Duration: One Hour . Total Marks: 20
(All questions are self explanatory and requires no clarification from the course coordinator).

1.		Write T or F and justify your answer briefly.	**3**
	(a)	Protection provided by a page table is in the capability style but not in the access-list style.	
	(b)	Binary semaphores can be used by a maximum of two processes.	
	(c)	When there is only a single independent processor deadlocks cannot occur.	
2.		Many processes having a unique number share a file. Concurrent file access is allowed subject to the following condition: The sum of the unique numbers of the files should be less than n. Design a monitor in a pseudo-language for co-ordination of the file access.	**10**
	(b)	Assume that there are n processes in the READY queue. Discuss which scheduling algorithm(s) from FCFS, SJF, SRTF, and RR give(s) the minimum context switches for these n processes. Ignore any I/O burst. Explain your answer and clearly state your assumptions.	**3**
	(c)	Consider a computer with a CPU scheduler that implements the RR scheduling algorithm using a fixed time quantum that cannot be changed. (i) Explain why RR provides a fair CPU allocation. (ii) You need to give certain critical processes a greater share of the CPU without changing the scheduler. Describe how you could do so, and how your solution achieves this goal.	**4**