IT Skill Test GIC Myanmar

Duration: 30 Minutes *Total Questions: 8*

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1. You are working on a database for a large e-commerce platform. You need to find all customers who have placed orders but have not yet received their shipments. Which SQL query would be most appropriate for this scenario?

A. SELECT c.customer_id, c.name FROM customers c INNER JOIN orders o ON c.customer_id = o.customer_id WHERE o.order_status = 'Shipped';

B. SELECT c.customer_id, c.name FROM customers c LEFT OUTER JOIN orders o ON c.customer_id = o.customer_id LEFT OUTER JOIN shipments s ON o.order_id = s.order_id WHERE o.order_id IS NOT NULL AND s.shipment_id IS NULL;

C. SELECT c.customer_id, c.name FROM customers c, orders o WHERE c.customer_id = o.customer_id AND o.order_status != 'Shipped';

D. SELECT c.customer_id, c.name FROM customers c FULL OUTER JOIN orders o ON c.customer_id = o.customer_id WHERE o.order_status IS NULL;

2. In a self-join operation, what is the primary purpose of using table aliases?

A. To improve query performance

B. To distinguish between multiple instances of the same table

C. To create temporary tables

D. To enforce referential integrity

3. You need to generate a report showing all departments and their employees, including departments with no employees. Which type of join should you use?

A. INNER JOIN

B. CROSS JOIN

C. LEFT OUTER JOIN

D. RIGHT OUTER JOIN

4. Consider a table 'employees' with columns (emp_id, name, manager_id). You need to write a query to find all employees who are also managers. Which of the following SQL queries would accomplish this task?

A. SELECT e1.emp_id, e1.name FROM employees e1 JOIN employees e2 ON e1.emp_id = e2.manager_id;

B. SELECT DISTINCT e1.emp_id, e1.name FROM employees e1 JOIN employees e2 ON e1.emp_id = e2.manager_id;

C. SELECT e1.emp_id, e1.name FROM employees e1 WHERE e1.emp_id IN (SELECT manager_id FROM employees);

D. SELECT e1.emp_id, e1.name FROM employees e1 FULL OUTER JOIN employees e2 ON e1.emp_id = e2.manager_id WHERE e2.manager_id IS NOT NULL;

5. You have two tables: 'orders' and 'customers'. You want to list all orders along with customer information, including customers who haven't placed any orders. Which join type should you use?

A. INNER JOIN

B. LEFT OUTER JOIN

C. RIGHT OUTER JOIN

D. FULL OUTER JOIN

6. What is the primary risk associated with using a Cartesian product (CROSS JOIN) in a production environment?

A. It may violate data integrity constraints

B. It can produce an extremely large result set, potentially causing performance issues

C. It always returns duplicate rows

D. It requires more complex SQL syntax

7. You're debugging a query that's supposed to return all departments and their employees, but it's not showing departments without employees. The current query is:

```
SELECT d.dept_name, e.emp_name
FROM departments d
JOIN employees e ON d.dept_id = e.dept_id;
```

How would you modify this query to include all departments, even those without employees?

A. Change JOIN to FULL OUTER JOIN

B. Change JOIN to LEFT OUTER JOIN

C. Change JOIN to RIGHT OUTER JOIN

D. Add WHERE e.emp_name IS NULL

8. In a complex query involving multiple joins, you notice that the result set includes unexpected NULL values. Which of the following could be a potential cause?

A. Using too many INNER JOINs

B. Not using enough WHERE clauses

C. Mixing INNER and OUTER JOINs incorrectly

D. Using subqueries instead of joins