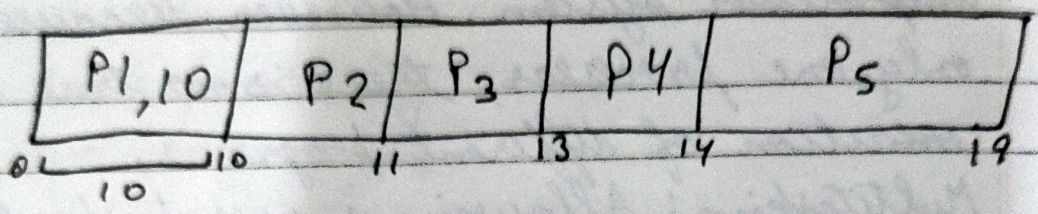
classmate
Date
Page

20/11/22

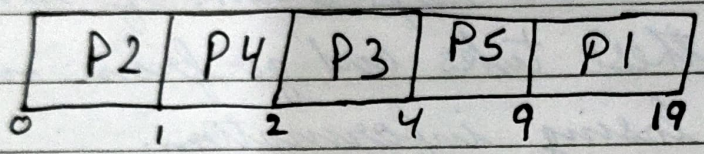
Assignment-2

Jatin Agarwal

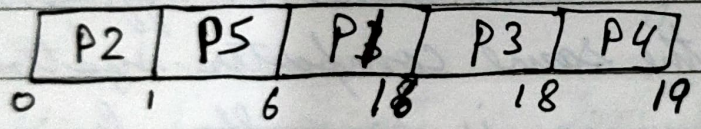
Q1- i) FCFS



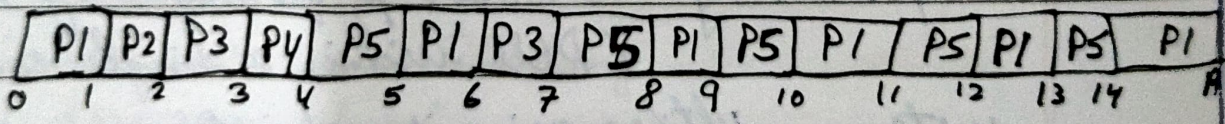
SJF



Non Preemptive priority



Round Robin (quantum = 1)



ii) $TAT_{FCFS} = \frac{10+11+13+14+19}{5} = 13.4$ s

$TAT_{SJF} = \frac{1+2+4+9+19}{5} = 7$ s

$TAT_{NPP} = \frac{1+6+16+18+19}{5} = 12$ s

$TAT_{RR} = \frac{19+2+7+4+14}{5} = 9.2$ s

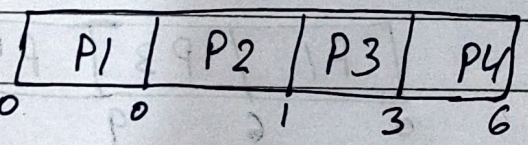
(iii) $WT_{FCFS} = \frac{0+10+11+13+14}{5} = 9.6$ sec

$WT_{SJF} = \frac{9+0+2+1+4}{5} = 3.2$ s

$WT_{NPP} = \frac{6+0+16+18+1}{5} = 20.5$ s

$WT_{RR} = \frac{9+1+5+3+9}{5} = 5.4$ s

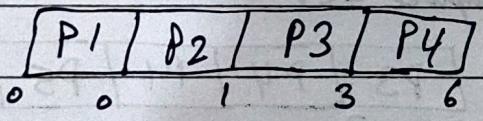
Q2- a) FCFS



$avg\ TAT_{FCFS} = \frac{0+1+3+6}{4} = 2.5$ s

$avg\ WT_{FCFS} = \frac{0+0+1+3}{4} = 1$ s

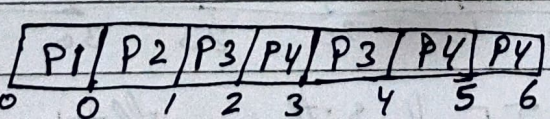
b) Preemptive SJF



$avg\ TAT_{PSJF} = \frac{0+1+3+6}{4} = 2.5$ s

$avg\ WT_{PSJF} = \frac{4}{4} = 1$ s

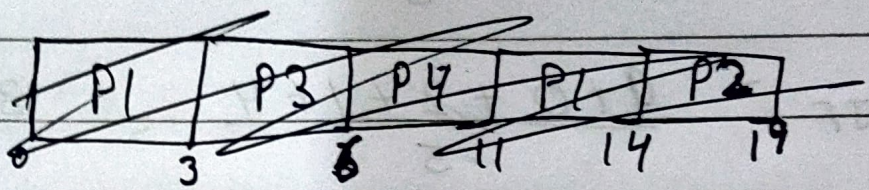
c) Round Robin (1 t.u.)

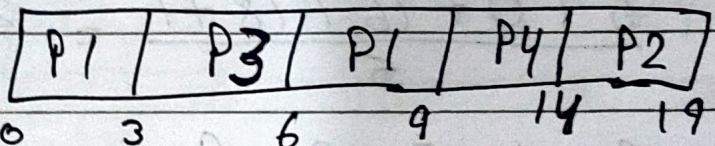


$avg\ TAT_{RR} = \frac{0+1+4+6}{4} = 2.75$ s

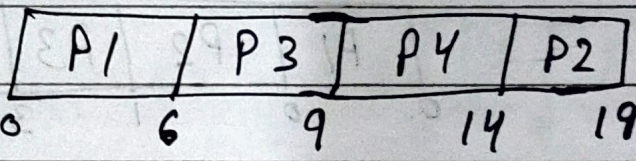
$avg\ WT_{RR} = \frac{0+0+2+3}{4} = 1.25$ s

Q3- (a) Preemptive

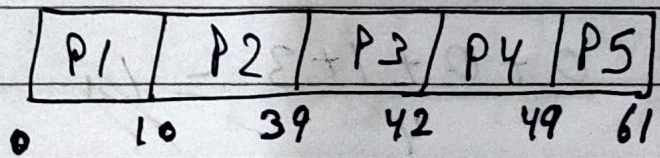




(b) Non preemptive

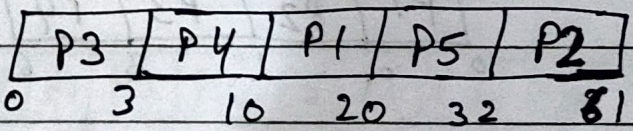


Q4 - FCFS



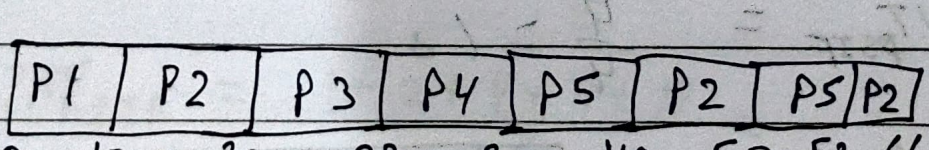
Avg WT_{FCFS} = 28 ms

Non preemptive SJF



Avg WT_{NPSJF} = 13 ms

Round Robin (10ms t.u.)



Avg WT_{RR} = 23 ms

NPSJF algorithm will take minimum avg WT as all the shortest remaining process will be finished up first and thus don't have to wait for longer jobs to finish.