Assignment 2

Part E

1. Consider the following processes with arrival times and burst times: Calculate the average waiting time using First-Come, First-Served (FCFS) scheduling.
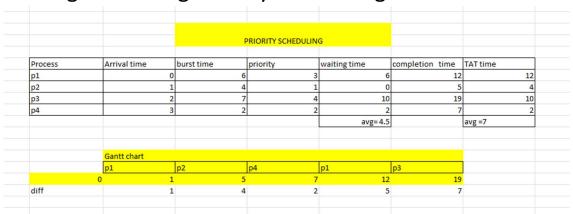
				FCFS SCHEDULING			
Process	Arrival time	Burst time	Cpu allocation time	waiting time		completion time	TAT time
P1	0	5	0	0		5	5
P2	1	3	5	4		8	7
P3	2	6	8	6		14	12
				Avg=3.33			Avg=8
				cpu alo-comp tym			comp-arrival

Gantt chart			
	P1	P2	P3
0	5	8	14

2. Consider the following processes with arrival times and burst times: Calculate the average turnaround time using Shortest Job First (SJF) scheduling.

				SJF SCHEDULING			
Process	arrival time	burst time	CPU allocation time	waiting time		completion time	TAT
P1	0	3	0	0		3	3
P2	1	5	3	7		13	12
P3	2	1	4	1		4	2
P4	3	4	8	1		8	5
							avg=5.5

Gantt chart			
P1	p3	P4	P2
0	3	4	8	13

3. Consider the following processes with arrival times, burst times, and priorities (lower number

indicates higher priority): Calculate the average waiting time using Priority Scheduling.

Process	Arrival time	burst time	priority	waiting time	completion time	TAT time
p1	0	6	3	6	12	12
p2	1	4	1	0	5	4
p3	2	7	4	10	19	10
p4	3	2	2	2	7	2
					avg= 4.5	avg =7

Gantt chart

p1	p2	p4	p1	p3
0	1	5	7	12	19

| diff | 1 | 4 | 2 | 5 | 7 |

4. Consider the following processes with arrival times and burst times, and the time quantum for Round Robin scheduling is 2 units: Calculate the average turnaround time using Round Robin scheduling.

Process	arrival time	burst time	waiting time	completion time	TAT time
P1	0	4	6	10	10
P2	1	5	11	14	13
P3	2	2	2	6	4
P4	3	3	9	13	10
				Avg =9.25	

Gantt chart

P1	P2	P3	P4	P1	P2	P4	P2
0	2	4	6	8	10	12	13	14