GATE 2020

Q50. Consider the following set of processes, assumed to have arrived at time 0. Consider the CPU scheduling algorithms Shortest Job First (SJF) and Round Robin (RR). For RR, assume that the processes are scheduled in the order P!, P2, P3, P4.

Processes	P1	P2	P3	P4
Burst time (in ms)	8	7	2	4

If the time quantum for RR is 4 ms, then the absolute value of the difference between the average turn around times (in ms) of SJF and RR (round off to 2 decimal places) is _____.

Solution.

Shortest Job First (SJF)

Process	Burst Time	Completion Time	Turn Around Time
P1	08	21	21
P2	07	13	13
P3	02	02	02
P4	04	06	06

Average Turn Around TIme (21+13+2+6)/4 = 10.5

Round Robin (RR)

Process	Burst Time	Completion Time	Turn Around Time
P1	08	18	12
P2	07	21	21
P3	02	10	10
P4	04	14	14

Average Turn Around Time (18+21+10+14)/4 = 15.75

Absolute value of the difference = | 10.75 – 15.75 | =5.25

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