

UNIT-3 CPU SCHEDULING AND ALGORITHMS

Scheduling Algorithms

Preemptive

- SRTF (Shortest Remaining time first)
- LRTF (Longest Remaining time)
- Round Robin
- Priority based

Non-preemptive

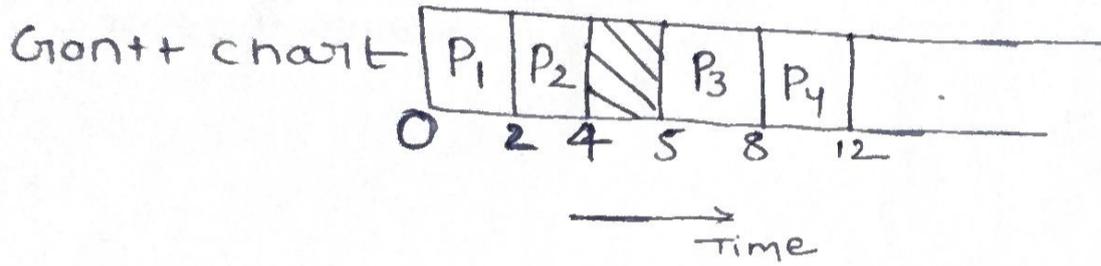
- FCFS (First come First serve)
- SJF (Shortest Job first)
- HRRN (Highest Response Ratio Next)
- Multilevel Queue

CPU Scheduling

- Arrival Time: The time at which process enter the Ready queue or state
- Burst Time: The Time required by a process to get execute on CPU
- Completion Time: The time at which process complete it's execution.
- Turn Around Time: $\{ \text{Completion time} - \text{Arrival Time} \}$
- Waiting Time: $\{ \text{Turn Around time} - \text{Burst time} \}$
- Response time: $[(\text{The time at which a process get CPU first time}) - (\text{Arrival time})]$

FCFS (Non-preemptive) BRUST TIME Less Arrival T. me

Process	Arival Time	BRUST TIME	Completion Time	TAT	WT	RT
P₁	0	2	2	2	0	0
P₂	1	2	4	3	1	1
P₃	5	3	8	3	0	0
P₄	6	4	12	6	2	2

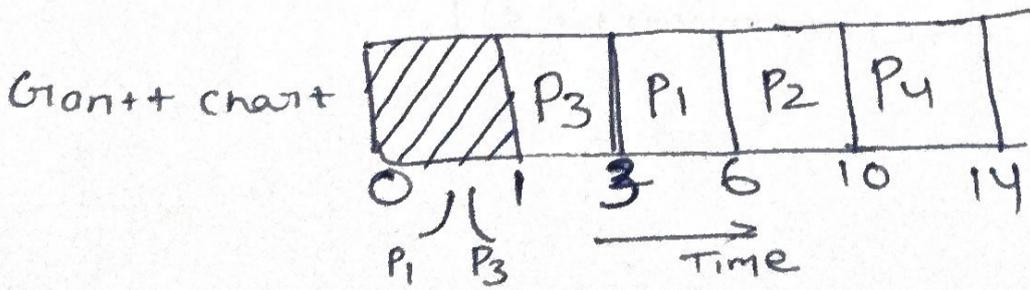


Turn around Time = CT - AT
 Waiting Time = TAT - BT
 Responce Time =

Avg TAT = $\frac{14}{4} = 3.5$
 Avg WT = $\frac{3}{4} =$

SJF (Shortest Job First) Less BRUST

Process	Arrival Time	BRUST TIME	Completion Time	CT-AT	TAT	WT	RT
P₁	1	3	6	5	5	2	
P₂	2	4	10	8	8	4	
P₃	1	2	3	2	2	0	
P ₄	4	4	14	10	10	6	



P₁P₄

~~P₂~~

Round Robin (RR)

Process	Arrival Time	BRUST TIME	Completion Time	TAT	WIT	RT
P ₁	0	5				
P ₂	1	4				
P ₃	2	2				
P ₄	1	1				

Ready quege

Running quegu