**NEW HORIZON COLLEGE OF ENGINEERING**

**DEPARTMENT OF MCA**

**OPERATING SYSTEM WITH UNIX PROGRAMMING (20MCA13) – I SEM MCA**

**ASSIGNMENT – 2**

1-3-2021

**Group – 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. No. | Question/Scheme | Marks | Level | Cos |
| 1. | Five processes arrive at time 0, in the order given, with the length of the CPU-burst time given in milliseconds.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Process | P1 | P2 | P3 | P4 | P5 | | Burst time | 10 | 29 | 3 | 7 | 12 |   Draw Gantt chart and calculate the average waiting time and average Turn around time for the given processes using First-come first served (FCFS). | 5 | L3 | CO1 |
| 2. | 5 batch jobs A, B, C, D and E arrive at the same time. They have running times of 10,6,2,4 and 8 mins. Their priorities are 3,5,2,1 and 4 respectively. For each of the following draw gantt chart and compute turn around time. Solve using SJF. | 5 | L3 | CO1 |
| 3. | Compute the average waiting time and average turn around time for the following scheduling policies. Solve using Round robin. Consider the workload for the system as given below:   |  |  |  | | --- | --- | --- | | Job | Arrival Time | Burst Time | | X | 0 | 10 | | Y | 1 | 3 | | Z | 2 | 3 | | A | 3 | 4 | | 5 | L3 | CO1 |
| 4 | Consider the following set of processes that arrive at time 0, with the length of the CPU-Burst time given in milliseconds. Use priority algorithm to calculate the average waiting time and avg turnaround time. Priority of P1, P2 and P3 is 1, 2, and 3. | 5 | L3 | CO1 |

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**Group – 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. No. | Question/Scheme | Marks | Level | Cos |
| 1. | Five processes arrive at time 0, in the order given, with the length of the CPU-burst time given in milliseconds.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Process | P1 | P2 | P3 | P4 | P5 | | Burst time | 10 | 29 | 3 | 7 | 12 | | 5 | L3 | CO1 |
| 2. | 5 batch jobs A, B, C, D and E arrive at the same time. They have running times of 10,6,2,4 and 8 mins. For each of the following draw gantt chart and compute turn around time. Solve using Round Robin. Quantum=4 ms. | 5 | L3 | CO1 |
| 3. | Compute the average waiting time and average turn around time for the following scheduling policies. Solve using FCFS. Consider the workload for the system as given below:   |  |  |  | | --- | --- | --- | | Job | Arrival Time | Burst Time | | X | 0 | 10 | | Y | 1 | 3 | | Z | 2 | 3 | | A | 3 | 4 | | 5 | L3 | CO1 |
| 4 | Consider the following set of processes that arrive at time 0, with the length of the CPU-Burst time given in milliseconds. Use priority algorithm to calculate the average waiting time and avg turnaround time. Priority of P1, P2 and P3 is 3,1, and 2. | 5 | L3 | CO1 |

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**OPERATING SYSTEM WITH UNIX PROGRAMMING (20MCA13) – I SEM MCA**

**ASSIGNMENT – 2**

1-3-2021

**Group – 3**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. No. | Question/Scheme | Marks | Level | Cos |
| 1. | Five processes arrive at time 0, in the order given, with the length of the CPU-burst time given in milliseconds.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Process | P1 | P2 | P3 | P4 | P5 | | Burst time | 10 | 29 | 3 | 7 | 12 |   Draw Gantt chart and calculate the average waiting time and average Turn around time for the given processes using Round Robin. | 5 | L3 | CO1 |
| 2. | 5 batch jobs A, B, C, D and E arrive at the same time. They have running times of 10,6,2,4 and 8 mins. For each of the following draw gantt chart and compute turn around time. Solve using First Come First Serve. Quantum=4 ms | 5 | L3 | CO1 |
| 3. | Compute the average waiting time and average turn around time for the following scheduling policies. Solve using SJF. Consider the workload for the system as given below:   |  |  |  | | --- | --- | --- | | Job | Arrival Time | Burst Time | | X | 0 | 10 | | Y | 1 | 3 | | Z | 2 | 3 | | A | 3 | 4 | | 5 | L3 | CO1 |
| 4 | Consider the following set of processes that arrive at time 0, with the length of the CPU-Burst time given in milliseconds. Use priority algorithm to calculate the average waiting time and avg turnaround time. Priority of P1, P2 and P3 is 2, 1, and 3. | 5 | L3 | CO1 |