

B.E / B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2011
PRINTING TECHNOLOGY BRANCH
SECOND SEMESTER

22

PH 9166 - PHYSICS FOR PRINTING TECHNOLOGY
(REGULATIONS 2008)

Time : 3 Hrs

Max. Mark : 100

Answer ALL Questions

Part - A (10 x 2 = 20 Marks)

1. Define surface tension.
2. What are surfactants? Give examples.
3. State Stoke's law.
4. Differentiate Newtonian and non-Newtonian fluids.
5. List the parameters on which magnetic recording depends.
6. What is phase change recording?
7. Define Luminescence and list its types.
8. Write a note on organic LED.
9. What are spatial light modulators?
10. How is incoherent image converted to coherent image?

Part - B (5 x 16 = 80 Marks)

11. (i) Explain the construction and reconstruction of a hologram. (12)
(ii) Write a note on optical data storage. (4)
12. a (i) Explain briefly the determination of surface tension by Jaeger's method. (12)
(ii) Give some examples of surface tension. (4)
(OR)
b (i) Explain briefly the determination of surface tension by bubble pressure method. (12)
(ii) What is the effect of temperature on surface tension? (4)
13. a. Derive Poiseuille's formula for the flow of liquid through a capillary tube.
(OR)
b. Explain in detail the principle and working of an inkjet printer.

p.t.o.

14. a. What is a liquid crystal display? Explain the construction, working, types and advantages of LCD.

(OR)

b (i) Explain the steps involved in bar code generation. (12)

(ii) Write a note on barcode reader. (4)

15. a (i) What are optical filters? (4)

(ii) Explain their types and functions in detail. (12)

(OR)

b. Explain briefly the Fourier transforming properties of lenses.