

B.PRINTING ENGINEERING EXAMINATION 2024

(THIRD YEAR FIRST SEMESTER)

SUBJECT: OFFSET PRINTING MACHINES

Time: Three hours

Full Marks: 100

CO -1 (answer any one)

- 1.(a) Compare between single sheet feeder and streamline sheet feeder used sheetfed offset presses.
(b) Discuss in brief about the different types sheet detector devices used in the feeding of sheetfed offset presses.
(c) Discuss in brief how the feeding of the sheet is controlled in the feedboard of sheetfed offset press.

5+8+7=20

2. (a) What are the limitations of the friction feeder?
(b) What are the functions of the pressure foot?
(c) On the feedboard, running-in-wheels are always placed on the feedboard tapes. Why?
(d) What are the functions of the trailing brushes and brush wheels in the feedboard?
(e) What are the advantages of overfeed type of insertion systems?
(f) The depression gap of any printing cylinders of the sheetfed offset press is dependent on the maximum speed of the machine. Why?
(g) Non-contact bearer presses are more suitable for short run multicolour printing. Why?

3+3+2+4+3+2+3=20

CO-2 (answer any two)

3. (a) What do you mean by Three Point Registration system? What are the benefits of this system?
(b) What are the adjustment provisions the front lays have?
(c) Discuss in brief about the different types of pull type side lays used in sheet fed offset press.
(d) What are the limitations of the push type side lays?
4. (a) Discuss with sketch the plate clamping mechanism used in sheetfed offset presses.
(b) What are the functions of the insertion systems?
(c) Discuss in brief, the blanket fixing systems used in sheetfed offset presses.
(d) The bearer rings of the impression cylinder do not come in contact with the bearer rings of the blanket cylinder irrespective of the type of presses in sheetfed offset press. Why?
(e) What is the function of the grooves placed on the printing cylinders inside the bearer rings but outside the printing area in the circumferential direction?
5. Discuss the different types of sheet insertion systems used in sheetfed offset presses.

8+2+6+2+2=20

20

[Turn over

CO-3(answer any one)

6. (a) Discuss with neat sketch the intermediate sheet transport devices used in sheetfed offset presses.
(b) Discuss with neat sketch the convertible type of Perfecting press used in sheetfed offset press.

10+10=20

7. (a) What are the basic features of the inking system used in sheetfed offset press.
(b) Discuss in brief how the supply of ink is controlled in sheetfed offset presses.
(c) Discuss with neat sketch the Drum type ink rollers pyramid used in sheetfed offset press.

5+7+8=20

CO-4 (compulsory)

- 8 (a) What happens, during printing of multicolor using sheet fed offset press, if the substrate to be printed is the coated paper consisting of partially hardened Casein?
(b) What is tail end hook? What is the cause of tail end hook?
(c) Why does the ink, having its lower surface tension, not displace the water film in the non-image areas of the plate during inking by ink form rollers?
(d) What happens to the droplets of water in the image areas during inking by ink form rollers?
(e) Why does the ink not form a film across the top of the non-image areas fountain layer during inking?

3+3+4+5+5=20