Reg. No.										
----------	--	--	--	--	--	--	--	--	--	--



### Manipal Institute of Technology, Manipal

ENOWLEDGE IS POWER

(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:						
	a. Scanner b. Camera c. Monitor d. Printer						
1C.	With a neat diagram, explain the "switchable polymer" plate technology for re-	02					
	imageable plates.						
2 <b>A</b> .	Explain the following proofing technologies in detail:	04					
	<ul><li>a. Digital Proof</li><li>b. Photomechanical proof</li><li>c. Press proof</li></ul>						
2B.	Explain the imaging and developing of following plates by digital imaging:	04					
	<ul><li>a. Aluminium based by diffusion transfer</li><li>b. Photopolymer plates</li></ul>						
	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	UU					
	b. Thermal Inkjet process						
	c. Piezoelectric Process						
3C.	Explain 8 advantages of digital printing.	02					

PME 317 Page 1 of 2



## Manipal Institute of Technology, Manipal



(A Constituent Institute of Manipal University)

	With a nea	at flowchart, e	xplain the steps	involved for po	ostscript RIP in prepress	04
4B.	Explain the	e possible hyb	ridization for the	following print	ing requirements:	04
		Identical content of the entire print run (fixed image)	Splitting the entire print run into segments (versions) of the same content	Page contents partly personalized (personal- izing, individualizing)	Complete pages with different content (variable image)	
			Segment 1 (version 1)			
	Print job		Segment Z Segment Z (version 2)			
		<b>↓</b>	text 2  Text 3  Text 3  Text 3			
	Run length:	e.g., 5000	Total: 10 000, for example, with 10 segments of 1000	*1"	"1" (e.g., "Book on Demand")	
4C.	State and	explain the fa	ctors affecting the	nrint image s	tability	
		•	ctors ancoming the	print image s	tability.	02
		'		e print image s	tability.	02
5A.	With nea	t sketches		llowing printi	·	06
5A. 5B.	electropho a. TurboSt	t sketches otography: tream t diagrams,	explain the fo	llowing printi	ng system based on	
	electropho a. TurboSi With near sublimatio	t sketches stography: tream t diagrams, n process. e common dig	explain the fo <b>b.</b> Omnius  differentiate bet	llowing printii	ng system based on	06
5B. 5C.	electropho a. TurboSi With near sublimatio Explain the preflighting	t sketches otography: tream t diagrams, n process. e common dio	explain the fo  b. Omnius  differentiate beto  gital file problems	llowing printing ween thermals and their pos	ng system based on transfer and thermal ssible solutions found in	06
5B.	electropho a. TurboSi With near sublimatio Explain the preflighting	t sketches stography: tream t diagrams, n process. e common dig	explain the fo <b>b.</b> Omnius  differentiate bet	llowing printing ween thermals and their pos	ng system based on transfer and thermal ssible solutions found in	06
5B. 5C.	electropho a. TurboSt With neat sublimatio Explain the preflighting With neat a. 74 Kara	t sketches btography: tream t diagrams, n process. e common dig	explain the fo  b. Omnius  differentiate bety	llowing printing ween thermals and their post	ng system based on transfer and thermal ssible solutions found in detail:	06

PME 317 Page 2 of 2