|  |  |  |
| --- | --- | --- |
| A picture containing company name  Description automatically generated | Nombres: | |
| Fecha: 9 de noviembre de 2021 | Ciclo: 4 |
| **Sistemas Operativos** | |
| **Quiz # 12** | |

En un planificador de procesos tenemos la carga de trabajo mostrada en la tabla siguiente

|  |  |  |  |
| --- | --- | --- | --- |
| **Proceso** | **Prioridad** | **Llegada** | **CPU** |
| P1 | 1 | 1 | 5 |
| P2 | 0 | 0 | 4 |
| P3 | 3 | 3 | 2 |
| P4 | 2 | 4 | 3 |

Muestre los diagramas de Gantt correspondientes a cada uno de los siguientes algoritmos de planificación, y presente el tiempo de total de espera de cada proceso para cada uno de los algoritmos presentados.

1. **Algoritmo Round Robin (Quantum=3)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** |
| **P1** |  |  |  | **x** | **x** | **x** |  |  |  |  |  |  | **X** | **X** |  |  |  |  |  |  |  |  |  |
| **P2** | **x** | **x** | **X** |  |  |  |  |  | **X** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **P3** |  |  |  |  |  |  | **X** | **X** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **P4** |  |  |  |  |  |  |  |  |  | **X** | **X** | **X** |  |  |  |  |  |  |  |  |  |  |  |
| **cola** | **P2**  **3** | **P2**  **2** | **P2**  **1** | **P1**  **4** | **P1**  **3** | **P1**  **2** | **P3**  **1** | **P2**  **1** | **P4**  **3** | **P4**  **2** | **P4**  **1** | **P1**  **2** | **P1**  **1** |  |  |  |  |  |  |  |  |  |  |
|  | **P1**  **5** | **P1**  **5** | **P3**  **2** | **P3**  **2** | **P3**  **2** | **P2**  **1** | **P4**  **3** | **P1**  **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | **P2**  **1** | **P2**  **1** | **P2**  **1** | **P4**  **3** | **P1**  **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | **P4**  **3** | **P4**  **3** | **P1**  **2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **Proceso** | **TEsperaPromedio** |
| **P1** | **8** |
| **P2** | **5** |
| **P3** | **3** |
| **P4** | **5** |
| **PROMEDIO** | **5.25** |

1. **Algoritmo FCFS**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** |
| **P1** |  |  |  |  | **x** | **x** | **x** | **x** | **X** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **P2** | **x** | **x** | **x** | **X** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **P3** |  |  |  |  |  |  |  |  |  | **x** | **X** |  |  |  |  |  |  |  |  |  |  |  |  |
| **P4** |  |  |  |  |  |  |  |  |  |  |  | **x** | **x** | **x** |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **Proceso** | **TEspera** |
| **P1** | **4** |
| **P2** | **0** |
| **P3** | **6** |
| **P4** | **7** |
| **PROMEDIO** | **4.25** |