Pre Board Examination 2015
Std. 12
16-01-2015

Set 2

Max. Marks : 70
Time : 3 hrs.

INFORMATICS PRACTICES

Instructions: (i) All questions are compulsory.

1. a) What is the name of the network topology in which each node is connected independently using a switch? Draw diagram of that topology. [2]
   b) What is meant by "Denial of Service" with reference to Internet service? [2]
   c) State two advantage of networking computers instead of having stand alone computers. [1]
   d) What was the objective behind developing UNICODE? [1]
   e) Expand the following terms: [1]
      i) WAN
      ii) OSS
   f) What is the purpose of switch in a network? [1]
   g) Identify the following devices: [2]
      i. An intelligent device that connects several nodes to form a network and redirects the received information only to intended node(s).
      ii. A device that regenerates (amplifies) the received signal and re-transmits it to its destination.

2. a) What will be the value stored in jTextArea1 after the execution of the following loop?
      for (int I=5; I<=25; I+=5) [2]
      jTextArea1. setText(jTextArea1. getText( ) + " "+Integer.toString(2*I));
   b) Explain with the help of example(s) the difference between container and empty tags of HTML. [2]
   c) Distinguish between ' / ' and ' % ' operators. [1]
   d) What is a button group? Which control is generally used with a button group? [1]
   e) Which property of ListBox is used to display values in the list? [1]
   f) Which tags of HTML are used to [1]
      i) Change the font in a page
      ii) Add a row in a table?
   g) What will be the values of variables sum and sum1 after the execution of the following loops?
      [2]

Loop A	Loop B

int v=6, sum=0;
while (v>3)
{
    sum+=v;
    v- =2;
}
	int w=6, sum1 =0;
	do
	{
	    sum1+=w;
	    w - =2;
	} while (w>3);

3. a) Name the method used to perform the following in NetBeans: [2]
      i) To set component visible at run time
      ii) To return the index value of the selected item from the list
   b) Gopi Krishna is using a table Employee. It has the following column: [2]
      Code, Name, Salary, Deptcode
      He wants to display maximum salary department wise.
      He wrote the following command
      SELECT Deptcode, Max(Salary) FROM Employee;
      But he did not get the desired result.
      Rewrite the above query with necessary change to help him get the desired output.
   c) Which MySql command will be used to open an already existing databse "LIBRARY". [1]

d) The Mname Column of a table Members is given below: [1]

Mname
Aakash
Hirav
Vinayak
Sheetal
Rajeev

Based on the information, find the output of the following queries:
i) Select Mname from Members where mname like "%v";
ii) Select Mname from Members where mname like "%e%";

e) A table "TRAINS" in a database has degree 3 and cardinality 8. What is the number of rows and columns in it?   [1]

f) Table 'Club' has 4 rows and 3 column. Table 'Member' has 2 rows and 5 columns. What will be the degree and cardinality of the Cartesian product of them?   [2]

g) A numeric data field CHANGER contains 25565.7765. Write a commands to round off CHANGER.
i) up to 2 decimal (i.e., expected result 25565.78)   [1]
ii) Whole number (i.e., expected result 25566)

4. a) What will be displayed in jTextArea1 after execution of the following code?   [2]
```
int Z=4;
do
{
  jTextArea1.setText( Integer.toString(++Z) ):
  Z=Z+1;
} while (Z<=8);
```

b) ZYX Pens Company sells each pen at the cost of Rs. 25.00. The Programmer has developed a GUI application as show below:

- The Amount is Number of Pens * 25.00
- If a person buying pens is a 'Special Customer', a discount of 5% is given of 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 jTextFields.   [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]

c) Define a class with reference to Object Oriented programming.   [1]

d) What will be the value X1 after the execution of the following code?   [1]
```
String X1="Graduate" , X2="Post";
X1=X2.concat (X1);
```

e) 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  =+2;
}
```

f) 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";
}
```

g) 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;
```

5. a) 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	MAMBAI	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;

b) Write two examples of DML commands of SQL. [1]

c) 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);

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

Table: CD

Code	TITLE	DURATION	SINGER	CATEGORY
101	Sufi Songs	50 mim	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" with datatype Varchar and size 30 in the table "CD". [1]
   vii. Write command in SQL to display code, Title and corresponding description of all the CDs.[2]

b) Write an SQL query to create the table 'SALESPERSON' with the following structure: [2]

Table : SALESPERSON

Field	Type	Size	Constraint
SCODE	int	6	Primary Key
FIRSTNAME	Varchar	30	Not Null
LASTNAME	Varchar	30	Not Null
CITY	Varchar	30	
SALES	float	8, 2	

7. a) Shradha 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	

b) Write two features of a good interface. [1]
c) How is e-business beneficial to shopkeepers? Write two points. [2]

-x-x-x-x-x-x-