Reg. No.										

Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)

V SEMESTER B.TECH (PRINT AND MEDIA TECHNOLOGY)

END SEMESTER EXAMINATIONS, NOV/DEC 2015

SUBJECT: DIGITAL AND SECURITY PRINTING [PME 317]

REVISED CREDIT SYSTEM

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer **ANY FIVE FULL** questions.
- Missing data may be suitable assumed.

1A. Explain the aspects that distinguish Digital Printing from Conventional printing. **04**

1B. Explain the steps involved in creating input profiles for the following: **04**

a. Scanner **b.** Camera **c.** Monitor **d.** Printer

1C. With a neat diagram, explain the "switchable polymer" plate technology for re-imageable plates. **02**

2A. Explain the following proofing technologies in detail: **04**

a. Digital Proof **b.** Photomechanical proof **c.** Press proof

2B. Explain the imaging and developing of following plates by digital imaging: **04**

a. Aluminium based by diffusion transfer **b.** Photopolymer plates

c. Thermal sensitive Aluminium plates **d.** CTX sandwich plates

2C. Briefly explain the steps involved in creating & processing a digital image. **02**

3A. Explain the scanning factors that affect the image quality. **04**

3B. i. Explain the simplicity of Inkjet systems over conventional systems. **01**

ii. With neat diagrams explain the following inkjet processes: **+ 03**

a. Continuous Flow

b. Thermal Inkjet process

c. Piezoelectric Process

3C. Explain 8 advantages of digital printing. **02**

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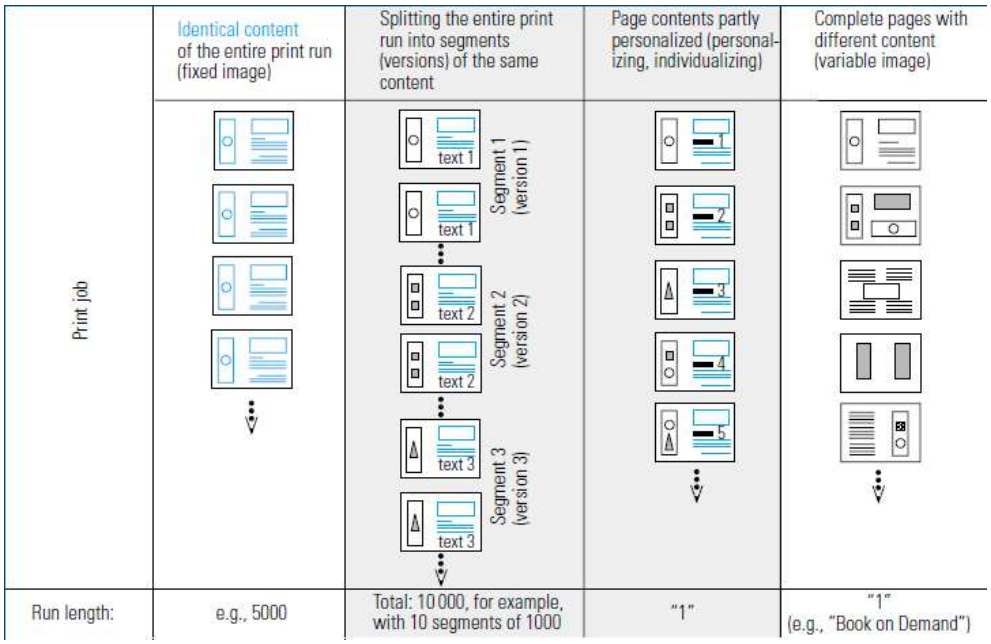
4A.	With a neat flowchart, explain the steps involved for postscript RIP in prepress workflow.	**04**
4B.	Explain the possible hybridization for the following printing requirements:  	**04**
4C.	State and explain the factors affecting the print image stability.	**02**
5A.	With neat sketches explain the following printing system based on electrophotography: **a.** TurboStream **b.** Omnius	**06**
5B.	With neat diagrams, differentiate between thermal transfer and thermal sublimation process.	**02**
5C.	Explain the common digital file problems and their possible solutions found in preflighting.	**02**
6A.	With neat sketches, explain the following digital press in detail: **a.** 74 Karat **b.** QM DI 46-4	**06**
6B.	Explain the imaging system of Ionography with a neat diagram.	**02**
6C.	Explain how the look-up table helps in color management system/architecture.	**02**