Question 4 [5 Marks]

Consider the table employee(empId, name, department, salary) and the two queries Q1 ,Q2 below. Assuming that department 5 has more than one employee, and we want to find the employees who get higher salary than anyone in the department 5, which one of the statements is TRUE for any arbitrary employee table?

```
Q1 : Select e.empId

     From employee e

     Where not exists

        (Select * From employee s where s.department = “5” and


                                          s.salary >=e.salary)

Q2 : Select e.empId

     From employee e

     Where e.salary > Any

    (Select distinct salary From employee s Where s.department
 = “5”)
```

Q1 is the correct query

B Q2 is the correct query

Both Q1 and Q2 produce the same answer.

D Neither Q1 nor Q2 is the correct query

Explanation

First note that they asked for **Anyone (= All)** not for **Any**.
Here, **Everyone** means all of the group.
Anyone means all or any part of the group.

Let the employee(empId, name, department, salary) have the following instance.

empId name department salary

```
e1 ------- A-------- 1---------10000

e2 -------B ------- 5 ---------5000

e3 -------C ------- 5----------7000

e4 -------D ------- 2----------2000

e5 -------E ------- 3----------6000
```

Now the actual result should contain empId : e1 , e3 and e5 (because they have salary greater than anyone employee in the department '5')

Now Q1 :

Note : EXISTS(empty set) gives FALSE, and NOT EXISTS(empty set) gives TRUE.

```
Select e.empId

From employee e

Where not exists

(Select * From employee s where s.department = “5” and

s.salary >=e.salary)
```

Q1 will result only empId e1.

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whereas Q2 :

```
Select e.empId

From employee e

Where e.salary > Any

(Select distinct salary From employee s Where s.department = “5”)
```

Q2 will result empId e1, e3 and e5.

Hence Q1 is the correct query.

Note that if we use **ALL** in place of **Any** in second query then this will be correct.

Option (A) is correct.

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