Worksheet 6.3: CPU Scheduling, Multiple-Choice Questions

Choose the right answer. There is only **one** correct answer.

1. Which of the following is (are) true about the difference between the Round Robin (RR) and the Shortest-Job-First (SJF) scheduling algorithms?
   a. RR minimizes the average waiting time, but SJF does not.
   b. SJF minimizes the average waiting time, but RR does not.
   c. RR may cause starvation, but SJF does not cause starvation.
   d. SJF may cause starvation, but RR does not cause starvation.
   e. Both a and d are correct **f. Both b and d are correct.** g. Both b and c are correct.

2. Which of the following is true about multilevel-feedback-queue scheduling?
   a. If a process uses its entire time quantum, it is moved to a higher priority level.
   b. If a process uses its entire time quantum, it is moved to a lower priority level.
   c. If a process spends a lot of time at a low-priority level without getting the CPU, it is moved to a higher priority level.
   d. If a process spends a lot of time at a high-priority level without getting the CPU, it is moved to a lower priority level.
   e. Both b and d are true. f. Both a and c are true. **g. Both b and c are true**

3. What's the difference between Rate-Monotonic Scheduling (RM) and Earliest-Deadline-First (EDF) Scheduling?
   a. EDF is preemptive, while RM is not.
   b. EDF assigns priorities while RM does not.
   c. EDF is more likely to meet the deadlines.
   d. EDF uses fixed priorities while RM dynamically adjusts priorities.
   e. Both c and d are correct. f. Both a and c are correct. g. Both a and d are correct.

4. How do **processor affinity** and **load balancing** interact in a multi-processor environment?
   a. Satisfying processor affinity always makes the load less balanced.
   b. Processor affinity and load balancing always conflict with each other.
   c. Improving load balancing may conflict with the processor affinity requirement in some cases.
   d. Processor affinity and load balancing are totally unrelated and can be handled independently.
   e. Improving load balancing always satisfies the processor affinity requirement.