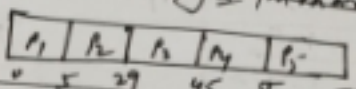
Process	Burst time (in millisec)
P_1	5
P_2	24
P_3	16
P_4	10
P_5	3

1. Turn around time = Finish time - Arrival time
2. Waiting time = Starting time - Arrival time
3. Response time = First response - Arrival time
4. Relative delay = Turnaround time / Burst time



(2) WT = ST - A.T

WT for $P_1 = 0$
$P_2 = 5-0 = 5$
$P_3 = 29-0 = 29$
$P_4 = 45-0 = 45$
$P_5 = 55-0 = 55$

Avg W.T = $\frac{0+5+29+45+55}{5} = 134/5 = 26.8$ ms

(1) TAT = FT - AT

$P_1 = 5-0 = 5$
$P_2 = 29-0 = 29$
$P_3 = 45-0 = 45$
$P_4 = 55-0 = 55$
$P_5 = 58-0 = 58$

ATAT = $\frac{5+29+45+55+58}{5} = 192/5 = 37.4$ ms

(3) Response Time = FR - A.T

Response time for $P_1 = 0$
$P_2 = 5-0 = 5$
$P_3 = 29-0 = 29$
$P_4 = 45-0 = 45$
$P_5 = 55-0 = 55$

Avg. response time = $\frac{0+5+29+45+55}{5} = 134/5 = 26.8$ ms

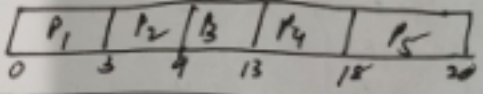
CPU Scheduling algorithm -

CPU scheduling algorithm decide which process is to be allocate the CPU from the ready queue.

Non preemptive / preemptive.

Process	CPU Burst time / service time	Arrival time
P_1	3	0
P_2	6	2
P_3	4	4
P_4	5	6
P_5	2	8

Gantt chart



(1) TAT for $P_1 = 3-0 = 3$
$P_2 = 9-2 = 7$
$P_3 = 13-4 = 9$
$P_4 = 18-6 = 12$
$P_5 = 20-8 = 12$

Avg T.A.T = $\frac{3+7+9+12+12}{5} = 43/5 = 8.60$ ms

(4) Relative delay = TAT / Burst time.

TQ / TS

Relative delay for $P_1 = 3/3 = 1.0$
$P_2 = 7/6 = 1.17$
$P_3 = 9/4 = 2.24$
$P_4 = 12/5 = 2.40$
$P_5 = 12/2 = 6.00$

Avg Relative delay = $\frac{1+1.17+2.24+2.40+6.00}{5} = 2.56$

Response time = FR - AT

Response time for $P_1 = 0$
$P_2 = 3-2 = 1$
$P_3 = 9-4 = 5$
$P_4 = 13-6 = 7$
$P_5 = 18-8 = 10$

Avg res time = $\frac{0+1+5+7+10}{5} = 23/5 = 4.6$ ms