

本科生实验报告

**实验课程: 操作系统原理实验**

**实验名称: 中断**

**专业名称: 计算机科学与技术（超算）**

**学生姓名: 黄玟瑜**

**学生学号: 19335074**

**实验地点: 中山大学广州校区东校园**

**实验成绩:**

**报告时间: 2021年4月7日**

|  |  |  |  |
| --- | --- | --- | --- |
| 100 | 10 | 100 | rest |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 7 | 0 | 1 | 2 | 0 | 3 | 0 | 4 | 2 | 3 | 0 | 3 | 2 |
| OPT | |  | | --- | | 7 | |  | |  | | |  | | --- | | 7 | | 0 | |  | | |  | | --- | | 7 | | 0 | | 1 | | |  | | --- | | 2 | | 0 | | 1 |   F | |  | | --- | | 2 | | 0 | | 1 | | |  | | --- | | 2 | | 0 | | 3 |   F | |  | | --- | | 2 | | 0 | | 3 | | |  | | --- | | 2 | | 4 | | 3 |   F | |  | | --- | | 2 | | 4 | | 3 | | |  | | --- | | 2 | | 4 | | 3 | | |  | | --- | | 2 | | 0 | | 3 |   F | |  | | --- | | 2 | | 0 | | 3 | | |  | | --- | | 2 | | 0 | | 3 | |
| LRU | |  | | --- | | 7 | |  | |  | | |  | | --- | | 7 | | 0 | |  | | |  | | --- | | 7 | | 0 | | 1 | | |  | | --- | | 2 | | 0 | | 1 |   F | |  | | --- | | 2 | | 0 | | 1 | | |  | | --- | | 2 | | 0 | | 3 |   F | |  | | --- | | 2 | | 0 | | 3 | | |  | | --- | | 4 | | 0 | | 3 |   F | |  | | --- | | 4 | | 0 | | 2 |   F | |  | | --- | | 4 | | 3 | | 2 |   F | |  | | --- | | 0 | | 3 | | 2 |   F | |  | | --- | | 0 | | 3 | | 2 | | |  | | --- | | 0 | | 3 | | 2 | |
| FIFO | |  | | --- | | 7 | |  | |  | | |  | | --- | | 7 | | 0 | |  | | |  | | --- | | 7 | | 0 | | 1 | | |  | | --- | | 2 | | 0 | | 1 |   F | |  | | --- | | 2 | | 0 | | 1 | | |  | | --- | | 2 | | 3 | | 1 |   F | |  | | --- | | 2 | | 3 | | 0 |   F | |  | | --- | | 4 | | 3 | | 0 |   F | |  | | --- | | 4 | | 2 | | 0 |   F | |  | | --- | | 4 | | 2 | | 3 |   F | |  | | --- | | 0 | | 2 | | 3 |   F | |  | | --- | | 0 | | 2 | | 3 | | |  | | --- | | 0 | | 2 | | 3 | |
| CLOCK | |  | | --- | | 7\* | |  | |  | | |  | | --- | | 7\* | | 0\* | |  | | |  | | --- | | 7\* | | 0\* | | 1\* | | |  | | --- | | 2\* | | 0 | | 1 |   F | |  | | --- | | 2\* | | 0\* | | 1 | | |  | | --- | | 2\* | | 0 | | 3\* |   F | |  | | --- | | 2\* | | 0\* | | 3\* | | |  | | --- | | 4\* | | 0 | | 3 |   F | |  | | --- | | 4\* | | 2\* | | 3 |   F | |  | | --- | | 4\* | | 2\* | | 3\* | | |  | | --- | | 4 | | 2 | | 0\* |   F | |  | | --- | | 3\* | | 2 | | 0\* |   F | |  | | --- | | 0\* | | 2\* | | 3\* | |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 0 | 2 | 2 | 1 | 7 | 6 | 7 | 0 | 1 | 2 |
| |  | | --- | | 1 | |  | |  | |  |   F | |  | | --- | | 1 | | 0 | |  | |  |   F | |  | | --- | | 1 | | 0 | | 2 | |  |   F | |  | | --- | | 1 | | 0 | | 2 | |  | | |  | | --- | | 1 | | 0 | | 2 | |  | | |  | | --- | | 1 | | 0 | | 2 | | 7 |   F | |  | | --- | | 1 | | 6 | | 2 | | 7 |   F | |  | | --- | | 1 | | 6 | | 2 | | 7 | | |  | | --- | | 1 | | 6 | | 0 | | 7 |   F | |  | | --- | | 1 | | 6 | | 0 | | 7 | | |  | | --- | | 1 | | 2 | | 0 | | 7 |   F |
| 0 | 3 | 0 | 4 | 5 | 1 | 5 | 2 | 4 | 5 | 6 |
| |  | | --- | | 1 | | 2 | | 0 | | 7 | | |  | | --- | | 1 | | 2 | | 0 | | 3 |   F | |  | | --- | | 1 | | 2 | | 0 | | 3 | | |  | | --- | | 4 | | 2 | | 0 | | 3 |   F | |  | | --- | | 4 | | 5 | | 0 | | 3 |   F | |  | | --- | | 4 | | 5 | | 0 | | 1 |   F | |  | | --- | | 4 | | 5 | | 0 | | 1 | | |  | | --- | | 4 | | 5 | | 2 | | 1 |   F | |  | | --- | | 4 | | 5 | | 2 | | 1 | | |  | | --- | | 4 | | 5 | | 2 | | 1 | | |  | | --- | | 4 | | 5 | | 2 | | 6 |   F |
| 7 | 6 | 7 | 2 | 4 | 2 | 7 | 3 | 3 | 2 | 3 |
| |  | | --- | | 4 | | 5 | | 7 | | 6 |   F | |  | | --- | | 4 | | 5 | | 7 | | 6 | | |  | | --- | | 4 | | 5 | | 7 | | 6 | | |  | | --- | | 2 | | 5 | | 7 | | 6 |   F | |  | | --- | | 2 | | 4 | | 7 | | 6 |   F | |  | | --- | | 2 | | 4 | | 7 | | 6 | | |  | | --- | | 2 | | 4 | | 7 | | 6 | | |  | | --- | | 2 | | 4 | | 7 | | 3 |   F | |  | | --- | | 2 | | 4 | | 7 | | 3 | | |  | | --- | | 2 | | 4 | | 7 | | 3 | | |  | | --- | | 2 | | 4 | | 7 | | 3 | |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 0 | 2 | 2 | 1 | 7 | 6 | 7 | 0 | 1 | 2 |
| |  | | --- | | 1 | |  | |  | |  |   F | |  | | --- | | 1 | | 0 | |  | |  |   F | |  | | --- | | 1 | | 0 | | 2 | |  |   F | |  | | --- | | 1 | | 0 | | 2 | |  | | |  | | --- | | 1 | | 0 | | 2 | |  | | |  | | --- | | 1 | | 0 | | 2 | | 7 |   F | |  | | --- | | 6 | | 0 | | 2 | | 7 |   F | |  | | --- | | 6 | | 0 | | 2 | | 7 | | |  | | --- | | 6 | | 0 | | 2 | | 7 | | |  | | --- | | 6 | | 1 | | 2 | | 7 |   F | |  | | --- | | 6 | | 1 | | 2 | | 7 | |
| 0 | 3 | 0 | 4 | 5 | 1 | 5 | 2 | 4 | 5 | 6 |
| |  | | --- | | 6 | | 1 | | 0 | | 7 |   F | |  | | --- | | 6 | | 1 | | 0 | | 3 |   F | |  | | --- | | 6 | | 1 | | 0 | | 3 | | |  | | --- | | 4 | | 1 | | 0 | | 3 |   F | |  | | --- | | 4 | | 5 | | 0 | | 3 |   F | |  | | --- | | 4 | | 5 | | 1 | | 3 |   F | |  | | --- | | 4 | | 5 | | 1 | | 3 | | |  | | --- | | 4 | | 5 | | 1 | | 2 |   F | |  | | --- | | 4 | | 5 | | 1 | | 2 | | |  | | --- | | 4 | | 5 | | 1 | | 2 | | |  | | --- | | 6 | | 5 | | 1 | | 2 |   F |
| 7 | 6 | 7 | 2 | 4 | 2 | 7 | 3 | 3 | 2 | 3 |
| |  | | --- | | 6 | | 7 | | 1 | | 2 |   F | |  | | --- | | 6 | | 7 | | 1 | | 2 | | |  | | --- | | 6 | | 7 | | 1 | | 2 | | |  | | --- | | 6 | | 7 | | 1 | | 2 | | |  | | --- | | 6 | | 7 | | 4 | | 2 |   F | |  | | --- | | 6 | | 7 | | 4 | | 2 | | |  | | --- | | 6 | | 7 | | 4 | | 2 | | |  | | --- | | 6 | | 7 | | 4 | | 3 |   F | |  | | --- | | 6 | | 7 | | 4 | | 3 | | |  | | --- | | 2 | | 7 | | 4 | | 3 |   F | |  | | --- | | 2 | | 7 | | 4 | | 3 | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | 0 |  |  |  |  | 5 |  |  |  |  | 10 |  |  |  |  | 15 |  |  |  |  | 20 |
| **FCFS** | A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **RR，q=1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **RR，q=4** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **SPN** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **SPT** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **HRRN** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **反馈q=1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **反馈q=2i** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 调度策略比较 | | | | | | |
| 进程 | A | B | C | D | E |  |
| 到达时间 | 0 | 1 | 3 | 9 | 12 |  |
| 服务时间（Ts） | 3 | 5 | 2 | 5 | 5 | 平均值 |
| **FCFS** | | | | | | |
| 完成时间 | 3 | 8 | 10 | 15 | 20 |  |
| 周转时间（Tr） | 3 | 7 | 7 | 6 | 8 | 6.20 |
| Tr/ Ts | 1.00 | 1.40 | 3.50 | 1.20 | 1.60 | 1.74 |
| **RR，q=1** | | | | | | |
| 完成时间 | 6 | 11 | 8 | 18 | 20 |  |
| 周转时间（Tr） | 6 | 10 | 5 | 9 | 8 | 7.6 |
| Tr/ Ts | 2 | 2 | 2.5 | 1.8 | 1.6 | 1.98 |
| **RR，q=4** | | | | | | |
| 完成时间 | 3 | 10 | 9 | 19 | 20 |  |
| 周转时间（Tr） | 3 | 9 | 6 | 10 | 8 | 7.2 |
| Tr/ Ts | 1 | 1.8 | 3 | 2 | 1.6 | 1.88 |
| **SPN** | | | | | | |
| 完成时间 | 3 | 10 | 5 | 15 | 20 |  |
| 周转时间（Tr） | 3 | 9 | 2 | 6 | 8 | 5.6 |
| Tr/ Ts | 1 | 1.8 | 1 | 1.2 | 1.6 | 1.32 |
| **SPT** | | | | | | |
| 完成时间 | 3 | 10 | 5 | 15 | 20 |  |
| 周转时间（Tr） | 3 | 9 | 2 | 6 | 8 | 5.6 |
| Tr/ Ts | 1 | 1.8 | 1 | 1.2 | 1.6 | 1.32 |
| **HRRN** | | | | | | |
| 完成时间 | 3 | 8 | 10 | 15 | 20 |  |
| 周转时间（Tr） | 3 | 7 | 7 | 6 | 8 | 6.20 |
| Tr/ Ts | 1.00 | 1.40 | 3.50 | 1.20 | 1.60 | 1.74 |
| **反馈q=1** | | | | | | |
| 完成时间 | 7 | 11 | 6 | 18 | 20 |  |
| 周转时间（Tr） | 7 | 10 | 3 | 9 | 8 | 7.4 |
| Tr/ Ts | 2.333333333 | 2 | 1.5 | 1.8 | 1.6 | 1.846666667 |
| **反馈q=2i** | | | | | | |
| 完成时间 | 4 | 9 | 8 | 16 | 20 |  |
| 周转时间（Tr） | 4 | 8 | 5 | 7 | 8 | 6.4 |
| Tr/ Ts | 1.333333333 | 1.6 | 2.5 | 1.4 | 1.6 | 1.686666667 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | 0 |  |  |  |  | 5 |  |  |  |  | 10 |  |  |  |  | 15 |  |  |  |  | 20 |
| **RR，q=1** | A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | 20 |  |  |  |  | 25 |  |  |  |  | 30 |  |  |  |  | 35 |  |  |  |  | 40 |
| **RR，q=1** | A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | 40 |  |  |  |  | 45 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **RR，q=1** | A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 | 39 | 42 | 45 | 48 | 510 | 54 | 57 | 60 |
| **优先级** | A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 | 39 | 42 | 45 | 48 | 510 | 54 | 57 | 60 |
| **FCFS** | A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 | 39 | 42 | 45 | 48 | 510 | 54 | 57 | 60 |
| **SPN** | A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **RR，q=1** | | | | | | |
| 进程 | A | B | C | D | E |  |
| 完成时间 (min） | 45 | 34 | 14 | 27 | 41 |  |
| 周转时间（Tr） | 45 | 34 | 14 | 27 | 41 | 32.2 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **FCFS** | | | | | | |
| 进程 | | A | B | C | D | E |  |
| 完成时间 (min） | | 15 | 24 | 27 | 33 | 45 |  |
| 周转时间（Tr） | | 15 | 24 | 27 | 33 | 45 | 28.8 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **SPN** | | | | | | |
| 进程 | A | B | C | D | E |  |
| 完成时间 (min） | 45 | 18 | 3 | 9 | 30 |  |
| 周转时间（Tr） | 45 | 18 | 3 | 9 | 30 | 21 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **优先级** | | | | | | |
| 进程 | A | B | C | D | E |  |
| 完成时间 (min） | 36 | 9 | 39 | 45 | 21 |  |
| 周转时间（Tr） | 36 | 9 | 39 | 45 | 21 | 30 |