# LAB 5 OS

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Photo for part a included in GitHub.

b. Turnaround Time

Turnaround Time = Completion time - Arrival time
Since all processes arrived at time 0, Turnaround Time = Completion time

FCFS:
P1 = 10, P2 = 11, P3 = 13, P4 = 14, P5 = 19

SJF:
P1 = 19, P2 = 1, P3 = 4, P4 = 2, P5 = 9

Non-preemptive Priority:
P1 = 16, P2 = 1, P3 = 18, P4 = 19, P5 = 6

RR:
P1 = 16, P2 = 1, P3 = 10, P4 = 4, P5 = 18

c. Waiting Time

Waiting Time = Turnaround time - Burst time

FCFS:
P1 = 0, P2 = 10, P3 = 11, P4 = 12, P5 = 14

SJF:
P1 = 9, P2 = 0, P3 = 2, P4 = 1, P5 = 4

Non-preemptive Priority:
P1 = 6, P2 = 0, P3 = 16, P4 = 18, P5 = 1

RR:
P1 = 6, P2 = 0, P3 = 8, P4 = 3, P5 = 13

d. Minimum Average Waiting Time

FCFS: (0 + 10 + 11 + 12 + 14)/5 = 9.4
SJF: (9 + 0 + 2 + 1 + 4)/5 = 3.2
Non-preemptive Priority: (6 + 0 + 16 + 18 + 1)/5 = 8.2
RR: (6 + 0 + 8 + 3 + 13)/5 = 6
Therefore, the SJF scheduling algorithm results in the minimum average waiting time of 3.2 milliseconds.