

OSLab5 Questions

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| Time | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|----------|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|
| FCFS | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 5 | 5 | 5 | 5 | 5 |
| SJF | 2 | 4 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| NP Prio | 2 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 4 |
| RR (Q=1) | 1 | 2 | 3 | 4 | 5 | 1 | 3 | 5 | 1 | 5 | 1 | 5 | 1 | 5 | 1 | 1 | 1 | 1 | 1 |

- 1 What is the turnaround time of each process for each of the scheduling algorithms?**

| | FCFS | SJF | NP Prio | RR |
|----------------|------|-----|---------|----|
| P ₁ | 10 | 19 | 16 | 19 |
| P ₂ | 11 | 1 | 1 | 2 |
| P ₃ | 13 | 4 | 18 | 7 |
| P ₄ | 14 | 2 | 19 | 4 |
| P ₅ | 19 | 9 | 6 | 14 |

- 2 What is the waiting time of each of process for each of the scheduling algorithms?**

| | FCFS | SJF | NP Prio | RR |
|----------------|------|-----|---------|-----|
| P ₁ | 0 | 9 | 6 | 9 |
| P ₂ | 10 | 0 | 0 | 1 |
| P ₃ | 11 | 2 | 16 | 5 |
| P ₄ | 13 | 1 | 18 | 3 |
| P ₅ | 14 | 4 | 1 | 9 |
| Average | 9.6 | 3.2 | 8.2 | 5.4 |

- 3 Which of the algorithms results in the minimum average waiting time over all processes?**

Shortest Job First resulted in the lowest average wait time over all of the processes. This is due to there being some processes with very short burst times,

so we only have a few processes that wait a long time, rather than all of the processes wait a medium amount of time.