Y, Z of a colour object. Explain it by plots and schematic diagram. **07**

(b) i) Show the plots showing generation of negative tristimulus values and its elimination. **03**

ii) Explain the spectral power distribution of black body radiation with necessary plots. **04**

OR

Q.3 (a) Enlist various CIE illuminants. Explain the process of assigning a colour temperature to source of light. **07**

(b) Narrate in brief about the development and usefulness of CIE chromaticity diagram with proper sketch. **07**

Q.4 (a) Discuss the demerits of system using chromaticity coordinates x, y and Y for colour quantification. Explain how L a b, opponent colour system is emerged. **07**

(b) Discuss the importance of quantification of colour difference. Enlist the applications of colour difference measurement. Explain how equations are developed for DE, DL, Da, Db, DC and DH. **07**

OR

Q.4 (a) i) Explain “Hue Circle” by Sketch. **04**

ii) Show three dimensional representation of a colour using L, a, b, c, h coordinates. **03**

- Q.4 (b)** Explain the use of CCMS to carry out exercise of approval and rejection of batches in a Textile processing Industry. **07**
- Q.5 (a)** Discuss how CCMS can be used for Colour Strength analysis with the help of equations and plots. **07**
- (b)** Give only the mathematical steps involved in process of match prediction by CCMS. **07**

OR

- Q.5 (a)** Answer following questions in short. **07**
- i) Give the equations to calculate chromaticity coordinates x, y, z . **02**
- ii) What L, a, b, c, h stands for? Give equation for calculating C and h . **02**
- iii) Give the equation to calculate DE, DL, Da, Db, Dc and DH . **03**
- (b)** Explain how CCMS is indispensable for performing Shade sorting activity to be done by Textile trade and Industry. **07**
