# بخش پنجم

* **Comparison**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Metric / Algorithm | **FCFS** | **SJF** | **Priority** | **Round Robin** |
| Waiting Time | **8.3** | **6** | **9.3** | **12** |
| Turnaround Time | **16** | **13.6** | **17** | **19** |
|  |  |  |  |  |
| Jobs | **3** | **3** | **3** | **3** |
| Burst Times | **10, 5, 8** | **10, 5, 8** | **10, 5, 8** | **10, 5, 8** |
|  |  |  | **priority = 1,3,2** | **Quantum = 2** |

* **FCFS**

|  |  |
| --- | --- |
| **Disadvantages** | **Advantages** |
| High average waiting time | Easy to implement (: |
| Can cause system to freeze | Nothing ((: |
| Non-preemptive! |  |

* **SJF**

|  |  |
| --- | --- |
| **Disadvantages** | **Advantages** |
| We don’t know Burst-Times in real life! | Preemptive (Also non-preemptive) |
| Starvation! | Minimum average waiting time |

* **Priority**

|  |  |
| --- | --- |
| **Disadvantages** | **Advantages** |
| Starvation for low priority | Preemptive (Also non-preemptive) |
| Need to implement Aging to avoid starvation |  |
| How to determine priority?! |  |

* **Round robin**

|  |  |
| --- | --- |
| **Disadvantages** | **Advantages** |
| Context switch overhead | Preemptive |
| Waste of good waiting time! | Fair-play |
|  | Low average time |
|  | No starvation |
|  | Fast response time |