			B.E. Information Technology Sixth Semester IT604 - Operating Systems	
P. Pages : 2 Time : Three		2 ree Ho	burs $* 1 3 3 9 *$ GU	G/W/18/1705 Max. Marks : 80
	Note	es: 1. 2. 3.	 All questions are compulsory. Due credit will be given to neatness and adequate dimensions. Assume suitable data wherever necessary. 	
1.	a)	What	t are the various services offered by operating system.	8
	b)	Expl	ain the following with respect to operating system.	8
		i)	Interrupt.	
		ii)	Spooling.	
			OR	
2.	a)	Expl	ain any four disc scheduling policies.	8
	b)	Discu	uss the file allocation methods with example.	8
3.	a)	What	t is process? Describe process state transition diagram.	8
	b)	Expl	ain the various block of process control Block.	8
			OR	
4.	a)	Expla	ain the following scheduling schemes.	8
		i)	Multilevel queue scheduling.	
		ii)	Multilevel feedback queue scheduling.	
	b)	How	switching of process takes place? Explain with neat sketch.	8
5.	a)	What sectio	t is critical section problem? Explain three requirements that a solution to cr on problem must satisfy.	itical- 8
	b)	What	t is semaphore? Explain two primitive semaphore operations. What are its a	dvantage? 8
			OR	
6.	a)	State	dining Philosopher's problem and give a solution using semaphore.	8
	b)	Write	e a note on following Interprocess communication.	8
		i)	Shared memory.	
		ii)	Message Passing.	

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7.	a)	What is deadlock? What are the necessary condition for a deadlock situation to arise.	8
	b)	Explain the different methods to recover deadlocks.	8
		OR	
8.	a)	Why deadlock state is more critical than starvation? Describe resource allocation graph with a deadlock, with a cycle but no deadlock.	8
	b)	Explain different methods to handle a deadlocks.	8
9.	a)	With a diagram. discuss the steps involved in handling a page fault.	8
	b)	What is paging? Explain the paging Hardware?	8
		OR	
10.	a)	What is fragmentation? Discuss Internal and External fragmentation with examples.	8
	b)	What is address binding? Explain the concept of dynamic relocation of addresses.	8
