## Master of Computer Application (MCA - I) (CBCS Pattern) First Semester **PSMCAT102 - Paper-II : Operating System & Linux**

P. Pages : 2 Time : Three Hours			GUG/W/18/11 * 3 2 0 0 * Max. Marks	<b>GUG/W/18/11087</b> Max. Marks : 80			
	Notes	5: 1. 2. 3.	All the questions are compulsory and carry equal marks. Draw neat and labelled diagram and use supporting data wherever necessary. Avoid vague answers and write specific points/answers related to questions.				
1.		Either:					
	a)	Explair	functions of operating system in details.	8			
	b)	Define	CPU scheduling. Explain various scheduling algorithms.	8			
			OR				
	c)	Explair	Interrupt handlers. Discuss various issues related to interrupt handling.	8			
	d)	Define process and explain system calls for process management.					
2.		Either:					
	a)	Explair	deadlock detection and Recovery with examples.	8			
	b)	Explain classical process co-ordination problems in details.					
			OR				
	c)	What is	hardware management explain in details.	8			
	d)	What is	critical section problem and explain semaphores in details.	8			
3.		Either:					
	a)	Explair	directory structure of Linux operating system in details.	8			
	b)	Explair	all the three shells in Linux Operating system.	8			
			OR				
	c)	What a	re characteristics of Unix file system in details.	8			
	d)	How ca over W	In we explore the directory structure of Linux operating system state its advantages indows OS.	8			

4.		Either:							
	a)	What is shell script explain shell variables in details.							
	b)	Explain arithmetics in shell scripts and also explain control flow statements.							
		OR							
	c)	Explain if else statement in Linux write shell script to find largest of two numbers.							
	d)	Explain shell parameters and variables in details.							
5.		Atte	ttempt all the questions.						
		a)	<ul><li>Short note on:</li><li>1) Distributed System</li></ul>	2)	Real time System	4			
		b)	Explain in short IPC mechanism.						
		c)	Explain following commands: 1) ls 3) mv	2) 4)	cd rm	4			
		d)	Explain pipes and filters in short.			4			
		*****							