

Databases

Sample theory questions

Exercise 1. The SQL command

```
CREATE TABLE T1
(A1          CHAR(5) NOT NULL,
 A2          INTEGER UNIQUE NOT NULL,
 A3          CHAR(5) NOT NULL,
 PRIMARY KEY (A1));
```

- A) is incorrect, because in this case UNIQUE and NOT NULL are conflicting with each other
- B) is correct provided that a single value is stored in A2
- C) none of the answers is correct
- D) is redundant since, in this case, UNIQUE and NOT NULL have the same meaning
- E) is correct

Exercise 2. In SQL, to check if an attribute contains a NULL value

- A) none of the answers is correct
- B) it is not possible to check this condition
- C) the LIKE operator should be used
- D) the IS operator should be used
- E) the UNDEFINED keyword should be used

Exercise 3. The following sequence of instructions:

```
PreparedStatement prstmt=conn.prepareStatement("UPDATE FAP SET
    Q=Q+? WHERE IIId=?");
int Q=20;
String IIId="I1";
prstmt.setInt(1,Q);
prstmt.setString(2,IIId);
int numRec=prstmt.executeUpdate();
```

- A) is incorrect because parameters (symbol ?) may not be used in update statements
- B) none of the answers is correct
- C) increments the quantity of all supplies of item I1 by the amount specified in program variable Q
- D) is incorrect because parameters (symbol ?) may not be used in the WHERE clause
- E) the compilation phase for the update query occurs when the `executeUpdate` method is invoked

Exercise 4. A transaction is atomic if

- A) all users share the same process
- B) it is executed on the system at the same time as other transactions, as if it were the only one being executed
- C) none of the answers is correct
- D) it brings the system from a valid state to another valid state
- E) it makes modifications permanent immediately after the transaction has ended