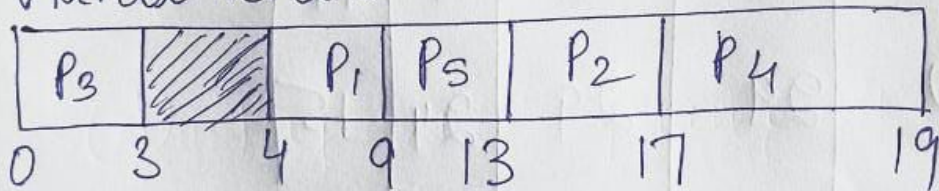


# FCFS

Process	Arrival time	Burst time	Completion time	Turnaround time	Waiting time
P <sub>1</sub> →	4	5	9	5	0
P <sub>2</sub>	6	4	17	11	7
P <sub>3</sub>	0	3	3	3	0
P <sub>4</sub>	6	2	19	13	11
P <sub>5</sub>	5	4	13	8	4

## Gantt chart



average turn around time =  $40/5$   
8 units

avg. waiting =  $22/5 = 4.4$  units

## Round Robin

Five process are given, content

Switch time is 1 unit.

calculate average WT, TAT, RT,

No. of content switches and

CPU utilization.

$$TQ = 3 \text{ unit}$$

	Burst time	AT	CT	TAT	WT	RT
P <sub>1</sub>	8	0	32	32	24	0
P <sub>2</sub>	2	0	6	6	4	4
P <sub>3</sub>	7	0	34	34	27	7
P <sub>4</sub>	3	0	14	14	11	11
P <sub>5</sub>	5	0	29	29	24	15

## Ready Queue

P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	P <sub>5</sub>	P <sub>1</sub>	P <sub>3</sub>	P <sub>5</sub>	P <sub>4</sub>	P <sub>3</sub>
----------------	----------------	----------------	----------------	----------------	----------------	----------------	----------------	----------------	----------------

Grant chart.

P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	P <sub>5</sub>	P <sub>1</sub>	P <sub>3</sub>	P <sub>5</sub>	P <sub>1</sub>	P <sub>3</sub>
3	4	6	7	10	11	14	15	18	19
22	23	26	27	29	30	32	33	34	

No. of content switches  $\rightarrow 9$

CPU utilization  $\rightarrow$

$$\frac{\text{Expected}}{\text{Actual}} = \frac{25}{34} \times 100 = 73.5\%$$