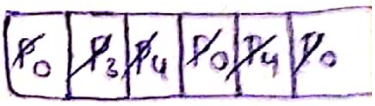
Radhakrishna OSD ALM-19 1900311187

1.

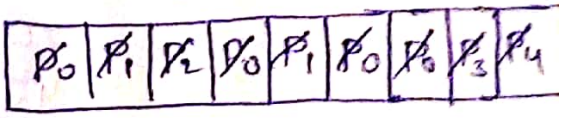
process	Execute Time	Arrival Time
✓ P_0	20-15=5 80-15=65-15 =50-15=35-15	0
✓ P_1	20-15=5	10
✓ P_2	10	10
✓ P_3	20-15=5	80
✓ P_4	50-15=35 35-15=20-15=5	85

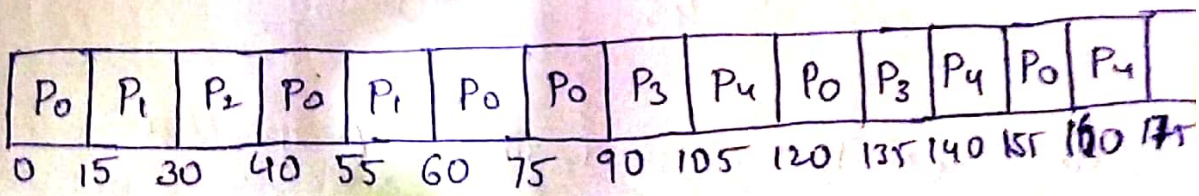
Quantum = 15

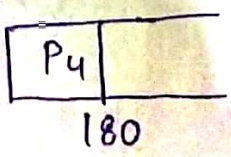


Ready Queue

(i) Gantt chart







All the process have been executed

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process	Execute Time	Arrival Time	Completion Time	TurnAround Time
P_0	80	0	160	160
P_1	20	10	60	50
P_2	10	10	40	30
P_3	20	80	140	60
P_4	50	85	180	95

Waiting Time	Response Time
80	0
30	5
20	20
40	10
45	20

(ii) The turn around time of process

$P_3 = 60$

(iii) Average Wait time $= \frac{80+30+20+40+45}{5}$

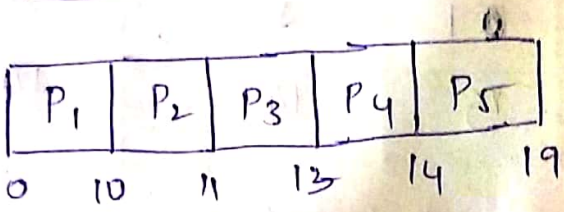
$= \frac{215}{5}$

$= 43$

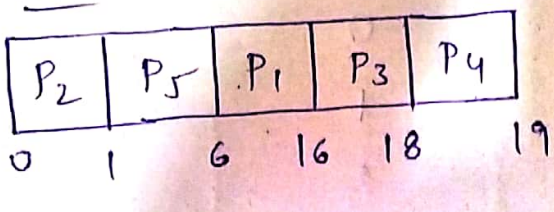
2.

process	Burst	Time priority
P_1	10	3
✓ P_2	1	1
✓ P_3	2	3
✓ P_4	1	4
P_5	5	2

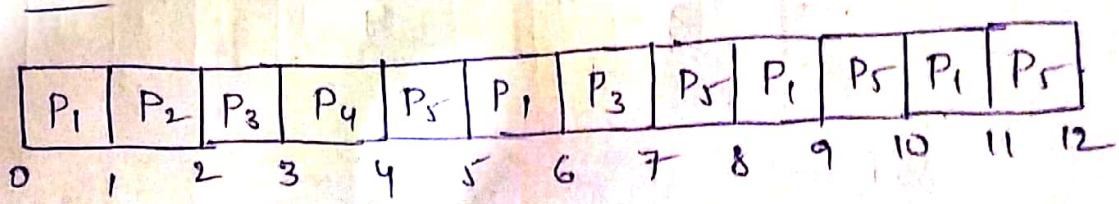
a. FCFS

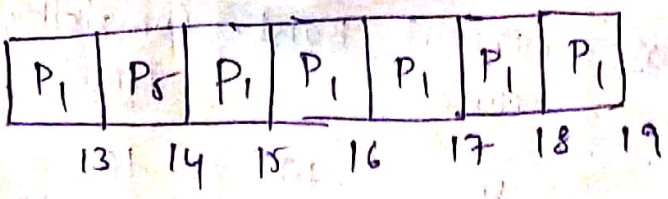


SJF



RR





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c) b) RR

process	Arrival Time	Burst	Completion Time	TurnAround Time	waiting Time	Response Time
P_1	0	10	19	19	9	0
P_2	0	1	2	2	1	1
P_3	0	2	7	7	5	2
P_4	0	1	5	5	4	3
P_5	0	5	14	14	9	4

SJF

Priority	process	Arrival Time	Burst	Completion Time	TurnAround Time
3	P_1	0	10	16	16
1	P_2	0	1	1	1
3	P_3	0	2	18	18
4	P_4	0	1	19	19
2	P_5	0	5	6	6

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FCFS

Process	Arrival	Burst	Completion Time	Turn Around Time	Waiting Time	Response Time
P_1	0	10	10	10	0	0
P_2	0	1	11	11	10	10
P_3	0	2	13	13	11	11
P_4	0	1	14	14	13	13
P_5	0	5	19	19	14	14

SJF

Waiting Time	Response Time
6	6
0	0
16	16
18	18
1	1

d) Avg Wait time in FCFS $= \frac{48}{5} = 9.6$

Avg wait time in SJF $= \frac{41}{5} = 8.2$

Avg wait time in RR $= \frac{28}{5} = 5.6$