



FOURTH SEMESTER B.TECH (PRINT AND MEDIA TECHNOLOGY)

MAKEUP EXAMINATIONS, JUNE 2017

SUBJECT: OFFSET PRINTING [PMT 2201]

REVISED CREDIT SYSTEM
(14/06/2017)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitably assumed.

- 1A. What are the two temperature control system requirements of waterless printing? Explain with neat diagrams.
- 1B. Explain the sequence of splicing operations in zero speed splicer with neat diagrams.
- 1C. i. With the help of a graphical representation, Explain the effect of repeated stretching of paper in web offset press.
ii. What is the significance of cut-off control? Explain the method of controlling cut-off.

[03 + 03 + (02+02)]

- 2A. Explain the BTB web offset press configurations with neat diagrams.
- 2B. Describe the significance and working principles of the following:
 - a. Re-moisturizer b. Fountain solution mixer c. Remote control console
- 2C. i. Explain the factors to be checked in the inspection sheet during press run.
ii. Explain the drying principle of offset heat set inks.

[03 + 03 + (02+02)]

- 3A. Explain how gripper bowing can be used to reduce the effect of fan-out on multi-color sheet-fed printing.
- 3B. What are the means of eliminating marking of wet ink during delivery of the printed sheets on sheet-fed presses? Discuss.

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- 3C.** i. Explain the working of jaw folder with neat diagram.
 ii. Define the following offset blanket properties and justify their importance:
 a. Sheet release **b.** Resiliency

[03 + 03 + (02+02)]

- 4A.** Define and describe the purpose of the following on plate cylinder:
 a. Start of print line **b.** Backlash gear **c.** Ramp **d.** Cylinder undercut
- 4B.** i. Explain the operation mechanism of perforators with a neat diagram.
 ii. What are the different types of offset press makeready? Explain with their specific application.
- 4C.** i. Explain the working of brush dampening system with neat diagram.
 ii. How does the metered amount of ink get transferred to the plate with doctorless inking system? Explain with neat diagram.

[02 + (02+02) + (02+02)]

- 5A.** List the causes and remedies for the following printing problems:
 a. Blistering **b.** Plate image blinding
- 5B.** i. Explain the procedure to shorten print length on bearer contact and non-bearer contact presses.
 ii. Explain the following with respect to the safety in press room:
 a. Noise exposure and limitations **b.** Chemical safety
- 5C.** i. Explain the working principle of extra sheet detector on stream feeder.
 ii. With the following data about the non-contact bearer press, calculate the squeeze and packing thickness for plate and blanket cylinders:
 Plate undercut = **0.028"**, Plate height above bearer = **0.005"**, Plate thickness = **0.020"**, Blanket undercut = **0.075"**, Blanket height above bearer = **0.005"**, Blanket thickness = **0.055"**, Distance between the bearers = **0.004"**.

[02 + (02+02) + (02+02)]