

Event: B arah D iploma

Course code & Title: First Package, J2SE , SQL

**Instructor: Mohammed A. Kamal Total mark: 90 Marks
allowed: 1.5Hr**

T ime

Answer the following questions

Question 1

a) Answer each of the following questions using either True (T) or False (F):

1. `int x[] = new int[]{10,20,30};` Arrays can also be created and initialized as in this statement. (T)
2. The JRE deletes objects when it determines that they are no longer being used. This process is called Garbage Collection. (T)
3. Java programming is not statically-typed, means all variables should not first be declared before they can be used. (F)
4. A .class file contains bytecodes (T).
5. JDK is platform independent. (F)
6. In Java, String is a primitive data type. (F)
7. substring method is used to split sentences using delimiter. (T)
8. You can use "for each" to insert values into an array. (T)
9. It's optional to write `String[]` args while declaring the main method in java. (F)
10. Java is short for "JavaScript" (F)

b) Choose the right answer for each of the following:

1.meth od can be used to find the length of a string.
a. **length().** c. `getSize().`
b. `getLength().` d. `len.`
2. In SQL, which commands are used to change table characteristics
a. **ALTER TABLE.** c. `MODIFY TABLE.`
b. `CHANGE TABLE.` d. All the above.
3. Which of the SQL statement is correct
a. **SELECT username AND password FROM users**
b. `SELECT username, password FROM users.`
c. `SELECT username, password WHERE username='user1'`

d. None of the above.

4. Which of the following is a primitive datatype?

a. float c. Integer

b. String d. A & C

5. What is an immutable object?

a. An immutable object can be changed once it is created.

b. An immutable object can't be changed once it is created.

c. An immutable object is an instance of an abstract class.

d. None of the above.

c) write the main commands that used to create git repository and upload it to github?

d) Write a statement that will select the City column from the Customers table

City column has the value 'Berlin' and the e) Write a statement that Select all records where the

PostalCode column has the value 12209

f) Write a statement to Set the value of the

City columns to 'Oslo', but only the ones where the

Country column has the value "Norway".

g)

Question 2

a) Write a Java program that does the following:

1. It generates a random integer number

2. Repeatedly asks the user to enter a number.

i. If the user enters the generated number, then a message saying "Congratulations" should be displayed. ii. If the user enters another number then if the entered number is smaller than the

generated number, then a message saying "Please, guess a larger number" should be displayed, otherwise a message saying "Please, guess a smaller number" should be displayed.

3. Finally, it requests the username, and prints his number of attempts.

b) Write an application with method using method overloading to calculate area of rectangle and square.

c) what is the output of the following:

```
String x = "abc";  
String y = "abc";  
x.concat(y);  
System.out.print(x);
```
