

BACHELOR OF PRINTING ENGINEERING EXAMINATION 2010
(Third Year, First Semester)
OFFSET PRINTING MACHINES

Time: Three hours

Full Marks: 100

Answer question no. 1 and any four questions from the rest.

1. (a) What are the limitations of the friction feeder?
(b) What are the functions of the pressure foot?
(c) Why is tilting action normally given to the lifting suckers?
(d) The sheet separation speed is higher than the sheet forwarding speed in streamline sheet feeder. Why?
(e) On the feed board running-in-wheels are always placed over the feed board tapes. Why?
(f) What are the functions of the trailing brushes and brush rollers in the feed board?
(g) What are the limitations of the push type side lays?
(h) The depression gap of any printing cylinders of the sheet fed offset press is dependent on the maximum speed of the machine. Why?

$3+3+2+2+2+3+3+2=20$

2. (a) Compare between single sheet feeder and streamline feeder.
(b) Discuss how the feeding of double sheets is restricted in streamline feeder.
(c) Discuss with neat sketch the feeding of the sheets on the feed board of the streamline sheet feeder.
3. (a) What do you mean by three point registration system? Though any sheet fed offset press has many front lays, out of which only two front lays are selected for use. Why?
(b) What are the adjustment provisions the front lays have? Discuss the need of these adjustments?
(c) Discuss with neat sketch the pull type side lays used sheet fed offset press.

$(3+2)+(4+3)+8=20$

4. (a) Discuss in brief the different types of detector devices used in sheet fed offset press.
(b) What is the function of the insertion system?
(c) Discuss in brief the blanket fixing systems used in sheet fed offset press.

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(d) The bearer rings of the impression cylinder does not come in contact with the blanket cylinder bearer rings irrespective of the type of press in sheet fed offset press. Why?

(e) What is the function of the grooves placed on the printing cylinders just inside the bearer rings but out side the printing area in the circumferential direction?

$$8+2+6+2+2=20$$

5. Discuss with neat sketch the different types of insertion systems used in sheet fed offset press. 20

6. (a) In any sheetfed offset press the bevel edge of the depression gap of the plate cylinder carrying the leading plate edge is designed to coincide with the blanket cylinder depression slightly in advance. Why?

(b) Discuss in brief the different types of plate Clamping system used in sheet fed offset presses.

(c) What are the merits of the contact bearer presses?

(d) What are the merits and demerits of the non-contact bearer presses?

(e) Non Contact bearer press is more suitable for short run multi-colour printing. Why?

$$2+5+5+5+3=20$$

7. (a) What are the basic features of an inking system used in sheet fed offset press?

(b) Discuss in brief how the supply of ink is controlled in sheet fed offset press.

(c) Discuss with sketch the drum type of ink rollers pyramid used in sheet fed offset press.

$$5+7+8=20$$

8. Discuss in brief about the different types of sheet control systems used in the delivery of the sheet fed offset presses. 20

