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B.E. (Full Time) DEGREE END SEMESTER EXAMINATIONS, Nov 2013  
PRINTING TECHNOLOGY BRANCH  
V SEMESTER - (REGULATIONS 2008)  
**PT 9305 Web Offset Technology**

Time 3 Hrs.

Max.Marks:100

Answer All Questions

**Part A**

**10x2=20 Marks**

1. At a given point the web has a wrap angle of  $30^\circ$  with tension sensing roller. Resolve the force acting on the roller.
2. How fan out can be controlled?
3. Name different types of dryers used in a web offset press?
4. What is the need for turner bars and bay windows?
5. What is the need for having a chiller in heat set press?
6. Enumerate the various components of a reel stand and their types.
7. What is the function of RTF?
8. A plate having a circumferential measurement of 590mm. has an angular deviation of  $0.09^\circ$ . What would be the error in colour registration?
9. What type of gear is advisable to drive the cylinders of a printing unit? Why?
10. Draw a fail-safe blanket locking up mechanism.

**Part B**

**5x16=80 Marks**

11.Explain the ISO requirements and the points to be considered while establishing terms of contract for purchasing a web offset machine.

12.a.Explain the configuration of a business forms printing machine in detail.

Or

b.Explain the working principle of a combination folder in web fed machine.

13. a.Explain the working principle of closed loop hydraulic tension controlling system with a neat diagram.

Or

b. Explain the various types of web edge aligners and their working principle.

14. a.Explain the working principle and the features of zero speed splicer with a neat diagram.

Or

b.I.A web material is 1750mm. wide and the unit web tension is 20Kg./m. There are 6 movable festoon rollers with a total weight of 300Kg. If the stroke of the above system is 2m., what is the total length of web stored in the festoon? If the press is running at a speed of 350 m/min. how much time is there for a successful splicing to take place?

II.How much pressure should be developed inside the cylinder of a counter pressure system to have a tension of 20Kg/m in the above festoon rollers? The diameter of the cylinder is 100mm. Explain with a diagram.

15.a.I.With a neat diagram explain how lateral and circumferential registration could be done in web offset printing.

II.Cyan image has to move by 6mm. both circumferentially and laterally. The helix angle of the gear is  $30^\circ$ . Lead per pitch is 0.3mm. How many times the wheel connected externally should be turned?

Or

b.I.Explain the working principle of automatic register control system.

II.Cyan image has to move by 8mm. both circumferentially and laterally. The helix angle of the gear is  $35^\circ$ . Lead per pitch is 0.5mm. How many times the wheel connected externally should be turned?