

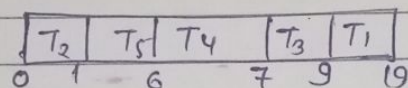
CHIRAG MISHRA (202120106)

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① SJF (non preemptive) :-

Taxi	Arrival Time	Burst Time	Comple. Time	Turn around time (CT-AT)	Waiting Time (TAT-BT)
T <sub>1</sub>	2	10	19	17	7
T <sub>2</sub>	0	1	1	1	0
T <sub>3</sub>	5	2	9	4	2
T <sub>4</sub>	3	1	7	4	3
T <sub>5</sub>	0	5	6	6	1

Gantt chart -



average Turn around Time -

$$\frac{17+1+4+4+6}{5} = \frac{32}{5} = 6.4$$

$$\boxed{\text{average TAT} = 6.4}$$

average waiting Time :-

$$\frac{7+0+2+3+1}{5} = \frac{13}{5} = 2.6$$

$$\boxed{\text{average waiting time} = 2.6}$$

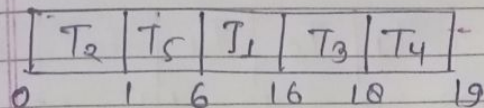
② priority (non-preemptive) :-

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⑧ priority (non preemptive) :-

Taxi	Arrival Time	Burst Time	Completion Time	Turn around Time (CT-AT)	Waiting Time (TAT-AT)	Priority
T <sub>1</sub>	2	10	16	14	4	3
T <sub>2</sub>	0	1	1	1	0	1
T <sub>3</sub>	5	2	18	13	11	3
T <sub>4</sub>	3	1	19	16	15	4
T <sub>5</sub>	0	5	6	6	1	2

Gantt chart :-



average Turn around Time :-

$$\frac{14+1+13+16+6}{5} = \frac{50}{5} = 10$$

$$\boxed{\text{average Turn around Time (TAT)} = 10}$$

average waiting time :-

$$\frac{4+0+11+15+1}{5} = \frac{31}{5} = 6.2$$

$$\boxed{\text{average waiting Time} = 6.2}$$

③ Round Robin (with slice as 2) :-

P.T.O.



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Round Robin (with slice as 2)

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Taxi	Arrival Time	Burst time	Completion Time	Turn around Time	Waiting Time
T <sub>1</sub>	2	10	21	19	9
T <sub>2</sub>	0	1	1	1	0
T <sub>3</sub>	5	2	8	3	1
T <sub>4</sub>	3	1	6	3	2
T <sub>5</sub>	0	5	15	15	10

Queue chart:-

$T_2$	$T_5$	$T_1$	$T_4$	$T_3$	$T_1$	$T_5$	$T_1$	$T_5$	$T_1$	
0	1	3	5	6	8	10	12	14	15	21

average TAT :-

$$\frac{19+1+3+3+15}{5} = \frac{41}{5} = 8.2$$

$$\boxed{\text{average TAT} = 8.2}$$

average waiting Time :-

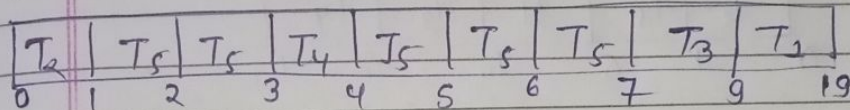
$$\frac{9+0+1+2+10}{5} = \frac{22}{5} = 4.4$$

$$\boxed{\text{average waiting time} = 4.4}$$

SJF (Be preemptive) / SRTF :-

Taxi	Arrival Time	Guest Time	Completion Time	TAT	Waiting Time
T <sub>1</sub>	2	10	19	17	7
T <sub>2</sub>	0	1	1	1	0
T <sub>3</sub>	5	2	9	4	2
T <sub>4</sub>	3	1	4	1	0
T <sub>5</sub>	0	<del>8</del> 1	7	7	2

Gantt chart :-



average TAT :-

$$\frac{17 + 1 + 4 + 1 + 7}{5} = \frac{30}{5} = 6$$

average TAT = 6

average waiting Time :-

$$\frac{7 + 0 + 2 + 0 + 2}{5} = \frac{11}{5} = 2.2$$

average waiting time = 2.2

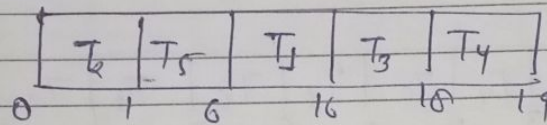
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### Priority (Preemptive) :-

Task	Ar. Time	Bu. Time	Priority	Comp. Time	TAT	W.T.
T <sub>1</sub>	2	10	3	16	14	4
T <sub>2</sub>	0	1	1	1	1	0
T <sub>3</sub>	5	2	3	18	13	11
T <sub>4</sub>	3	1	4	19	16	15
T <sub>5</sub>	0	5	2	6	6	1

### Gantt Chart



avg. TAT :-

$$\frac{14+1+13+16+6}{5} = \frac{50}{5} = 10$$

$$\boxed{\text{avg. TAT} = 10}$$

avg. waiting Time :-

$$\frac{4+0+11+15+1}{5} = \frac{31}{5} = 6.2$$

$$\boxed{\text{avg. waiting Time} = 6.2}$$