Q.1 PROFESSOR TABLE

QUERIES:

CREATE DATABASE UNIVERSITY;

CREATE TABLE PROFESSOR(

SIN INT PRIMARY KEY,

NAME VARCHAR (20),

AGE INT,

MOBILE_NO INT);

OUTPUT:

```
mysql> DESC PROFESSOR;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| SIN        | int         | NO   | PRI | NULL    |       |
| NAME       | varchar(20) | YES  |     | NULL    |       |
| AGE        | int         | YES  |     | NULL    |       |
| MOBILE_NO  | int         | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
4 rows in set (0.01 sec)

mysql> SELECT * FROM PROFESSOR;
+-----+------+------+------------+
| SIN | NAME | AGE  | MOBILE_NO  |
+-----+------+------+------------+
|  10 | ABC  |   45 | 1234567890 |
|  20 | XYZ  |   45 | 1478523691 |
|  30 | PQR  |   45 |  369852147 |
+-----+------+------+------------+
3 rows in set (0.06 sec)

mysql>
```

PRIMARY KEY: SIN

CANDIDATE KEY: SIN, MOBILE_NO.

SUPER KEY:

 SIN, MOBILE_NO, {SIN, MOBILE_NO}, {SIN, NAME}, {SIN, AGE} {MOBILE_NO, NAME},
{MOBILE_NO, AGE}

 FOREIGN KEY BETWEEN PROFESSOR AND COURSE: SIN.

Q. COURSE TABLE

QUERIES:

CREATE TABLE COURSE(

COURSE_ID INT PRIMARY KEY,

COURSE NAME VARCHAR (20),

DURATION VARCHAR (20));

OUTPUT:

```
mysql> DESC COURSE;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| COURSE_ID   | int         | NO   | PRI | NULL    |       |
| COURSE_NAME | varchar(20) | YES  |     | NULL    |       |
| DURATION    | varchar(20) | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql>
```

PRIMARY KEY: COURSE_ID.

CANDIDATE KEY: COURSE_ID

SUPER KEY: COURSE_ID , {COURSE_ID, COURSE_NAME}, {COURSE_ID, DURATION}.