Process Scheduling Assignment

Q1. Given the following information's, draw GANTT charts and find the average waiting time and average turn-around time using FCFS, SJF, SRTF, RR (quantum=3), HRRN.

Process	Arrival Time	Burst Time
A	0	8
B	2	6
C	4	9
D	7	5

Q2. Suppose six batch jobs P1, P2, P3, P4, P5 and P6 arrived at the service centre at time 0. They have the running time of 18, 20, 6, 10, 12 and 8 respectively. Their priorities are 4, 2, 1, 3, 5 and 6 respectively with 1 being the highest priority. For each of the scheduling algorithms, determine the mean process turnaround time. Also determine the average system waiting time for

a. FCFS b. SJF c. RR (quantum size 6) d. Priority scheduling e. HRRN f. SRTN

Q3. Consider the following set of processes, with the length of the CPU-burst time and arrival-time given in milliseconds:

Process	Burst time	Arrival time	Priority
P1	10	0	2
P2	15	2	1
P3	22	3	4
P4	16	5	5
P5	5	6	3

For the given data, draw Gantt charts that illustrate the execution of these processes using FCFS, SJF (Preemptive and Non-Preemptive), Priority (Preemptive and Non-Preemptive) and Round Robin algorithms with quantum 4 milliseconds.

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