# Flashcards

## l3

**Q1. What is the role of a short-term scheduler (CPU scheduler)?**

A1. It selects from ready processes and allocates the CPU to one of them.

**Q2. When is the short-term scheduler invoked?**

A2. Frequently.

**Q3. Under what four circumstances do CPU-scheduling decisions happen?**

A3. 1. Running to waiting; 2. Running to ready; 3. Waiting to ready; 4. Process termination.

**Q4. Is scheduling preemptive or non-preemptive when a process switches from running to waiting or terminates?**

A4. Non-preemptive (cooperative).

**Q5. Is scheduling preemptive or non-preemptive when a process switches from running to ready or waiting to ready?**

A5. Preemptive.

**Q6. What are five criteria used to compare CPU scheduling algorithms?**

A6. CPU utilization, throughput, turnaround time, waiting time, response time.

**Q7. Define CPU utilization.**

A7. Percentage of time the CPU is busy executing processes.

**Q8. Define throughput.**

A8. Number of processes completed per time unit.

**Q9. Define turnaround time.**

A9. Time from process submission to completion.

**Q10. Define waiting time.**

A10. Time a process spends in the ready queue.

**Q11. Define response time.**

A11. Time from request submission to the first response.

**Q12. What is the goal of scheduling in a batch system?**

A12. Complete maximum jobs per unit time, minimize time between submission and termination, keep CPU busy.

**Q13. What is the goal of scheduling in an interactive system?**

A13. Quick response to requests, reduced waiting time, meet user expectations.

**Q14. What is the goal of scheduling in a real-time system?**

A14. Meeting deadlines and ensuring quality constraints.

**Q15. What is the simplest CPU-scheduling algorithm?**

A15. First-Come, First-Served (FCFS).

**Q16. How does FCFS manage processes?**

A16. With a FIFO queue.

**Q17. What scheduling algorithm schedules the shortest job first?**

A17. Shortest Job First (SJF).

**Q18. How does SJF manage processes?**

A18. With a priority queue using burst time as input.

**Q19. What is the preemptive version of SJF?**

A19. Shortest Remaining Time First (SRTF).

**Q20. How does SRTF handle newly arriving short processes?**

A20. They may preempt the currently running process.