B.E. (Full Time) DEGREE END SEMESTER EXAMINATIONS, Apr/May 2013

PRINTING TECHNOLOGY BRANCH

V SEMESTER - (REGULATIONS 2008)

PT9305 Web offset Technology

Time: 3 hr   Max. Mark: 100

Answer ALL Questions

Part – A (10 x 2 = 20 Mark)

1. Draw the diagram of one unit of a semidrum type press.
2. Is it possible to print two colour on one side of the web in a blanket to blanket unit?
3. Explain the need for chiller in a heat set web offset press.
4. What is a box tilt mechanism?
5. Draw a failsafe plate and blanket locking mechanism?
6. What are the three mechanical components required for a jaw folder?
7. Enumerate different types of web edge sensors.
8. What is meant by r.t.f.?
9. What is PIV? How it works?
10. Enumerate the critical points to be considered before ordering a Web offset machine?

Part B   **5x16=80 Marks**

11. Expalin the construction of a Business forms printing machine.

12. a.With diagrams explain the characteristic features and job suitability of different types of web offset presses.

OR

b. (I) Configure the web lead for a news paper having 16 pages in which 1 to 5 and the center page front and back are in 4 colour and the 6th page in 2 colour using the following printing units: 4 'H' blanket to blanket tower, 4 'Y' in which two of tower type, and finally 1 blanket to blanket vertical lead.-8

(II).What is fan out? Explain the concept involved in tackling them effectively?-8

13.a.(I).Explain how zero speed pasting works in a web offset machine?-10

(II).Accumulator has a stroke of 3 meter and there are 8 rollers on the movable arm. What would be the splicing time within which the entire operation should be completed if the speed of the machine is 200 m / min.-6

OR

b.(I).Explain how flying paster works in a web offset machine?-10

(II).The diameter of new reel for pasting is 1100mm. The machine speed is 60,000 copies per hour. Cut of length of the folder is 546mm. What should be the rpm of the reel for successful pasting to take place?-6

14. a.(I)Expalin the concept of Inertia compensated dancing rollers.-8
(II).Explain the various types of dancing rollers.-8

OR

b. (I).How the web tension is sensed and controlled using pneumatic to hydraulic system? Explain with a diagram. -8

(II).A web having a total tension of 20kg/m. passes through a load cell rollers with wrap angles of a.180^0 b. 135^0, c. 120^0, d. 90^0, e. 60^0. Find the resultant force on the roller in each case with diagrams. -8.

15. a.(I).Explain the mechanism involved in circumferential and lateral movement of the cylinder for colour registration.-10

(II).The teeth of the cylinder gear are inclined to the axis at 30 degrees and lead per pitch is 0.5mm. How many turns had to be made to effect a cylinder movement of 10mm in circumferential and lateral direction? How?-6

OR

b.With a block diagram explain the concepts of automatic register controls. Explain any one system in detail.