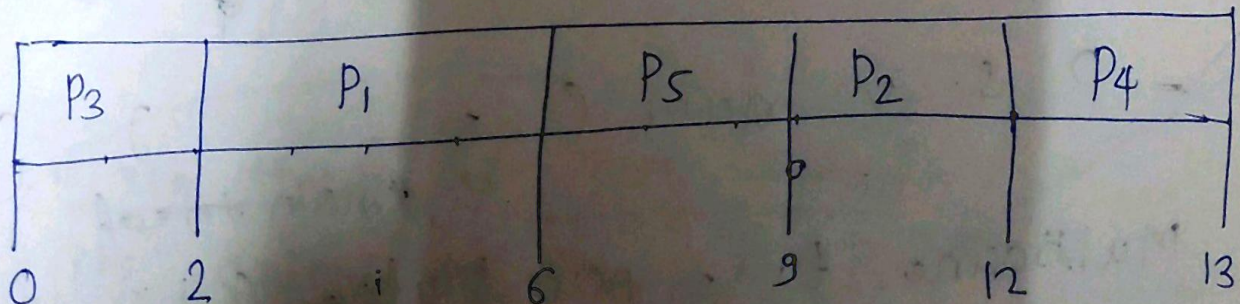


OS Assignment

Problem 1

<u>processes</u>	<u>Arrival Time</u>	<u>Burst Time</u>
P ₁	3	4
P ₂	5	3
P ₃	0	2
P ₄	5	1
P ₅	4	3

FCFS



$$\begin{aligned}\text{Average waiting time} &= (0 + 0 + 2 + 4 + 8) / 5 \\ &= 14 / 5 \\ &= \underline{2.8 \text{ ms}}\end{aligned}$$

$$\begin{aligned}\text{Turnaround Time} &= (2 + 8 + 2 + 5 + 6) / 5 \\ &= \underline{5.8 \text{ ms}}\end{aligned}$$

Q.2 →

Process Id

Arrival Time

Burst Time

✓ P₁ →

3 → 1

✓ P₂ →

1 → 4

✓ P₃ →

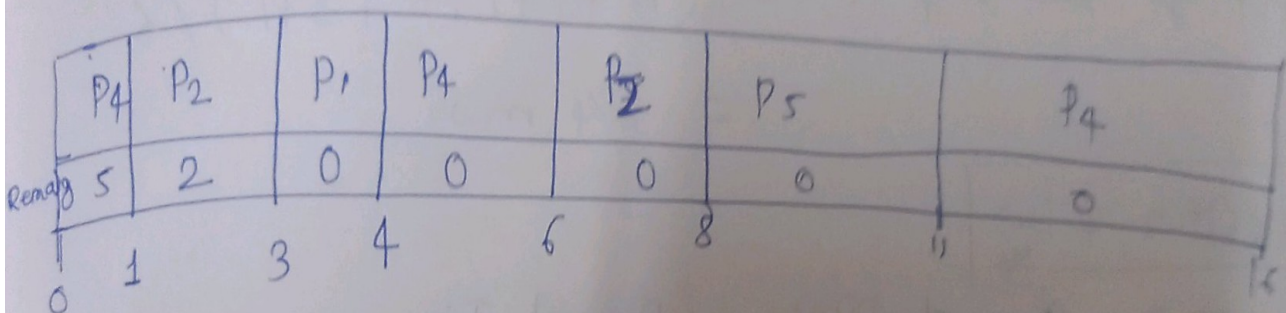
4 → 2

P₄ →

0 → 6

P₅ →

2 → 3



Average Turnaround Time = $35/5 = 7 \text{ ms}$

Average waiting time = $19/5 = 3.8 \text{ ms}$

Que → 3 →

Process

Arrival Time

Burst Time

P₁ → 0 → 7

P₂ → 1 → 5

P₃ → 2 → 3

P₄ → 3 → 1

P₅ → 4 → 2

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

$$\text{Average Turnaround Time} = (19 + 12 + 4 + 1 + 5 + 2) / 6$$

$$= 7.17 \text{ ms}$$

$$\text{Average waiting time} = (12 + 7 + 1 + 6 + 3 + 1) / 6$$

$$= 4 \text{ ms}$$

Question 4 →

process	Arrival time	Burst Time
- P ₁	→ 0	→ 5
- P ₂	→ 1	→ 3
- P ₃	→ 2	→ 1
- P ₄	→ 3	→ 2
- P ₅	→ 4	→ 3

Round Robin (Time Quantum = 2 unit)

P ₁	P ₂	P ₃	P ₄	P ₅	P ₁	P ₂	P ₅	P ₁	
3	1	0	0	1	1	0	0	0	
0	2	4	5	7	9	11	12	13	14

$$\text{Avg Turn Time} = (13 + 11 + 5 + 6 + 10) / 5 =$$

$$= 8.6 \text{ ms}$$

$$\text{Average waiting time} = (8 + 8 + 2 + 4 + 7) / 5$$

$$= 5. \text{ Scanned by Scanner Go}$$