Using Null

1.

List the teachers who have NULL for their department.

Why we cannot use =

select name from teacher where dept is NULL

2.

Note the INNER JOIN misses the teachers with no department and the departments with no teacher.

SELECT teacher.name, dept.name
FROM teacher INNER JOIN dept
ON (
teacher.dept=dept.id)
where dept is not Null

3.

Use a different JOIN so that all teachers are listed.

select teacher.name, dept.name from teacher left join dept on (teacher.dept=dept.id)

4.

Use a different JOIN so that all departments are listed.

SELECT <u>teacher.name</u>, <u>dept.name</u> FROM teacher RIGHT JOIN dept

ON (

teacher.dept=dept.id)

5.

Use COALESCE to print the mobile number. Use the number '07986 444 2266' if there is no number given. **Show teacher name and mobile number or '07986 444 2266'**

SELECT <u>teacher.name</u>, COALESCE(teacher.mobile,'07986 444 2266') FROM teacher

6.

Use the COALESCE function and a LEFT JOIN to print the teacher **name** and department name. Use the string 'None' where there is no department.

SELECT <u>teacher.name</u>, COALESCE(<u>dept.name</u>,'None') FROM teacher LEFT JOIN dept ON teacher.dept = <u>dept.id</u>

7.

Use COUNT to show the number of teachers and the number of mobile phones.

select count(name), count(mobile) from teacher

8.

Use COUNT and GROUP BY **dept.name** to show each department and the number of staff. Use a RIGHT JOIN to ensure that the Engineering department is listed.

SELECT <u>dept.name</u>, COUNT(teacher.dept) FROM teacher RIGHT JOIN dept ON <u>dept.id</u> = teacher.dept GROUP BY <u>dept.name</u>

9.

Use CASE to show the **name** of each teacher followed by 'Sci' if the teacher is in **dept** 1 or 2 and 'Art' otherwise.

```
select name, CASE WHEN dept IN (1,2) THEN 'Sci'
ELSE 'Art'
END
FROM teacher
```

10.

Use CASE to show the name of each teacher followed by 'Sci' if the teacher is in dept 1 or 2, show 'Art' if the teacher's dept is 3 and 'None' otherwise.

```
select name, CASE WHEN dept IN (1,2) THEN 'Sci' when dept = 3 THEN 'Art' else 'None' END FROM teacher
```

QUIZ:

1. Select the code which uses an outer join correctly.

```
SELECT teacher.name, dept.name FROM teacher LEFT OUTER JOIN dept ON (teacher.dept = dept.id)
```

2. Select the correct statement that shows the name of department which employs Cutflower -

```
SELECT dept.name FROM teacher JOIN dept ON (dept.id = teacher.dept) WHERE teacher.name = 'Cutflower'
```

3. Select out of following the code which uses a JOIN to show a list of all the departments and number of employed teachers

```
SELECT dept.name, COUNT(teacher.name) FROM teacher RIGHT JOIN dept ON dept.id = teacher.dept GROUP BY dept.name
```

4. Using SELECT name, dept, COALESCE(dept, 0) AS result FROM teacher On teacher table will:

display 0 in result column for all teachers without department

5. Query:

```
SELECT name,

CASE WHEN phone = 2752 THEN 'two'

WHEN phone = 2753 THEN 'three'

WHEN phone = 2754 THEN 'four'

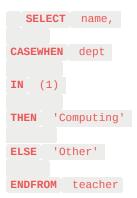
END AS digit

FROM teacher
```

shows following 'digit':

'four' for Throd

6. Select the result that would be obtained from the following code:



Shrivell	Computing
Throd	Computing
Splint	Computing
Spiregrain	Other
Cutflower	Other
Deadyawn	Other