

## **Operating System**

### **Unit II**

#### **Numerical Practice Questions based on SJF Scheduling Algorithm**

Q1. Consider the set of 5 processes whose arrival time and burst time are given below-

Process Id	Arrival time	Burst time
P1	3	1
P2	1	4
P3	4	2
P4	0	6
P5	2	3

If the CPU scheduling policy is SJF non-preemptive, calculate the average waiting time and average turnaround time.

*Check Your answer:*

- *Average Turn Around time = 8 unit*
- *Average waiting time = 4.8 unit*

Q2. Consider the given table below and find Completion time (CT), Turn-around time (TAT), Waiting time (WT), Average Turn-around time and Average Waiting time.

Process ID	Arrival time	Burst time
P1	2	6
P2	5	2
P3	1	8
P4	0	3
P5	4	4

*Check Your answer:*

- *Average Turn-around time = ??*
- *Average Waiting time = 5.2*

Q3. Consider the given table below and find Completion time (CT), Turn-around time (TAT), Waiting time (WT), Average Turn-around time and Average Waiting time.

Process ID	Arrival time	Burst time
P1	0	10
P2	3	8
P3	6	9
P4	10	4

*Check Your answer:*

- *Average Turn-around time = ??*
- *Average Waiting time = 6.75*

Q4. Consider the given table below and find Completion time (CT), Turn-around time (TAT), Waiting time (WT), Average Turn-around time and Average Waiting time.

Process ID	Arrival time	Burst time
P1	0	10
P2	1	6
P3	3	2
P4	5	4

*Check Your answer:*

- *Average Turn-around time = 12.75*
- *Average Waiting time = 7.25*

Q5. Consider the given table below and find Completion time (CT), Turn-around time (TAT), Waiting time (WT), Average Turn-around time and Average Waiting time.

Process ID	Arrival time	Burst time
P1	1	7
P2	3	3
P3	6	2
P4	7	10
P5	9	8

*Check Your answer:*

- *Average Turn-around time = ??*
- *Average Waiting time = 27/5*

Q6. Consider the given table below and find Completion time (CT), Turn-around time (TAT), Waiting time (WT), Average Turn-around time and Average Waiting time.

Process ID	Arrival time	Burst time
P1	1	6
P2	2	3
P3	3	2
P4	4	3
P5	5	4

*Check Your answer:*

- *Average Turn-around time = 9.4*
- *Average Waiting time = 5.8*

Q7. Consider the given table below and find Completion time (CT), Turn-around time (TAT), Waiting time (WT), Average Turn-around time and Average Waiting time.

Process ID	Arrival time	Burst time
P1	0	20
P2	1	1
P3	2	1

*Check Your answer:*

- *Average Turn-around time = 20.3*
- *Average Waiting time = 13*

Q8. Consider the given table below and find Completion time (CT), Turn-around time (TAT), Waiting time (WT), Average Turn-around time and Average Waiting time.

Process ID	Arrival time	Burst time
P1	2	20
P2	0	1
P3	1	1

*Check Your answer:*

- *Average Turn-around time = 7.3*
- *Average Waiting time = 0*

Q9. Consider the given table below and find Completion time (CT), Turn-around time (TAT), Waiting time (WT), Average Turn-around time and Average Waiting time.

Process ID	Arrival time	Burst time
P1	0	21
P2	0	3
P3	0	6
P4	0	2

*Check Your answer:*

- *Average Turn-around time = ??*
- *Average Waiting time = 4.5*

Q10. Consider the given table below and find Completion time (CT), Turn-around time (TAT), Waiting time (WT), Average Turn-around time and Average Waiting time.

Process ID	Arrival time	Burst time
P1	1	6
P2	3	5
P3	4	3
P4	7	9
P5	9	2

*Check Your answer:*

- *Average Turn-around time = ??*
- *Average Waiting time = ??*