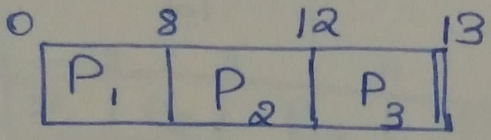
6.3

a)

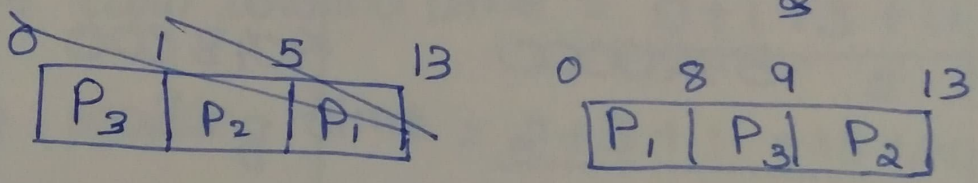


turnaround time = Exit time - Arrival time

Process	Exit time	Turnaround time
P_1	8	8 - 0 = 8
P_2	12	12 - 0.4 = 11.6
P_3	13	13 - 1.0 = 12

Average turnaround time = $\frac{8 + 11.6 + 12}{3} = 10.53$.

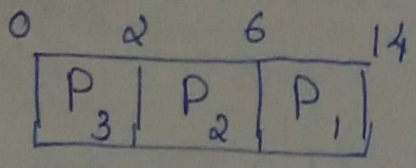
b)



Process	Exit time	Turnaround time
P_1	8	8 - 0 = 8
P_3	9	9 - 1 = 8
P_2	13	13 - 0.4 = 12.6

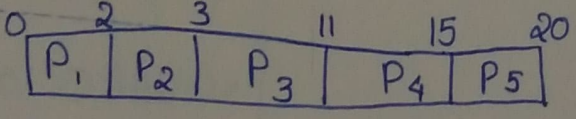
Average turnaround time = $\frac{8 + 8 + 12.6}{3} = 9.53$

6.3 c.



Process	Exit time	turn around time
P_3	2	2-1 = 1
P_2	6	6-0.4 = 5.6
P_1	14	14-0 = 14

Average turnaroud time = $\frac{1+5.6+14}{3} = 6.866$



6.16

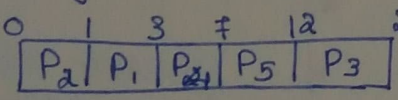
a.

Process	Exit time	turn around time
P_1	2	0
P_2	3	1
P_3	11	3
P_4	15	11
P_5	20	15

Average turn around time = $\frac{0+1+3+11+15}{5} = 6.2$

Average waiting time = $\frac{2+3+11+15+20}{5} = 10.2$

b.

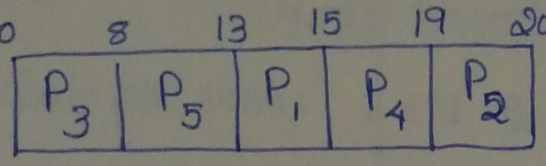


Process	Exit time - Arival	TAT - Burst = Waiting
P_1	3	1
P_2	1	0
P_3	20	12
P_4	7	3
P_5	12	7

Average turn around time $= \frac{3+1+20+7+12}{5} = \frac{43}{5} = 8.6$

Average waiting time $= \frac{1+0+12+3+7}{5} = \frac{23}{5} = 4.6$

c.

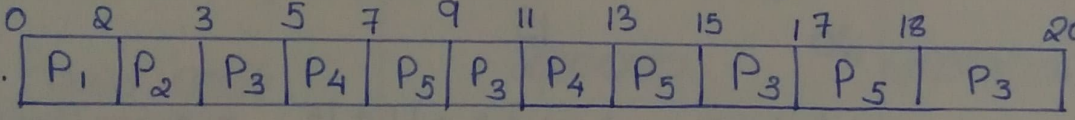


Process	Exit time	turn around time	Waiting time
P_3	8		0
P_2	20		19
P_1	15		13
P_4	19		15
P_5	13		8

Average turnaround time $= \frac{15+20+8+19+13}{5} = \frac{75}{5} = 15$

Average waiting time $= \frac{0+19+13+15+8}{5} = \frac{55}{5} = 11$

d.



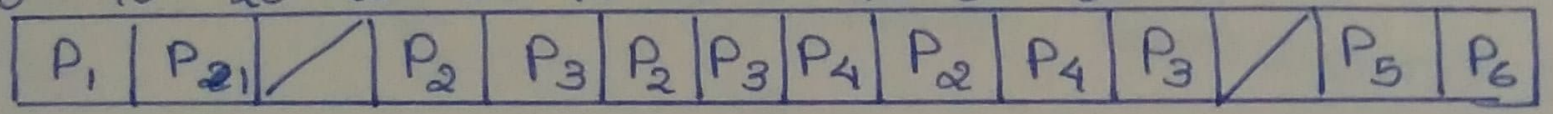
Process	turnaround time	waiting time
P_1	2	0
P_2	3	2
P_3	13	5
P_4	4	0
P_3	8	3

Average turnaround time $= \frac{2+3+13+4+8}{5} = \frac{30}{5} = 6$

Average waiting time $= \frac{0+2+5+0+3}{5} = \frac{10}{5} = 2$

6.17

a.



Process	Turnaround time	Waiting time
P_1	20	0
P_2	55	30
P_3	60	35
P_4	25	10
P_5	10	0
P_6	10	0

b. Average turnaround time $= \frac{180}{6} = 30$

c. Average waiting time $= \frac{30+35+10}{6} = \frac{75}{6} = 12.5$