

SQL SERVER Joins Interview Questions & Answers

SET 1

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The question we will discuss is the most common question in SQL and MSBI Interviews; normally they will provide you two data sets and will say apply different kinds of joins and give me number of rows we will get after each join operation.

Let's say we have 2 tables named TestJoinsT1 and TestJoinsT2. Both tables have only one ID column.

Sample Script

```
CREATE TABLE [TestJoinsT1]
(
    ID INT
)
GO
INSERT INTO [TestJoinsT1] VALUES (1),(NULL),(1),(NULL)

CREATE TABLE [TestJoinsT2]
(
    ID INT
)
GO
INSERT INTO [TestJoinsT2] VALUES (2),(NULL),(2),(NULL)
```

Please check out the data from both the tables.

```
SELECT * FROM [TestJoinsT1]
```

SELECT * FROM [dbo].[TestJoinsT1]

	ID
1	1
2	NULL
3	1
4	NULL

SELECT * FROM [TestJoinsT2]

SELECT * FROM [dbo].[TestJoinsT2]

	ID
1	2
2	NULL
3	2
4	NULL

Now provide output of following queries.

Query 1

```
SELECT t1.ID , t2.ID
FROM [dbo].[TestJoinsT1] t1 INNER JOIN [dbo].[TestJoinsT2] t2
ON t1.ID = t2.ID
```

Answer - Since we don't have any common rows between these columns we will get nothing as the output. Please note that NULL will not match with NULL. Please check out the below.

ID	ID

Query 2

```
SELECT t1.ID , t2.ID
FROM [dbo].[TestJoinsT1] t1 LEFT OUTER JOIN [dbo].[TestJoinsT2] t2
ON t1.ID = t2.ID
```

Answer - Since we don't have any common rows between these columns so we will get all the rows from Left table with NULL for the other table. Please check out the below.

ID	ID
1	NULL
NULL	NULL
1	NULL
NULL	NULL

Query 3

```
SELECT t1.ID , t2.ID
FROM [dbo].[TestJoinsT1] t1 RIGHT OUTER JOIN [dbo].[TestJoinsT2] t2
ON t1.ID = t2.ID
```

Answer - Since we don't have any common rows between these columns so we will get all the rows from right table with NULL for the other table. Please check out the below.

ID	ID
NULL	2
NULL	NULL
NULL	2
NULL	NULL

Query 4

```
SELECT t1.ID , t2.ID
FROM [dbo].[TestJoinsT1] t1 FULL OUTER JOIN [dbo].[TestJoinsT2] t2
ON t1.ID = t2.ID
```

Answer - Here we will get 8 rows, 4 from left join and 4 from right join. We don't have any common rows so we will 0 rows from Inner Join. Please check out the output below.

ID	ID
1	NULL
NULL	NULL
1	NULL
NULL	NULL
NULL	2
NULL	NULL
NULL	2
NULL	NULL