Practice Questions

FCFS (First Come First Serve)

1. Consider a set of three processes with arrival times and burst times as follows:

   Process A: Arrival Time = 0 ms, Burst Time = 5 ms
   Process B: Arrival Time = 2 ms, Burst Time = 3 ms
   Process C: Arrival Time = 4 ms, Burst Time = 2 ms

   Calculate the completion time, waiting time, and turnaround time for each process using FCFS scheduling.

2. In a multiprogramming system, five processes are scheduled using FCFS. Their arrival times and burst times are as follows:

   Process P1: Arrival Time = 0 ms, Burst Time = 6 ms
   Process P2: Arrival Time = 2 ms, Burst Time = 4 ms
   Process P3: Arrival Time = 4 ms, Burst Time = 2 ms
   Process P4: Arrival Time = 6 ms, Burst Time = 5 ms
   Process P5: Arrival Time = 8 ms, Burst Time = 3 ms

   Calculate the average turnaround time and average waiting time for these processes.

3. A set of four processes arrives at a computer system with FCFS scheduling. Their burst times are as follows:

   Process X: Burst Time = 8 ms
   Process Y: Burst Time = 4 ms
   Process Z: Burst Time = 1 ms
   Process W: Burst Time = 5 ms

   Calculate the average turnaround time and average waiting time for these processes.

   Process C: Arrival Time = 3 ms, Burst Time = 2 ms

   Calculate the turnaround time and waiting time for each process using FCFS scheduling.

SJF (Shortest Job First)

4. Consider the following set of processes with their arrival times and burst times:

   Process A: Arrival Time = 0 ms, Burst Time = 6 ms
   Process B: Arrival Time = 2 ms, Burst Time = 3 ms
   Process C: Arrival Time = 4 ms, Burst Time = 2 ms
   Process D: Arrival Time = 7 ms, Burst Time = 5 ms

   Calculate the average turnaround time and average waiting time for these processes using the SJF (non-preemptive) scheduling algorithm.

5. Consider a set of five processes with their arrival times and burst times:

   Process P1: Arrival Time = 0 ms, Burst Time = 6 ms
   Process P2: Arrival Time = 2 ms, Burst Time = 4 ms
   Process P3: Arrival Time = 4 ms, Burst Time = 2 ms
   Process P4: Arrival Time = 6 ms, Burst Time = 5 ms
   Process P5: Arrival Time = 8 ms, Burst Time = 3 ms

   Calculate the average turnaround time and average waiting time for these processes using the SJF (non-preemptive) scheduling algorithm.

SRTF (Shortest Remaining Time First)

6. Consider the following set of processes with their arrival times and burst times:

   Process P1: Arrival Time = 0 ms, Burst Time = 6 ms
   Process P2: Arrival Time = 2 ms, Burst Time = 4 ms
   Process P3: Arrival Time = 4 ms, Burst Time = 2 ms
   Process P4: Arrival Time = 6 ms, Burst Time = 5 ms

   Calculate the average turnaround time and average waiting time for these processes using the SRTF (Shortest Remaining Time First) scheduling algorithm.

7. Consider the following set of processes with their arrival times and burst times:

   Process P1: Arrival Time = 0 ms, Burst Time = 8 ms
   Process P2: Arrival Time = 1 ms, Burst Time = 4 ms
   Process P3: Arrival Time = 2 ms, Burst Time = 9 ms
   Process P4: Arrival Time = 3 ms, Burst Time = 5 ms

   Calculate the average turnaround time and average waiting time for these processes using the SRTF (Shortest Remaining Time First) scheduling algorithm.