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B.E / B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, APR/MAY 2014

PRINTING TECHNOLOGY

IV Semester

PT8401 Colour Reproduction

(Regulations 2012)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

**Part – A (10 x 2 = 20 Mark)**

1. Define chromatic adaptation.
2. Compare between Munsell and CIE<sub>x</sub>yY color spaces.
3. State the subtractive colour theory.
4. What is a moiré pattern?
5. How does the brightness of a substrate affects the colour reproduction?
6. Define masstone and undertone.
7. Write the significance of gray balance.
8. Differentiate between UCR and GCR.
9. What are the conditions for soft proofing?
10. What are dynamic device link profiles?

**Part – B (5 x 16 = 80 Mark)**

11. i) Explain in detail about the role of ICC profiles in colour management for achieving consistent colour reproduction across various devices. (8)  
ii) What are the steps to be followed for achieving colour managed workflow in a press. (8)
12. Describe in detail about the working principle of spectrophotometer with neat sketches. (or)  
b. i) Discuss in detail about the characteristics of light sources and objects that will influence human colour perception. (10)  
ii) Describe about the CIELAB and CIELCH colour space with diagram. (6)
13. a. Discuss in detail about the optics of ink film and its effect on colour reproduction, with neat sketches. (or)  
b. i) How is colour reproduction affected by the ink properties? Explain in detail. (8)  
ii) Explain about proportionality failure and its causes. (8)

14. a. With neat diagram, discuss in detail about colour separation using graphical approach.

(or)

b. i) Explain the spectral differences between ideal and actual inks. (4)

ii) How will you compensate for the spectral deficiencies of the printing inks in prepress?  
Explain in detail with diagram. (12)

15. a. Discuss in detail about the types of colour reproduction objectives with examples.

(or)

b. Write short notes on

i) Image acquisition using Digital Cameras (8)

ii) Evaluation of Colour originals (8)