Roll No.

- Please check that this question paper contains **8** printed pages.
- Code number given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
- Please check that this question paper contains **7** questions.
- **Please write down the Serial Number of the question before attempting it.**
- 15 minutes time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the students will read the question paper only and will not write any answer on the answer-book during this period.

INFORMATICS PRACTICES

Time allowed : 3 hours   *Maximum Marks : 70*

Instructions :

(i)   **All** *questions are compulsory.*

(ii)   *Answer the questions after carefully reading the text.*

1.   (a)   Given below are two addresses :

         (i)   http://www.abc.com/index.htm

         (ii)   182.68.9.165

         Identify which one of the above is an IP address and which one is a URL.   *1*

(b)   Expand   *1*

(i)   ODF

(ii)   HTTP

(c)   How is a Trojan Horse harmful to a network ?   *1*

(d)   What do the following top level domains signify ?   *1*

(i)   .edu

(ii)   .org

(e)   Write one advantage each of Star and Bus topology used in networking.   *2*

(f)   List two measures to secure a computer network.   *2*

(g)   What is common in all of the following software(s) ?   *2*

Firefox, Perl, PHP, OpenOffice.org

Write one feature of the above category of software.

2.   (a)   Write the value of z after execution of following code :   *1*

```
int j;
int z;
j=4;
z = (4*++j)%3;
```

(b)   Write one difference between IF statement and SWITCH statement.   *1*

(c)   Name two tags that are present in every HTML code.   *1*

(d)   What is wrong in the following HTML code ?   *1*

```
<UL TYPE = "a" START = 4>
```

(e)   Write the difference between the following :   *2*

(i)   A = 10

(ii)   If (A==10)

_____

_____

(f)   Write statement to increase the value assigned to variable Z by 5 and then to display the value.   *2*

(g)   Write two features of XML.   *2*

3. (a)   How is NULL value different from 0 (zero) value ?   *1*

(b)   Write the UPDATE statement in MySQL to increase commission by 100.00 in the "Commission" column in the 'Emp' table.   *1*

(c)   When using the LIKE clause, which wildcard symbol represents any sequence of none, one or more characters ?   *1*

(d)   Rewrite the following SQL statement after correcting error(s). Underline the corrections made.   *1*

```
INSERT IN STUDENT(RNO,MARKS) VALUE (5, 78.5);
```

(e)   Distinguish between a Primary key and a Unique key in a table.   *2*

(f)   Given 'Employee' table as follows :   *2*

Employee_ID	NAME	Commission
101	Sabhyata Sharma	NULL
102	Divya Arora	8900
103	Faizal Zaidi	NULL

What values will the following statements return ?

```
SELECT COUNT(*) FROM Employee;
```

```
SELECT COUNT(Commission) FROM Employee;
```

(g)   (i)   If you have not executed the COMMIT command, executing which command will reverse all updates made during the current work session in MySQL ?

        (ii)   What effect does SET AUTOCOMMIT have in transactions ?   *2*

4. (a) Define a class with reference to Object Oriented programming. *1*

(b) What will be the content of the jTextArea1 after executing the following code : *1*

```
INT n = 89;
jTextAreal.setText(Integer.toString(++n));
```

(c) Write the value of sum1 after execution of the following WHILE loop : *1*

```
int i = 1, sum1 = 0;
while (i<10)
{       sum1 =sum1+ i;
        i =i+2;
}
```

(d) Rewrite the following program code using if else if statement *2*

```
String remarks;
int num = Integer.parseInt(jTextField1.getText());


switch (num)
{
    case 0: remarks = "You have not won any points.";
            break;
    case 1: remarks = " You have won one point";
            break;
    case 2: remarks = " You have won two points";
            break;
    default: remarks = " All the best";
}
```

(e) The following code has some error(s). Rewrite the correct code underlining all the corrections made 2

```
int z;
    z = 14;
do;
  z = z-2;
  System.out.displayln(z);
}while z >= 2;
```

(f) Write the output : 2

```
System.out.println(Math.pow(4.0,2.0));
System.out.println(Math.round(6.459));
```

(g) XYZ Pens Company sells each pen at the cost of ₹ 25.00. The Programmer has developed a GUI application as shown below :

- The number of pens bought are entered by the user.
- The Amount is Number of Pens * 25.00

- If a person buying pens is a 'Special Customer', a discount of 5% is given on the amount, otherwise no discount is given.

- Amount to be paid = Amount – Discount

Write code in Java to do the following :

(i) When Calculate button is clicked the Amount, Discount and Amount to be Paid are calculated and should be displayed in appropriate text fields. *3*

(ii) When Clear button is clicked, all the Textfields and Checkbox are cleared. *2*

(iii) When Stop button is clicked, the application is closed. *1*

5. (a) Write two examples of DML commands of SQL. *1*

(b) Write the output of the following SQL queries : *2*

(i) **SELECT RIGHT('software', 2);**

(ii) **SELECT INSTR('twelve','lv');**

(iii) **SELECT DAYOFMONTH('2014-03-01');**

(iv) **SELECT ROUND(76.987, 2);**

(c) Consider the table FLIGHT given below. Write commands in SQL for (i) to (iv) and output for (v) to (vii). *7*

Table : FLIGHT

FLCODE	START	DESTINATION	NO_STOPS	NO_FLIGHTS
IC101	DELHI	AGARTALA	1	5
IC102	MUMBAI	SIKKIM	1	3
IC103	DELHI	JAIPUR	0	7
IC105	KANPUR	CHENNAI	2	2
IC107	MUMBAI	KANPUR	0	4
IC431	INDORE	CHENNAI	3	2
IC121	DELHI	AHMEDABAD	2	6

(i) Display details of all flights starting from Delhi.

(ii) Display details of flights that have more than 4 number of flights operating.

(iii) Display flight codes, starting place, destination, number of flights in descending order of number of flights.

(iv) Display destinations along with flight codes of all the destinations starting with 'A'.

(v) **SELECT MAX(NO_FLIGHTS) FROM FLIGHT;**

(vi) **SELECT DISTINCT(NO_STOPS) FROM FLIGHT;**

(vii) **SELECT START, COUNT(*) FROM FLIGHT GROUP BY Start;**

6. (a) Write an SQL query to create the table 'SALESPERSON' with the following structure : *2*

Table : SALESPERSON

Field	Type	Size	Constraint
SCODE	Decimal	6	Primary Key
FIRSTNAME	Varchar	30	Not Null
LASTNAME	Varchar	30	Not Null
CITY	Varchar	30	
SALES	Decimal	8	

(b) In a database there are two tables 'CD' and 'TYPE' as shown below :

Table : CD

CODE	TITLE	DURATION	SINGER	CATEGORY
101	Sufi Songs	50 min	Zakir Faiz	12
102	Eureka	45 min	Shyama Mukherjee	12
103	Nagmey	23 min	Sonvi Kumar	77
104	Dosti	35 min	Bobby	1

Table : **TYPE**

CATEGORY	DESCRIPTION
1	Jazz
12	Classical
40	Country Side
78	Pop

(i) Name the Primary key in "CD" table. *1*

(ii) Name the foreign key in "CD" table. *1*

(iii) Write the Cardinality and Degree of "TYPE" table. *1*

(iv) Check every value in CATEGORY column of both the tables. Do you find any discrepancy ? State the discrepancy. *1*

(v) Write SQL statement to change the name of Singer "Sonvi Kumar" to "Sonvi Mehra" in all the places wherever it occurs in CD table. *1*

(vi) Write MySQL statement to add a column "Music_Director" which datetype Varchar and size as 30 in the table "CD". *1*

(vii) Write command in SQL to display code, Title and corresponding description of all the CDs. *2*

7. (a) Write two features of a good interface. *1*

(b) How is e-business beneficial to shopkeepers ? Write two points. *2*

(c) Shraddha works for a hospital. She wishes to create controls on a form for the following functions. Suggest controls to her. Choose appropriate controls from Text box, Label, Radio button, Check box, List box, Combo box, Command button. *2*

SNo	Control used to :	Control
1	Enter Patient name	
2	Choose Gender (out of Male/Female)	
3	Choose Department from a list of available departments	
4	Submit Form	