Module 14: Python Database Connectivity

Database Servers and Client:

- **Database** is a repository of data.
- **Data** is stored permanently in the **Database Server** and we can retrieve later whenever needed by using query commands.
- **Database client** is used to retrieve data from tables and give it to the user.

sqlite3:

- sqlite3 is a Python module that enables to access SQLite database.

Module 14: Python Database Test

Q1) What is the result assuming the table "emp" does not exists?

```
from sqlite3 import *
con = connect('test.db')
cursor = con.cursor()
sql = "create table emp(eid int primary key, ename varchar(10))"
con.close()
```

Options:

A. Table emp is created.
B. Table emp is created with 1 empty row.
C. Error as program is incomplete.
D. Nothing is added to the database.

Solution:

Q2) What is the result assuming the table "emp" is empty?

```
from sqlite3 import *
con = connect('test.db')
cursor = con.cursor()
sql = "insert into emp values(10, 'Amit')"
cursor.execute(sql)
con.close()
```

Options:

A. 1 row is added to the table.
B. Error as commit is not performed.
C. Error as SQLite does not support insert operation.
D. nothing is added to the table

Solution:

Q3) What is the result assuming the table emp is empty?

```
from sqlite3 import *
con = connect('test.db')
cursor = con.cursor()
sql = "insert into emp values(30, 'Modi')"
cursor.execute(sql)
con.rollback()
sql = "insert into emp values(40, 'Amit')"
cursor.execute(sql)
con.commit()
con.close()
```

Options:

A. Both rows are inserted.

B. Only one row → 40 Amit is added to table.

C. Only one row → 30 Modi is added to table.

D. Nothing is added to the table.

Solution:

Q4) What is the result assuming table emp contains: eid-ename
10-Amit, 20-Rahul & 40-Amar

```
from sqlite3 import *
con = connect('test.db')
cursor = con.cursor()
cursor.execute("select * from emp")
row = cursor.fetchone()
print(row, end = ' ')
row = cursor.fetchone()
print(row, end = ' ')
con.close()
```

Options:

A. (20, 'Rahul'), (40, 'Amar')

B. (10, 'Amit'), (20, 'Rahul'), (40, 'Amar')

C. (20, 'Rahul') (10, 'Amit')

D. (10, 'Amit') (20, 'Rahul')

Solution: