B.E./B.Tech. (Full time) DEGREE END SEMESTER EXAMINATIONS, NOV/DEC 2011

PRINTING TECHNOLOGY BRANCH

FIFTH SEMESTER – (REGULATIONS 2004)

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PT373 – COLOUR REPRODUCTION

Time : 3 hrs Max Mark:100

ANSWER ALL QUESTIONS

Part – A (10 x 2 = 20 Mark)

1. Define colour.
2. What is metamerism?
3. Define hue, chroma and lightness.
4. What are the types of geometries used in spectrophotometer?
5. Calculate color difference between the following samples:

Sample 1: L* = 80; a* = -5 ; b*=24 ; **Sample 2**: L* = 75; a* = 15 ; b*=46.

6. Draw the tone reproduction curve for a high key image.
7. What are the different methods used to evaluate the colour of ink?
8. How does first surface reflection affect colour measurement?
9. What is the significance of setting white and black points during scanning?
10. What is the need for Unsharp Masking (USM)?

PART B (5 X 16 = 80 marks)

11. i) What are the types of colour originals? Explain. (8)

    ii) Explain the additive & subtractive color theory, their merits & demerits and applications. (8)

12. a) With neat diagram, explain the working principle of densitometer and its applications.

    (or)

    b) With neat diagram, explain in detail about the color matching experiment and how the tristimulus values are obtained.

13 a) What is the need for masking? Explain the positive masking method with diagram.

(or)

b) With neat sketch, explain the Jones diagram and its role in tone reproduction.

14 a) Explain in detail about the proportionality failure and its causes.

(or)

b) Explain in detail about any eight factors that affect the colour reproduction.

15 a) With neat diagram, explain the working principle of drum scanner.

(or)

b) Write short notes on i) colour correction ii)UCR iii) GCR iv) UCA