Unit 5 - Week 3: Pipeline Scheduling Techniques

**Assignment 3**

The due date for submitting the assignment has passed. An extension may be granted upon request. Please submit the assignment by the new due date.

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1. Loop unwrapping rule is _____.
   - a. Increasing register pressure
   - b. Decreasing register pressure
   - c. Increasing control hazards
   - d. Decreasing control hazards
   **Answer:** a.

2. In Lamport's algorithm, register renaming is done using _____.
   - a. Concept scheduling
   - b. Reservation stations
   - c. Register renaming
   - d. Consistency checking
   **Answer:** c.

3. Suppose a transaction store across the same address. If a program order the last appears before the store, interchanging from in execution order can create _____.
   - a. Deadlock
   - b. Conflict
   - c. Stale data
   - d. 1234
   **Answer:** c.

4. Which of the following statements is correct?
   - a. II can be scheduled before III
   - b. III can be scheduled before II
   - c. III can be scheduled before I
   - d. None of the above
   **Answer:** a.

5. Consider an in-order pipeline of the cycle value that supports operand forwarding and executes the following test vectors:
   - i. 0, 1, 2, 3, 4, 5
   - ii. 0, 1, 2, 3, 4, 5
   - iii. 0, 1, 2, 3, 4, 5
   - iv. 0, 1, 2, 3, 4, 5
   **Answer:** a.

6. Consider an instruction pipeline of an instruction with 4 stages: I, II, III, and IV. The following table shows the delay time for each stage.
<table>
<thead>
<tr>
<th>Stage</th>
<th>Delay Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
</tr>
<tr>
<td>II</td>
<td>2</td>
</tr>
<tr>
<td>III</td>
<td>3</td>
</tr>
<tr>
<td>IV</td>
<td>4</td>
</tr>
</tbody>
</table>
   **Answer:** a.

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**Feedback Form**

**Course Outline**

**Course Objectives**

**Introduction**

**Week 1:** Basics Computer Organization

**Week 2:** Dynamic Scheduling Techniques

**Week 3:** Pipeline Scheduling Techniques

**Week 4:** Superscalar and Symmetric Multiprocessor

**Week 5:** Parallel Processor Design

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**Assignments:**

**Assignment 3**

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**Announcements**

**About the Course**

**Ask a Question**

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**Moodle**