

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VII EXAMINATION – WINTER 2015**

**Subject Code: 172802****Date:07/12/2015****Subject Name: Computer Aided Designing and Computer Color Matching****Time: 10:30am to 1:00pm****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) Do as Directed: **07**
- Define the terms: i) pixel, ii) resolution.
  - Name and describe any 3 selection tools.
- (b) Discuss the hardware components used in CAD system used for Textile Designs. **07**

- Q.2** (a) Describe in detail the process of image editing and Colour separation for developing printed Designs **07**
- (b) Explain briefly the steps for developing a jacquard design using CAD software. **07**

**OR**

- (b) Discuss the hardware component of spectrophotometer namely, grating and photo diode. **07**

- Q.3** (a) Describe the process of standardization of illuminant for CCMS. **07**
- (b) Justify the contribution of Wright and Guild to the development of CCMS. **07**

**OR**

- Q.3** (a) Answer the following short questions. **07**
- i) Spectral reflectance curve gives idea about the nature of an illuminant, true or false? Correct if false.
  - ii) \_\_\_\_\_ viewing geometry is used in today's CCMS.
  - iii) Mercury lamp gives \_\_\_\_\_ spectra.
  - iv) F(R) changes \_\_\_\_\_ with concentration of dyes on fabric.
  - v) Plankian body is also called as \_\_\_\_\_ body.
  - vi) Name the inorganic pigment used to make integrating sphere white.
  - vii) Name the illuminant used in today's CCMS.

- (b) Discuss various viewing geometries in Spectrophotometer with diagrams. **07**

- Q.4** (a) Discuss the terms: **09**  
 Chromatic coordinates, Dominant wavelength, Excitation purity with reference to CIE chromaticity diagram.
- (b) Explain how to use CCMS to give fastness ratings to dyed fabrics. **05**

**OR**

- Q.4** (a) Enlist the methods for determination of strength of dyed textiles. **07**  
 Describe any one in detail.

**Q.4 (b)** Discuss the terms, acceptability and perceptibility and its significance in CCMS. **07**

**Q.5 (a)** Name the various whiteness indices. Discuss the development in measurement of whiteness indices of textiles. **07**

**(b)** Give the steps involved in “Formulation” by CCMS. **07**

**OR**

**Q.5** Discuss in detail about the pass fail program and shade sorting with its industrial significance and the technological aspects involved. **14**

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