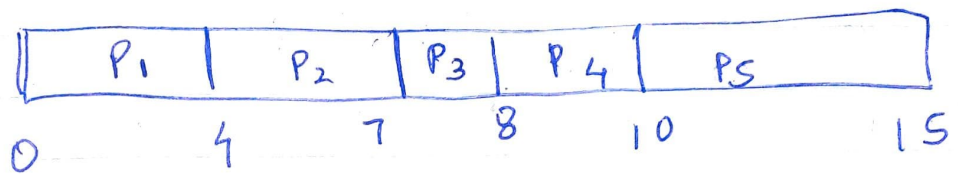


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1)

Process No	Arrival Time	Burst Time	Complete Time	Turnaround Time	Wait Time
P ₁	0	4	4	4	0
P ₂	1	3	7	6	3
P ₃	2	1	8	6	5
P ₄	3	2	10	7	5
P ₅	4	5	15	11	6



Turnaround time = Completion time - Arrival Time

Wait time = Turnaround time - Burst Time

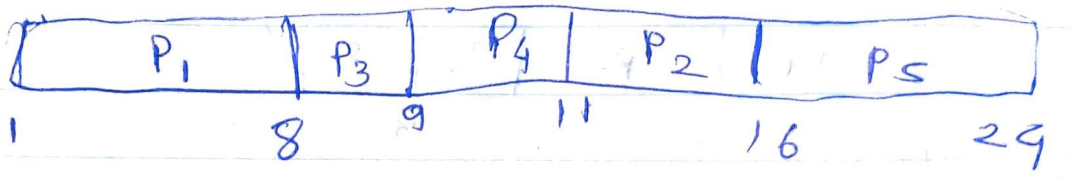
$$\begin{aligned} \text{Avg : Turnaround Time} &= \frac{4 + 6 + 6 + 7 + 11}{5} \\ &= \frac{34}{5} = 6.8 \end{aligned}$$

$$\begin{aligned} \text{Avg Completion time} &= \frac{4 + 7 + 8 + 10 + 15}{5} \\ &= \frac{44}{5} = 8.8 \end{aligned}$$

$$\begin{aligned} \text{Avg Waiting time} &= \frac{0 + 3 + 5 + 5 + 6}{5} \\ &= 3.8 \end{aligned}$$

2.

Process Number	Arrival Time	Burst Time	Completion Time	TAT	WT
P ₁	1	7	8	7	0
P ₂	2	5	16	14	9
P ₃	3	1	9	6	5
P ₄	4	2	11	7	5
P ₅	5	8	24	19	11



$$\text{Avg (TAT)} = \frac{7 + 14 + 6 + 7 + 19}{5} = 10.6$$

$$\text{Avg (WT)} = \frac{9 + 5 + 5 + 11}{5} = 6$$

3.

Process Number	Arrival	Burst	Comp	TAT	WT
P ₁	0	7	19	19	12
P ₂	1	5	13	12	7
P ₃	2	3	6	4	1
P ₄	3	1	4	1	0
P ₅	4	2	9	5	3
P ₆	5	1	7	2	1

P ₁	P ₂	P ₃	P ₄	P ₃	P ₆	P ₅	P ₂	P ₁	
0	1	2	3	4	6	7	9	13	19

$$\text{Avg (TAT)} = \frac{19 + 12 + 4 + 1 + 5 + 2}{6}$$

$$= 7.16$$

$$\text{Avg (WT)} = \frac{24}{6} = 4$$

4) $Q = 2$

Process	Arrive	Process	Complete	TAT	WT
P ₁	0	4	13	13	9
P ₂	1	5	19	18	13
P ₃	2	2	6	4	2
P ₄	3	1	7	4	3
P ₅	4	6	21	17	11
P ₆	6	3	18	12	9

2	3	0	0	4	1	0	1	2	0	0
P ₁	P ₂	P ₃	P ₄	P ₅	P ₆	P ₁	P ₁	P ₂	P ₅	P ₅
0	2	4	6	7	9	11	13	15	17	18
								19		21

$$\text{Avg(TAT)} = \frac{13+18+4+4+17+12}{6}$$

$$= 11.34$$

$$\text{Avg(WT)} = \frac{9+13+2+3+11+9}{6}$$

$$= 7.83$$