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MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

V SEMESTER B.TECH. (PRINT AND MEDIA TECHNOLOGY)

END SEMESTER EXAMINATIONS, NOV/DEC 2016

FLEXOGRAPHY, GRAVURE AND SCREEN PRINTING [PMT 3101]

REVISED CREDIT SYSTEM

(24/11/2016)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

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

- 1A.** With neat diagram, discuss the components of flexo inking system.
- 1B.** Explain the following with respect to screen printing:
- a) Calendered mesh b) Wooden frames c) Squeegee skewing
- 1C.**
- i. With neat diagram, discuss the Tympan bar as a variation in flexo press.
- ii. Compare the features of gravure and intaglio printing.
- [03 + 03 + (02+02)]**
- 2A.** Explain the features of 3 types of textile screen printing presses.
- 2B.** With neat diagram, discuss the components and working of dancer roll tension control system.
- 2C.**
- i. Explain the following screen printing applications:
- a) Tinsel b) Flock
- ii. Describe the 4 major sources of energy used for producing hot air in gravure dryers.
- [03 + 03 + (02+02)]**
- 3A.** Explain different ways of achieving doctor blade oscillation with diagrams.
- 3B.**
- i. Explain the features of 3 types of sheeters used in inline gravure presses with neat sketches.
- ii. Explain the features of packaging gravure and mention 2 applications.
- 3C.** Compare the features of top-side and bottom side flexo printers.
- [04 + (03+01) + 02]**

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- 4A.** With neat diagrams, explain the features and working of the following:
- i) Web-turner bar
 - ii) Water-fall gravure inking system
- 4B.** With neat diagrams, discuss the 3 types of frame dual roll unwinders.
- 4C.** With neat diagram, explain carbon absorption method of solvent recovery in gravure industry.

[04 + 03 + 03]

- 5A.** Describe the components and procedure for pin-register mounting system for liquid photopolymer flexo plates.
- 5B.**
- i. With diagrams, explain different types of ESA equipment used on gravure impression roller.
 - ii. Describe the features of various doctor blade loading systems.
- 5C.** Compare flat-bed and cylinder-bed screen printing presses.

[03 + (2.5+2.5) + 02]