

# Digital Assignment - 1

Abhinav Dinesh Srivatsa

21BD50340

Operating Systems

## Question 1

A.

— First come First served

P	AT	BT	Priority	CT	TAT	WT
P1	0	5	-	5	5	0
P2	0	3	-	8	8	5
P3	0	4	-	12	12	8
P4	0	2	-	14	14	12
P5	0	1	-	15	15	14

P - process

AT - arrival time

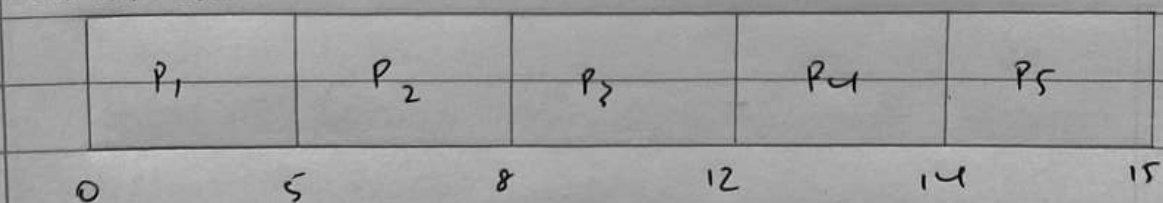
BT - burst time

CT - completion time

TAT - turn around time

WT - wait time

Gantt chart:



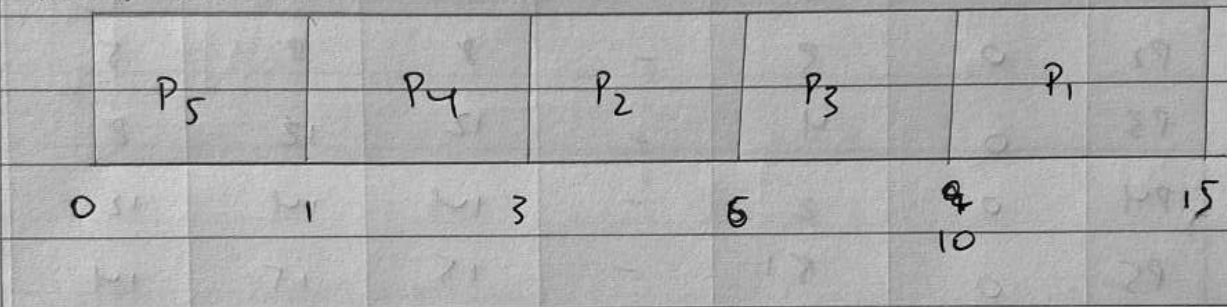
Average wait time = 7.8 ms

Average turn around time = 10.8 ms

Shortest Job First:

Process	Arrival Time	Burst Time	Completion Time	Turn Around Time	Waiting Time
P <sub>1</sub>	0	5	15	15	10
P <sub>2</sub>	0	3	6	6	3
P <sub>3</sub>	0	4	10	10	6
P <sub>4</sub>	0	2	3	3	1
P <sub>5</sub>	0	1	1	1	0

Gantt chart:



Average wait time = 4 ms

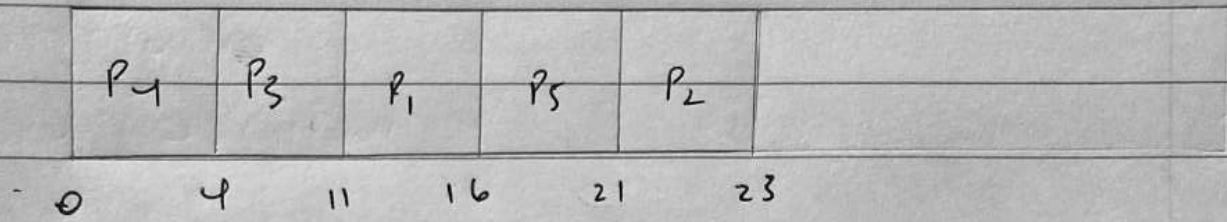
Average turn around time = 7 ms

B. Assuming non-preemptive

Time Quantum = 3 ms

Process	Arrival Time	Burst Time	Priority	Completion Time	Turn Around Time	Waiting Time
P <sub>1</sub>	5	5	0	16	11	6
P <sub>2</sub>	4	2	7	23	19	17
P <sub>3</sub>	3	7	5	11	8	1
P <sub>4</sub>	0	4	10	4	4	0
P <sub>5</sub>	3	5	5	21	18	13

Gantt chart:



Average wait time = 7.4 ms

Average turn around time = 12 ms