Name: _____ ID: _____ Section: ____

[CO3] Apply Round Robin (RR) scheduling algorithm with quantum = 4 and show the following -

- Gantt Chart   2 Marks
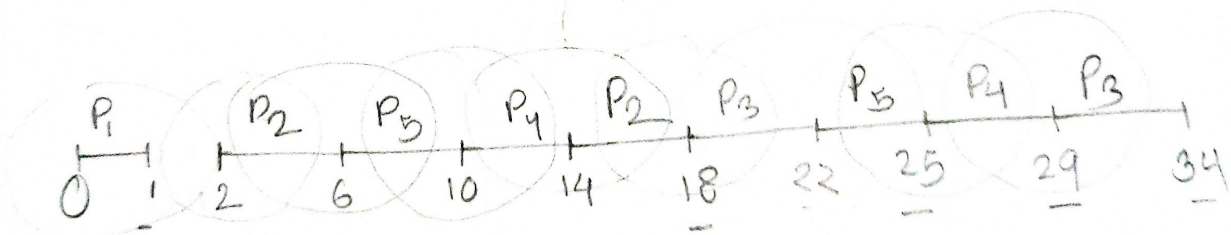- Average Waiting Time & Average Turnaround Time   2 Marks
- Number of Context Switching   1 Marks

Process ID	Arrival Time	Burst Time	C_T	T_{AT}	W_T
✓ P1	0	~~10~~	1	1	0
✓ P2	2	~~8~~ 4	18	16	8
P3	8	~~9~~ 5	34	26	17
✓ P4	3	~~8~~ ~~4~~ 6	29	26	18
✓ P5	3	~~7~~ ~~3~~ 0	25	22	15

$Q = 4$

Gantt Chart

Gantt chart: P1 | P2 | P5 | P4 | P2 | P3 | P5 | P4 | P3
with timeline: 0, 1, 2, 6, 10, 14, 18, 22, 25, 29, 34

$$Avg\ T_{AT} = 18.2$$

$$Avg\ W_T = 11.6$$

$$Context\ Switch = 9$$

[CO3] Apply preemptive Shortest Remaining Time First (SRTF) scheduling algorithm and show the following -

- Gantt Chart — 2 Marks
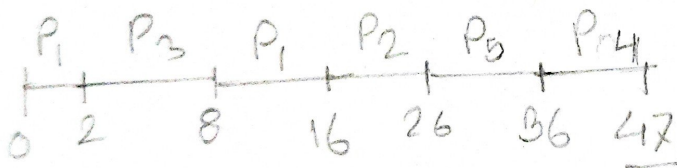- Average Waiting Time & Average Turnaround Time — 2 Marks
- Number of Context Switching — 1 Marks

Process ID	Arrival Time	Burst Time	C_T	TA_T	W_T
P1	0	10 8 0	16	16	6
P2	2	10 0	26	24	14
P3	2	6 4 2 0	8	6	0
P4	7	11	47	40	29
P5	7	10	36	29	19

Gantt Chart:

P1	P3	P3	P3	P3	P3	P3	P1	P2	P5	P4
0	2	3	4	5	6	7	8	16	26	36	47

P1	P3	P1	P2	P5	P4
0	2	8	16	26	36	47
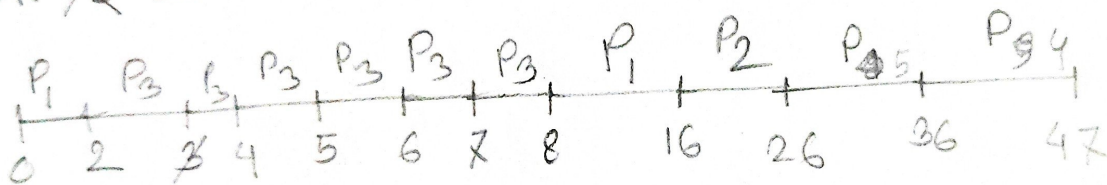
CSE321: Operating Systems

Quiz-2

Name: PRIONTO KUMAR CHOUDHURY ID: 19301089 Section: 03.

[CO3] Apply Round Robin (RR) scheduling algorithm with quantum = 4 and show the following –

- Gantt Chart   2 Marks
- Average Waiting Time & Average Turnaround Time   2 Marks
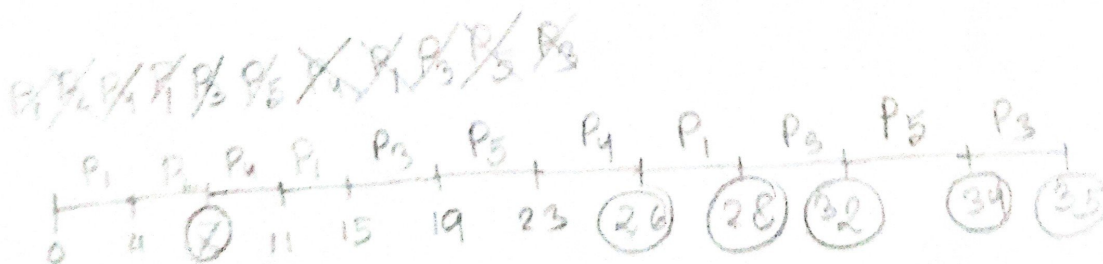- Number of Context Switching   1 Marks

Process ID	Arrival Time	Burst Time	C_T	T_{AT}	W_T
P1	0	10 ~~6~~ 4 28	28	18
P2	2	~~3~~ 7	5	2
P3	7	9 ~~5~~7 35	28	19
P4	4	7 ~~20~~ 26	22	15
P5	9	6 ~~20~~ 34	25	19

$$\boxed{Avg \; T_{AT} = 21.6 \qquad Avg \; W_T = 14.6}$$

$$P_1 \; P_2 \; P_4 \; P_1 \; P_3 \; P_5 \; P_4 \; P_1 \; P_3 \; P_5 \; P_3$$

Gantt chart timeline: 0, 4, 7, 11, 15, 19, 23, 26, 28, 32, 34, 35
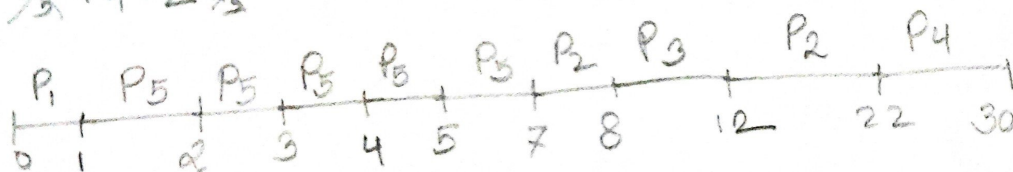
Context Switch?

[CO3] Apply Preemptive Priority scheduling algorithm and show the following –

- **Gantt Chart** — 2 Marks
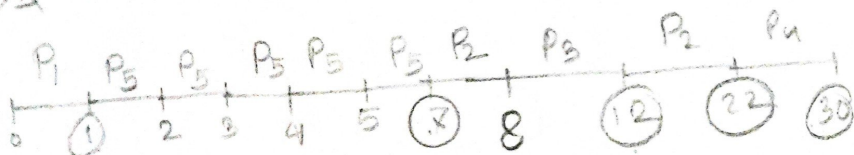- **Average Waiting Time & Average Turnaround Time** — 2 Marks
- **Number of Context Switching** — 1 Marks

Process ID	Arrival Time	Burst Time	Priority	C_T	T_{AT}	W_T
P1	0	10	2	1	1	0
P2	3	11 / 10	4	22	19	8
P3	8	4	1	12	4	0
P4	1	8	5	30	29	21
P5	1	6	3	7	6	0

$\cancel{P_1}\ \cancel{P_3}\ P_4\ P_2\ \cancel{P_3}$

P_1	P_5	P_5	P_5	P_5	P_3	P_2	P_3	P_2	P_4
0	1	2	3	4	5	7	8	12	22	30

$\cancel{P_1}\ \cancel{P_5}\ P_4\ P_2\ \cancel{P_3}$

P_1	P_5	P_5	P_5	P_5	P_5	P_2	P_3	P_2	P_4
0	1	2	3	4	5	7	8	12	22	30

Avg T_{AT} = 11·8

Avg W_T = 5·8

Content switch ?

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