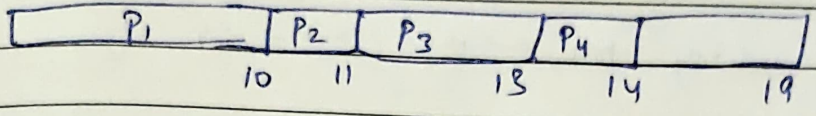
99201053173
f6
Shruti

Page No.
Date / 20

Assignment - 2.

1. a) fcfs scheduling:

Gantt chart:

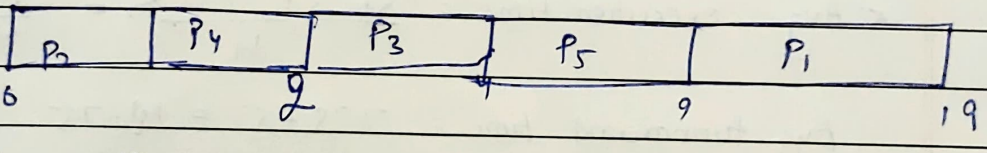


Avg waiting time = $\frac{0+10+11+13+14}{5} = 9.6$

Avg execution time = $\frac{10+1+2+1+5}{5} = 3.8$.

Avg turn around time = $9.6 + 3.8 = 13.4$

b) SJF non-preemptive scheduling

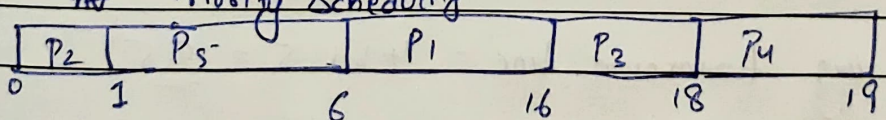


Avg waiting time = $\frac{9+0+2+1+4}{5} = 3.2$

Avg. execution time = $\frac{10+1+2+1+5}{5} = 3.8$

Avg. turn around time = $3.8 + 3.2 = 7$

c) Priority Scheduling



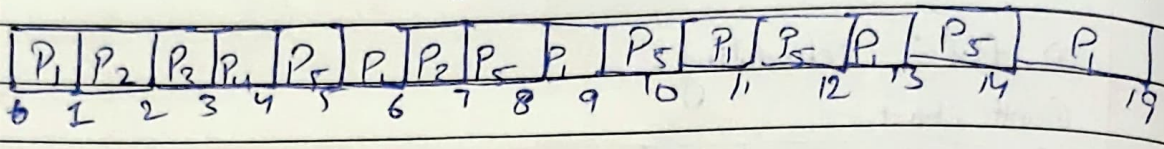
Avg. waiting time = $\frac{6+0+16+18+1}{5} = 8.2$.

Avg. execution time = 3.8

Avg turnaround time = $8.2 + 3.8 = 12$

Page No.
Date / 20

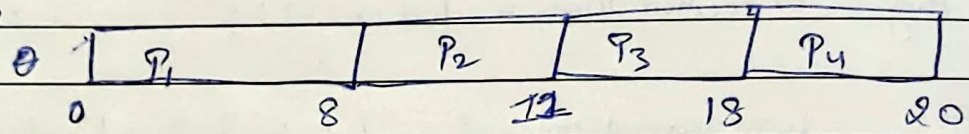
d) Round Robin Scheduling



Avg waiting time = $\frac{9+5+5+9}{5} = 5.4$

Avg. turnaround time = $5.4 + 3.8 = 9.2$

2. a)

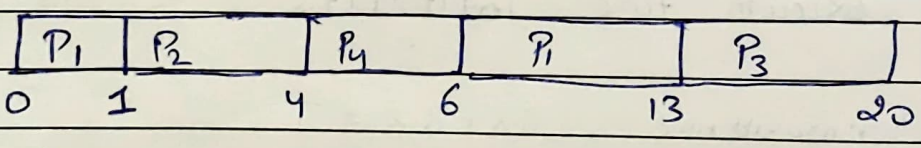


Avg waiting time = $\frac{0+7+9+15}{4} = 7.75$

* Avg. execution time = $\frac{8+3+7+2}{4} = \frac{20}{4} = 5$

Avg turnaround time = $7.75 + 5 = 12.75$

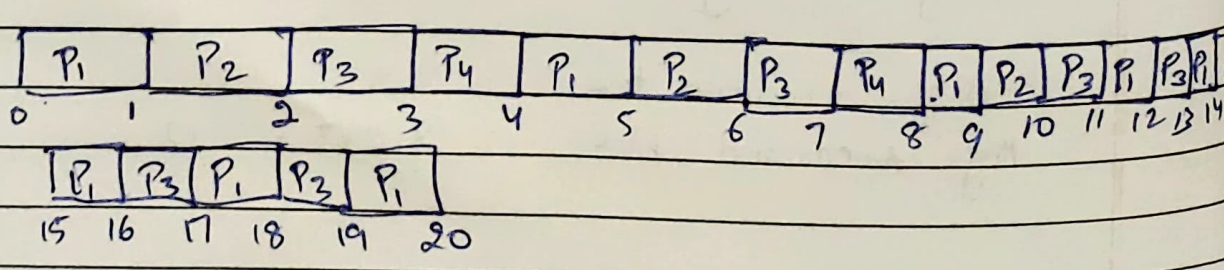
b) Premptive SJF



Avg waiting time = $\frac{0+6+0+11+1}{4} = \frac{18}{4} = 4.5$

Avg turnaround time = $4.5 + 5 = 9.5$

c) Round robin (1 time unit)



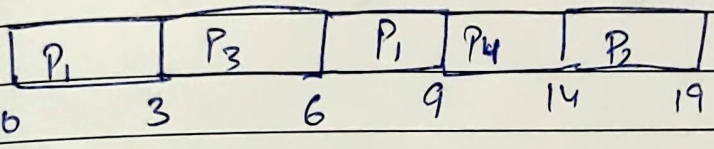
Page No.
Date / 20

Avg waiting time = $\frac{(0+(4-1)+(8-5)+(11-9)+(13-12)}{4}$ . . . .

$= \frac{11}{4} + 6 + 3 + 10 = \frac{30}{4} = 7.5$

Avg turnaround time = 7.5 + 5 = 12.5 .

3. a) Preemptive

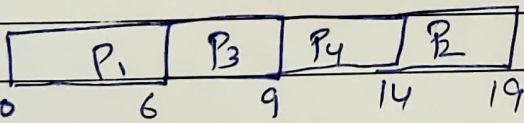


Avg waiting time = $\frac{3+11+0+4}{4} = \frac{18}{4} = 4.5$

* Avg execution time = $\frac{6+5+3+5}{4} = \frac{19}{4} = 4.75$

Avg turnaround time = 4.5+4.75 = 9.25

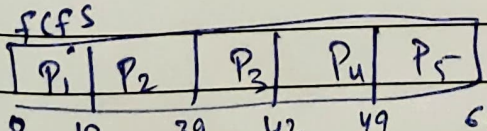
b) Non Preemptive



Avg waiting time = $\frac{0+3+4+11}{4} = \frac{18}{4} = 4.5$

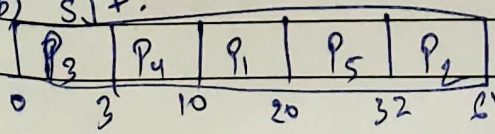
Avg turnaround time = 9.25 .

4. a) FCFS



Avg waiting time = $\frac{0+10+39+42+49}{5} = \frac{140}{5} = 28$ ms.

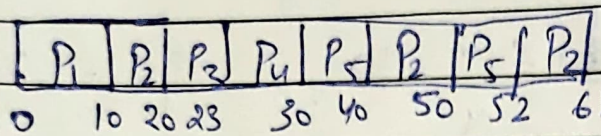
b) SJF:



Avg waiting time = $\frac{65}{5} = 13$ ms

Page No.
Date / 20

Round Robin



Avg waiting time = $\frac{0+32+20+23+40}{5} = \frac{115}{5} = 23$ ms

Minimum waiting time is of Shortest Job first.