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First Assignment on Operating System for Computer Science and Engineering- Aug, 2017

Q1. What are the differences between multiprogramming and multitasking system?

Q2. Difference between program and process in the context of operating system?

Q3. Describe the various states of a process with a neat diagram.

Q4. What do you mean by process control block (PCB), describe.

Q5. What is a process scheduler? Describe about various types of scheduler.

Q6. What are the different principles which must be considered while selection of a scheduling algorithm?

Q7. What are the necessary and sufficient conditions for deadlock?

Q8. Consider 3 CPU intensive processes, which require 5, 10 and 15 burst time units and arrive at time 0, 2 and 6 respectively. How many context switches are needed, if the operating system implements a priority preemptive scheduling algorithm? Do not count the context switches at time zero and at the end.

Q9. Consider the 4 processes, P1, P2, P3, and p4 shown in the table.

Process	Arrival Time	Burst Time
P1	0	5
P2	1	7
P3	3	4
P4	2	6

i. What are the sequence of process completion order of the 4 processes under the policies FCFS and SRTF.
ii. Find the Turnaround time, waiting time and response time for each process.

Q10. A system contains three programs and each requires three tape units for its operation. What is the minimum number of tape units required, so that deadlocks will never arise in system? Justify your answer.

Note: Dear Students, you will find all the questions in 1st Internal from this assignment only. However, the combination and order of questions may vary in original question paper.

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