Question 5 [5 Marks]

Given the following schema:

```
    employees(emp-id, first-name, last-name, hire-date, dept-id, salary)

    departments(dept-id, dept-name, manager-id, location-id)
```

You want to display the last names and hire dates of all latest hires in their respective departments in the location ID 1700. You issue the following query:

```
SQL> SELECT last-name, hire-date

    FROM employees

 WHERE (dept-id, hire-date) IN ( SELECT dept-id, MAX(hire-date)

                FROM employees JOIN departments USING(dept-id)

                                    WHERE location-id = 1700

                                    GROUP BY dept-id);
```

What is the outcome?

A It executes but does not give the correct result.

✓ It executes and gives the correct result.

C It generates an error because of pairwise comparison.

D It generates an error because the GROUP BY clause cannot be used with table joins in a subquery

Explanation

The given query uses below inner query.

```
SELECT dept-id, MAX(hire-date)

     FROM employees JOIN departments USING(dept-id)

     WHERE location-id = 1700

     GROUP BY dept-id
```

The inner query produces last max hire-date in every department located at location id 1700.

The outer query simply picks all pairs of inner query. Therefore, the query produces correct result.

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```
SELECT last-name, hire-date

     FROM employees

     WHERE (dept-id, hire-date) IN

     (Inner-Query);
```