



CSE316\_Quiz\_RealTimeScheduling  
7 Questions

NAME : \_\_\_\_\_

CLASS : \_\_\_\_\_

DATE : \_\_\_\_\_

1. Rate monotonic scheduling is

- |                            |                                       |                            |  |
|----------------------------|---------------------------------------|----------------------------|--|
| <input type="checkbox"/> A | A type of memory management technique | <input type="checkbox"/> B | A type of file system                                      |
| <input type="checkbox"/> C | A type of network protocol            | <input type="checkbox"/> D | A scheduling algorithm used in real-time operating systems |

2. In rate monotonic scheduling the priority of the tasks

- |                            |                                  |                            |  |
|----------------------------|----------------------------------|----------------------------|--|
| <input type="checkbox"/> A | depends on the task's complexity | <input type="checkbox"/> B | is directly proportional to their periods  |
| <input type="checkbox"/> C | is not related to their periods  | <input type="checkbox"/> D | is inversely proportional to their periods |

3. In early deadline first scheduling the priority of the tasks

- |                            |   |                            |   |
|----------------------------|---|----------------------------|---|
| <input type="checkbox"/> A | is not affected by the absolute deadline of the tasks           | <input type="checkbox"/> B | is randomly assigned regardless of the absolute deadline of the tasks |
| <input type="checkbox"/> C | is inversely proportional to the absolute deadline of the tasks | <input type="checkbox"/> D | is directly proportional to the absolute deadline of the tasks        |

4. Consider a set of three real-time tasks: Task A, Task B, and Task C. Each task has a specific execution time and deadline as follows:

Task A: Execution Time = 4 time units, Deadline = 10 time units

Task B: Execution Time = 3 time units, Deadline = 7 time units

Task C: Execution Time = 5 time units, Deadline = 15 time units

Assuming that the system starts at time 0, use the Early Deadline First (EDF) scheduling algorithm to determine the order in which these tasks will be executed.

- |                            |                        |                            |                        |
|----------------------------|------------------------|----------------------------|------------------------|
| <input type="checkbox"/> A | Task B, Task A, Task C | <input type="checkbox"/> B | Task C, Task A, Task B |
| <input type="checkbox"/> C | Task B, Task C, Task A | <input type="checkbox"/> D | Task A, Task B, Task C |

5. Consider a set of four real-time tasks: Task A, Task B, Task C, and Task D. Each task has a specific period and execution time as follows:

Task A: Period = 10 time units, Execution Time = 3 time units

Task B: Period = 15 time units, Execution Time = 4 time units

Task C: Period = 20 time units, Execution Time = 2 time units

Task D: Period = 25 time units, Execution Time = 5 time units

Determine whether these tasks are schedulable using the Rate Monotonic Scheduling (RMS) algorithm. If not then which task will miss the deadline.

- ☐ A No, not all tasks are schedulable using the RMS algorithm. Task D will miss its deadline.
- ☐ B Only Task A and Task B are schedulable using the RMS algorithm.
- ☐ C No, not all tasks are schedulable using the RMS algorithm. Task C will miss its deadline.
- ☐ D No, not all tasks are schedulable using the RMS algorithm. Task A will miss its deadline.

6. Which is not the property of multi-level feedback queue scheduling?

- ☐ A It allows priority
- ☐ B It allows preemption
- ☐ C It allows starvation
- ☐ D It allows aging

7. Which are the properties of Multi-level feedback queue scheduling.

- ☐ A It prevents starvation by aging processes
- ☐ B It uses different scheduling algorithms for different queues
- ☐ C It allows processes to move between queues
- ☐ D It reduces CPU utilization

### Answer Key

- |      |      |            |      |
|------|------|------------|------|
| 1. d | 2. d | 3. c       | 4. a |
| 5. a | 6. c | 7. c, b, a |      |