

EECE.4810/EECE.5730: Operating Systems

Spring 2017

Lecture 8: Key Questions

February 15, 2017

1. Explain the role of a preemptive CPU scheduler.
2. What are the possible criteria used in scheduling metrics?
3. Describe the basics, pros, and cons of first-come, first-served (FCFS) scheduling.

4. Describe the basics, pros, and cons of shortest job first (SJF) scheduling.

5. Describe the basics, pros, and cons of shortest time to completion (STCF) scheduling.

6. Describe the basics, pros, and cons of priority scheduling.

7. Describe the basics, pros, and cons of round robin scheduling.

8. **Example:** Consider the following set of processes, with the length of the CPU-burst time given in milliseconds:

Process	Burst	Time Priority
<i>P1</i>	10	3
<i>P2</i>	1	1
<i>P3</i>	2	3
<i>P4</i>	1	4
<i>P5</i>	5	2

The processes are assumed to have arrived in the order *P1, P2, P3, P4, P5* all at time 0.

What is the turnaround time (i.e., time of completion) of each process for each of the following four (4) scheduling algorithms : FCFS (First Come First serve), Round Robin (quantum=1), SJF (Shortest Job First), and a non-preemptive priority (a smaller priority number implies a higher priority)?

9. Describe some of the complications involved in scheduling processes on real-time systems.

10. Describe the basics, pros, and cons of earliest deadline first (EDF) scheduling.