

## Operating System (B.Tech-II Year)

### Self-Assessment Assignment of Module-1

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1. Differentiate Any **TWO** from the following:

- i. Multiprogramming Vs Time Sharing system
- ii. Online Processing Vs Spooling

2.

- I. Explain the difference between Preemptive and Non-preemptive CPU scheduling algorithm. Find the waiting Time and Turnaround time for FCFC, SJF and Shortest Remaining Time First (SRTF).

Process	Burst Time	Arrival Time	Priority
P1	10	0	4
P2	4	2	3
P3	2	3	2
P4	1	6	5
P5	2	8	1

- II. Find the waiting Time and Turnaround time for Preemptive Priority and Round Robin CPU Scheduling Algorithm. (Time Quantum= 2) {**Priority 0>1>2>3..**}

3. Calculate the average waiting and average turnaround time for Preemptive SJF and Round Robin CPU scheduling algorithm.[Time Quantum =4]

Process	Arrival Time	Expected CPU Time
P1	0	14
P2	3	12
P3	5	7
P4	7	4
P5	19	7

4. What are the different types of structure of operating system? Explain each in brief.
5. What is Critical Section Problem? Explain Reader Writer Problem with its solution using Semaphore.

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