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Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)



III SEMESTER B.TECH (PRINT AND MEDIA TECHNOLOGY)

MAKE-UP EXAMINATIONS, DEC 2015 – JAN 2016

SUBJECT: BASICS OF PRINT MEDIA [PMT 2101]

REVISED CREDIT SYSTEM

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

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

- 1A.** With a neat sketch, explain the principle of screen printing process and the functions of all components. **04**
- 1B.** Explain the features of following printing industries: **03**
- i. Trade shops
 - ii. In-plant printers
 - iii. Commercial printers
- 1C.** Which flexo inking system can be used for water based inks? Why? Explain the inking system with neat diagram. **03**
- 2A.** Give reasons: **04**
- i. CIC gravure is not practical to be used in the industry.
 - ii. Dampening pan roller is rotated separately using a variable speed motor.
 - iii. Anilox roller is the heart of flexo printing unit.
 - iv. Nylon screen fabric is used to print on irregular surface.
- 2B.** Explain the working principle of pre-metered gravure inking system with a neat sketch. Mention two gravure presses having this inking system. **03**
- 2C.** Explain in detail the working principle of 3D printing software and the printing process. **03**

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- 3A.** With a neat diagram explain the function of each component of a single color sheet-fed offset press. **04**
- 3B.** What is an indirect gravure? How does it differ from direct gravure? Explain the principle of indirect gravure press with a neat diagram. **03**
- 3C.** With a neat diagram explain the working of Cylinder bed screen printing press. **03**
- 4A.** Draw a heat-set web offset press and explain the components with their functions. **04**
- 4B.** A prepress of a commercial offset printing industry has CtF. Explain the stages of its workflow with a neat diagram. **03**
- 4C.** Explain the principle of three drop on demand inkjet technologies. **03**
- 5A.** With neat diagrams explain the working of the following flexo inking systems: **04**
- i. Two roller with reverse angle doctor blade system
 - ii. Single roll with positive angle doctor blade system
- 5B.** Explain the different combinations of hybrid printing and give an example of the product printed for each combination. **03**
- 5C.** What is squeegee? List its functions. Explain ON and OFF contact screen printing methods. **03**