

PRINTING TECHNOLOGY BRANCH  
FOURTH SEMESTER – (REGULATIONS 2008)

**PT9253 – COLOUR REPRODUCTION**

Time : 3 hrs

Max Mark:100

ANSWER ALL QUESTIONS

**Part – A (10 x 2 = 20 Mark)**

1. State the subtractive theory and its applications.
2. Write the equation to calculate tristimulus values.
3. List the devices used for image acquisition.
4. Draw the cross section of a colour photographic film.
5. State the significance of setting white point and black point.
6. What are balanced inks?
7. What is additivity failure?
8. How does the sensitivity of filters affect the colour reproduction?
9. Define: Profile
10. Write the standard light source and illumination levels used for comparing proofs with the prints.

**Part – B (5 x 16 = 80 Mark)**

11. Explain in detail about chromaticity diagram and CIE Lab colour space with neat diagram.
12. a. Discuss in detail about the types of colour originals and their colour reproduction objectives.  
(or)  
b. i) How is colour reproduced in a LCD monitor? Explain. (10)  
ii) Discuss in detail about the need for screen angles in offset printing and moiré patterns. (6)
13. a. Derive the Neugebauer equations for colour separation.  
(or)  
b. Explain in detail about the methods for black generation in printing.
14. a. Describe in detail about the ink film-optics with neat sketches.  
(or)  
b. Explain in detail about proportionality failure and its causes.
15. a. Explain the types of gamut mapping techniques with example.  
(or)  
b. i) State the need for digital proofing and its types,  
ii) Explain the steps in colour management workflow.