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Programme = BS(S.E)  
Semester = 3rd  
Exam = Mid  
Paper = Operating System  
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- 1) The hardware mechanism that enables a device to notify CPU is called an Interrupt.
- 2) The section of the process control block comprises of Page and Segment tables  
⇒ Memory related information.
- 3) The wait system call suspends the calling process.

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- 4) In Asymmetric addressing, the recipient is not required to name the sender.
- 5) Ps Command gives a snapshot of the current processes.
- 6) fg Command to resume the execution of a suspended job in the foreground.
- 7) You can use the jobs Command to display the status of suspended and background processes.
- 8) You can terminate a foreground process by pressing <ctrl-c>.
- 9) A time sharing system is :  
Multitasking

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- 10) The main characteristics of a real time is Efficiency.
- 11) Shared libraries and kernel modules are stored in /Lib directory.
- 12) Long term Scheduler selects the process from the job pool and put them in main memory.
- 13) In Indirect Inter process communication, a Sender do-not mention the name of recipient.
- 14) A Semaphore is an Integer variable that, apart from initialization is accessible only through two standard atomic operations: wait and signal.
- 15) A <sup>Semaphore</sup> ~~semaphore~~ that cause Busy-waiting is termed as Spinlock.





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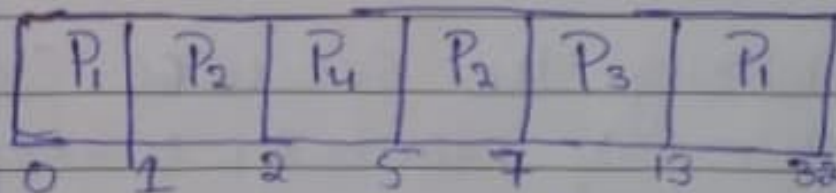
- 16) The execution of critical sections must not be mutually exclusive  
⇒ False
- 17) The Performance of Round Robin algorithm does NOT depends heavily on the size of the time quantum. ⇒ True
- 18) The following requirement for solving critical section problem is known as Bounded waiting.
- 19) The critical section problem can be solved by the following except  
⇒ Firmware based solution.
- 20) Medium term scheduler is also called Swapper.

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Write the formula / procedure for calculating the waiting time in preemptive shortest job first scheduling.

Ans:

<u>Process</u>	<u>Burst time</u>	<u>Arrival time</u>
P <sub>1</sub>	21	0
P <sub>2</sub>	3	1
P <sub>3</sub>	6	2
P <sub>4</sub>	2	3



The avg time will be  $(5-3) + (6-2) + (12-1) / 4 = 4.25$  ms

QNo 22:

If a process exists and there are still threads of that process running, will they continue to run?

Ans:

No, threads of the process will no longer run once the process is terminated. Because

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all threads in a process share the same address space, all threads are suspended at the same time. Similarly a termination of a process terminates all threads within that process.

Q23: Considering the resource sharing feature of thread, what do you think is 'resource sharing' an advantage of a thread or disadvantages of a thread. Explain your answer briefly.

Ans: I consider resource sharing an advantage of a thread, mostly threads share the





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memory and the resources of any process to which they fit in. The advantage of sharing code is that it allows any application to 've multiple different thread of activity inside the same address space.