	walt() operations of semaphore? (8%)	The state of the s
	 (b) Une type of semaphore implementation for process synchronization is "spin-lock" (i.e., busy waiting). What's the disadvantage of such implementation? (4%) (c) To overcome the disadvantages of spin-lock, how can we implement the stonal() and 	
		-
Martin Statement (M. 187) All second	5. Please explain the differences of two common interprocess communication mechanisms. (8%)	
ADDIOUSE COMMENT AND ADDIOUSE A	and a pointer to a disk block requires 4 bytes. An i-node has pointers to 12 direct disk blocks, one single, one double, and one triple indirect disk blocks. What is the maximum size of a file that can be stored in this file system? (10%)	The second secon
Vile	 with demand paged memory management, a process is thrashing if it is spending more time paging than executing. Therefore, thrashing may result in extreme low CPU utilization if most processes are thrashing. Give a method to prevent thrashing from occurring, and explain why the method given can prevent thrashing from occurring. (9%) Consider a file system that uses i-nodes to represent files. Disk blocks are 4 KB in size, 	
	3(a). Under demand paged memory management, a good page-replacement algorithm should be used to minimize the number of page faults. How many page faults will occur if the LRU (least recently used) page replacement algorithm is adopted for the page reference string below with four page frames that are initially empty? (8%) 2, 1, 4, 3, 5, 4, 3, 2, 6, 8, 7, 8, 7, 9, 8, 7, 9, 5, 3, 5, 3, 1	
***************************************	 Three page table structures are (i) hierarchical page table, (ii) hashed page table, and (iii) inverted page table. In a 64-bit CPU, why is the structure of inverted page table usually adopted instead of the structure of hierarchical page table? (8%) 	And the second s
	processes, and (iii) batch processes, respectively. (a) Why should the processes in the batch queue be scheduled with FCFS (first come first serve) algorithm? (8%) (b) Why should the processes in the interactive queue be scheduled with RR (round robin) algorithm? (7%)	The second secon
	In an OS, the Bultilevel queue-scheduling algorithm with three queues is used for CPU scheduling. These greeness are designated for CPU	
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	参 式 C ET-4	

* 战科目: Operating System	國立臺灣科技大學			
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Print and the second	What i	the sma	ilest valu	e of x for	which th	What is the smallest value of x for which this is a safe state? (5%)	le state? (5%)						
	8. (a) I transiti	on. Pleas	State Tr	ansition) plain the	Diagram reason w	of a proc hy a trans	ess and variation bere	 (a) Draw the State Transition Diagram of a process and write in the diagram the name of a transition. Please also explain the reason why a transition between states occurs. (11%) 	he diagra	m the na (11%)	me of a	Regg		DC SUPPRISONERS
	8. (b) 1 the Sta	lease ex le Transi	plain the tion Diag	main dif	ference b answered	8. (b) Please explain the main difference between mult the State Transition Diagram you answered in (a). (4%)	oultiprogr	 (b) Please explain the main difference between multiprogramming and time sharing by using the State Transition Diagram you answered in (a). (4%) 	and time	sharing b	y using	,		
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