

MANIPAL INSTITUTE OF TECHNOLOGY

A Constituent Institution of Manipal University

I SEMESTER M.TECH. (PRINTING AND MEDIA TECHNOLOGY) END SEMESTER EXAMINATIONS, NOV/DEC 2016

QUALITY CONTROL AND STANDARDISATION IN PRINTING [PME 5106]

REVISED CREDIT SYSTEM (01/12/2016)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ✤ Answer ALL questions.
- Missing data may be suitable assumed.
- **1A.** Explain the various print parameters that needs to be standardized in offset printing process.
- **1B.** Explain the design and working principle of polarized optical spectro densitometer with a neat diagram.
- **1C.** Explain the guidelines for linearization of image setter as per SNAP standard.
- **1D.** Describe the method of evaluating proofing device using Ugra Fogra Media wedge.

[03+03+02+02]

- **2A.** Explain the guidelines formulated by SNAP standard for the following activities.
 - i. Duplicating / contacting films
 - ii. Vacuum frame exposure
- **2B.** Explain the following offset printing ink tests
 - i. Scum test
 - ii. Heat seal strength test
- **2C.** Explain the various methods to control the Tone Value Increase in printing.
- **2D.** Describe the importance and guidelines for Ladder targets for evaluating print quality.

[04 + 03 + 02 + 01]

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- **3A.** Explain the offset ink testing method for following properties:
 - i. Ink Tack ii. Water Resistance
- **3B.** What are the recommended guidelines for scanning of images in SNAP standard?
- 3C. What is the significance of following targets in G7 method?
 - i. P2P25X target
 - ii. Gray finder patch
- **3D.** Explain the procedure to print the solid ink density test chart and its importance.

[04+03+02+02]

- **4A.** Explain the following paper properties along with their evaluating procedure and their effect on print and product quality.
 - i. Paper formation iii. Dimensional stability
 - ii. Surface strength iv. Water absorption capacity
- **4B.** Explain the drawback in TVI method for controlling color in offset printing and how it is solved by Neutral Print Density curve method?
- **4C** List and explain the advantages of PDF file format and work flow.
- **4D.** Explain the procedure to create and evaluate the followings:
 - i. Print characteristic curve
 - ii. Dot gain curve

[04 + 02 + 02 + 02]

- **5A.** Explain the methodology of G7 calibration for offset printing process in detail.
- **5B.** Describe the step by step procedure for calibrating CtP system.
- **5C.** Explain the basic requirements of offset printing inks for quality printing.
- **5D.** Explain the factors that affect the amount of dampening solution flow rate for quality printing.

[04+03+02+01]