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★ Round Robin Scheduling

- Used in time sharing systems.
- It is pre-emptive scheduling algorithm.

Numerical

1)

Process	A.T.	B.T.
✓ P_1	0	8 5 2 0
✓ P_2	5	2 0
✓ P_3	1	7 4 1 0
✓ P_4	6	3 0
✓ P_5	8	5 2 0

$Tq = 3$

Calculate avg. waiting time & avg TAT.

→ ~~Gantt chart~~

Ready Queue:

P_1	P_3	P_1	P_2	P_4	P_3	P_5	P_1	P_3	P_5

Gantt chart

P_1	P_3	P_1	P_2	P_4	P_3	P_5	P_1	P_3	P_5

0 3 6 9 11 14 17 20 22 23 25

(+2)

Process	AT	B.T	C.T	TAT	WT	R.T.
P_1	0	8	22	22	14	0
P_2	5	2	11	6	4	4
P_3	1	7	23	22	15	2
P_4	6	3	14	8	5	5
P_5	8	5	25	17	12.	9

Avg WT = 10.

Avg TAT = 15

2)

Process	AT	BT
✓ P_1	0	~~5~~ ~~3~~ 1 0
✓ P_2	1	~~3~~ 1 0
✓ P_3	2	1 0
✓ P_4	3	~~2~~ 0
✓ P_5	4	~~3~~ 1 0

calculate avg WT & avg TAT

TQ = 2

→ Ready Queue

P_1	P_2	P_3	P_1	P_4	P_5	P_2	P_1	P_5

Gantt chart

P_1	P_2	P_3	P_1	P_4	P_5	P_2	P_1	P_5

0 2 4 5 7 9 11 12 13 14

Process	AT	BT	CT	TAT	WT	RT
P_1	0	5	13	13	8	0
P_2	1	3	12	11	8	1
P_3	2	1	5	3	2	2
P_4	3	2	9	6	4	4
P_5	4	3	14	10	7	5

Avg WT = 5.8

Avg TAT = 8.6

3)

Process	A.T.	B.T.
P_1	0	5 3 1 0
P_2	1	4 2 0
P_3	2	2 0
P_4	4	1 0

Cal. avg WT & avg TAT.

TQ = 2

→ Ready queue.

P_1	P_2	P_3	P_1	P_4	P_2	P_1

Gantt chart

P_1	P_2	P_3	P_1	P_4	P_2	P_1

0 2 4 6 8 9 11 12

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Process	A.T	B.T	CT	TAT	WT	R.T.
P_1	0	5	12	12	7	0
P_2	1	4	11	10	6	1
P_3	2	2	6	4	2	2
P_4	4	1	9	5	4	4
~~P_5~~						

Avg WT = 4.75

Avg TAT = 7.75