# COMP 7500/7506-Lecture 10: Basic Scheduling Concepts

**🟊: >85%, 🟊🟊: 70-85%, 🟊🟊🟊: 55-70%, 🟊🟊🟊🟊: 40-55%, 🟊🟊🟊🟊🟊: < 40%**

**🟊 Exercise 1 (Menti):** What is a process?

1. It is an application to be loaded into CPU.
2. It is a program stored on a file system.
3. It is an application stored on a file system.
4. It is an instance of a program in execution.

**🟊 Exercise 2 (Menti):** Which statement is incorrect about context switch?

1. It stores the state of a running process
2. It resumes the execution of a ready process
3. It allows multiple CPUs to share resources
4. It is an essential feature of a multi-tasking operating system.

**🟊🟊 Exercise 3:** Please design a process scheduling system diagram. (**Hints**: two queues, one scheduler)

**🟊 Exercise 4:** What are reasons forrunning jobs (processes) to cease using a CPU? (Write down one or two reasons)

**🟊🟊 Exercise 5:** What is the data structure of items in the ready queue and I/O queue?

**🟊🟊 Exercise 6 (Menti):** The system objectives of processor scheduling include the following ones except:

1. Reduce response time
2. Improve throughput
3. Minimize context switch overhead
4. Optimize processor efficiency

**🟊🟊 Exercise 7 (Menti):** The shortest job next scheduling algorithm schedules the following five jobs.

i 0 1 2 3 4

t(pi) 350 125 475 250 75

(7.1) What is the average turn around time?

A. 315 B. 600 C. 560 D. 480

(7.2) What is the average waiting time?

A. 285 B. 320 C. 410 D. 305

**🟊🟊 Exercise 8:** (8.1) Please propose two separate ready queues? (Hint: for different types of processes). (8.2) What are scheduling policies these two queues?

**🟊 Exercise 9:** (9.1)In multi-level queue scheduling, which queue has the highest priority and which queue has the lowest one? (9.2) How does this scheduling policy work?