Sample Paper – SET1
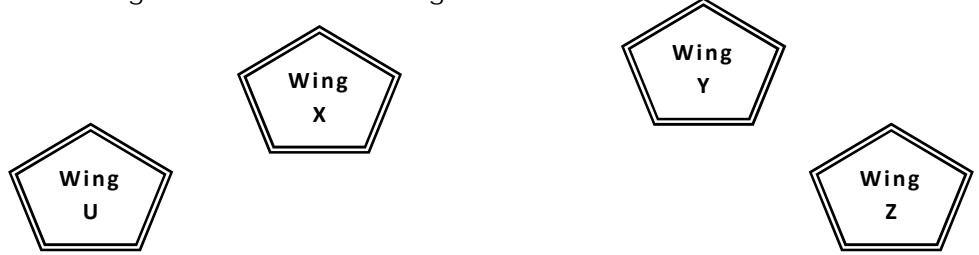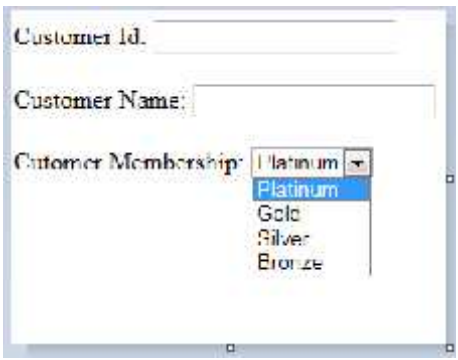## Class-XII
Subject: Informatic Practices

1 (a)	Answer the following questions: **What is the difference between Star Topology and Bus Topology of network?**	2
Ans.	**Bus topology:** All devices are connected to a central cable, called the bus or backbone. Bus networks are relatively inexpensive and easy to install for small networks. Ethernet systems use a bus topology. **Star topology:** All devices are connected to a central hub. Star networks are relatively easy to install and manage, but bottlenecks can occur because all data must pass through the hub	
(b)	**What is the full form of the following** **i) FTP ii)RSS iii) TTF iv) GNU v) FLOSS vi)JDBC**	2
Ans.	FTP: File Transfer Protocol RSS: Really Simple Syndication TTF: True Type Font OSI: Open Source Initiative FLOSS: Free Libre and Open Source Software JDBC: Java Data Base Connectivity	
(c)	**What to you understand by Domain resolution?**	2
Ans.	Internally computer follows a mechanism to obtain IP address of a website from a URL. This mechanism is known as Domain Name Resolution	
(d)	**What are the facilities provided by the SERVER in a network environment?**	2
Ans.	Facilities provided by the SERVER in a network environment are as follow- • Resource Sharing • Centralized database storage • Internet Sharing with authentication • Account Monitoring	
(e)	**Explain the following terms:** **i) Linux ii) FSF**	2
Ans.	**Linux** – Linux is a popular operating system. It is an example of free software and open source development. It is not freely available for use, but also its code is freely available for use and modification and fro redistribution. It was originally written by Linus Trovals. **FSF** – FSF stands for Free Software Foundation. FSF is a non-profit organization created for the purpose of supporting free software movement. Richard Stallman founded FSF in 9185 to support GNU project and GNU licenses.	
2 (a)	**What is e-Learning?**	1
Ans.	e-Learning is the delivery of a learning, training or education program by electronic means.E-learning can be CD-ROM-based, Network-based, Intranet-based or Internet-based in some way to provide training, educational or learning material. e-learning allows you to learn anywhere and usually at any time. It can include text, video, audio, animation and virtual environments.	
(b)	**Explain any two major projects of E-Governance in India.**	1
Ans.	The 2 major projects of E-Governance in India are: **1. DRDO:** It is a network of more than 50 laboratories which are engaged in developing defence technologies covering various disciplines like naval system, special materials, advanced computing etc.	

	2. Indian Courts: It includes the website of Supreme Court and all 21 high courts and their benches in India. It provides us a single point access to information related to the Supreme Court and High Court in India.	
(c)	**What is m-commerce?**	1
Ans.	M-commerce (mobile commerce) is the buying and selling of goods and services through wireless technology using mobile phones or PDAs.	
(d)	**Explain any two features of front-end.**	1
Ans.	The features of front-end are: 1. Display: It includes the type of widgets used, user friendly, dialog-usage, correct usage of controls etc. 2. Functionality Feature: It includes the validation, security features, storage, recall feature, performance, speed responsive features etc.	
(e)	Acme Education has set up its new branch at Jaipur for its office and web based activities. It has 4 wings of buildings as shown in the diagram:	

Center to center distances between various blocks

Wing X to Wing Z	50 m
Wing Z to Wing Y	70 m
Wing Y to Wing X	125 m
Wing Y to Wing U	80 m
Wing X to Wing U	175 m
Wing Z to Wing U	90 m

Number of computers

Wing X	50
Wing Z	30
Wing Y	150
Wing U	15

	(i) Suggest the most suitable place for Repeater and switch and justify. (ii) Suggest the most suitable place to house the server. (iii) Suggest the most suitable cable layout and topology between various wings.	2 1 1
Ans.	Try this question to solve.	
3 (a)	**What will be the output of the following program code when the user will press JButton:**	3

```
public class class1
{
     int a;
     public class1(int p)
     {
          a=p;
     }
     void assign(int no)
     {
          a=no;
     }
     int  disp()
     {
          return a;
     }
}
public class class2 extends class1
{
     int b;
     public class2(int p)
```

```
        {
                super(p);
                b=p+5;
        }
        int  disp()
        {
                System.out.println(super.disp());
                return b;
        }
}
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        class2 c2 = new class2(15);
        System.out.println("          " + c2.disp());
}
```

Ans.	15	
	20	

(b)	**Rewrite the following if-else segment using switch-case statement**	2

```
        char ch = 'P';
        if((ch == 'p') || (ch == 'P'))
            System.out.println("Platinum");
        if((ch == 'g') || (ch == 'G'))
            System.out.println("Gold");
        if(ch == 'S')
            System.out.println("Silver");
        else
            System.out.println("Normal");
```

Ans.

```
char ch = 'P';
switch(ch)
{
      case 'p':
      case 'P':
            System.out.println("Platinum");
            break;
      case 'g':
      case 'G':
            System.out.println("Gold");
            break;
      case 'S':
            System.out.println("Silver");
            break;
      default:
            System.out.println("Normal");
            break;
}
```

(c)	**The following code has some error(s). Rewrite the correct code underlining all the correction made:**	2

```
int num1=Integer.parseInt(jTextField1.getText());
String num2=Integer.parseInt(jTextField2.getText());
int sum=num1+num2;
jLabel1.setText(sum);
```

| Ans. | ```
int sum;
int num1=Integer.parseInt(jTextField1.getText());
String num2=Integer.parseInt(jTextField2.setText());
int sum=num1+num2;
jLabel1.setText("" +sum); OR jLabel1.setText(Integer.toString+sum);
``` | |
|---|---|---|
(d)	**What is Dialog box?**	2
Ans.	It is a window that pops up on the screen with options that the user can select. After the selections have been made, the user can typically click "OK" to enter the changes or "Cancel" to discard the selections. It is customary for menu options that include an ellipsis at the end, such as "Preferences..." or "Save As...", to open a dialog box when selected.	
(e)	**Briefly explain the concept of ResultSet method. Also, discuss the next() and first() methods.**	2
Ans.	A ResultSet object maintains a cursor, which points to its current row of data. When a ResultSet object is first created, the cursor is positioned before the first row. The methods of ResultSet object are: **next()** - moves the cursor forward one row. Returns true if the cursor is currently positioned on a row and false if the cursor is positioned after the last row. **first()** - moves the cursor to the first row in the ResultSet object. Returns true if the cursor is currently positioned on the first row and false if the ResultSet object does not contain any rows.	
(f) i.	**Write any minimum 4 features of XML.**	2
Ans.	The features of XML are as follows: 1. XML was designed to carry data, not to display data - Describes data & focuses on what data is. 2. XML is free and extensible - We can create our own tag set. 3. XML is platform independent - Can run on all platforms. It is created using standard text files. 4. XML can Separate Data from HTML - Stores & describes data which can later be formatted & presented in described way.	
ii.	**Write HTML code for the following page for generating Form:**	2
| Ans. | ```
<html>
<head>
<title>FORM</title>
</head>
<body>
<form name="form1">
  Customer Id:<input name="" type="text" />
<p>
  Customer Name:<input name="" type="text" />
</p>
  Customer Membership:<select name="select" id="select">
    <option>Platinum</option>
    <option>Gold</option>
``` | |

	`<option>Silver</option>`
	`<option>Bronze</option>`
	`  </select>`
	`</form>`
	`</body>`
	`</html>`	

(g) i.	**What do you understand by option VLINK used with <BODY> tag?**	1
Ans.	When we use VLINK option in <BODY> tag it set the visited link color in an HTML document. Syntax for using VLINK is <body vlink="color_name|hex_number|rgb_number">	
4	**Mr. Lal is designing the GUI for managing customer details. The GUI designed in Netbeans is as follows:** Answer the following: i) Mr. Lal wants that when the form is run, it should display the details of first customer in the form from the customer database. Which event he should handle to write the java code to do the above? And write the code for performing the task. ii) Write java code to navigate current customer record to next customer record or from to navigate from current customer record to previous customer record from the table CUST(CID, CNAME, CADDR) in the database CUSTOMER and display the id and name in the textfield , and address in the textarea. iii) Write java code to exit from the application, when the exitBTN is clicked	2 2 1
| **Ans.** | `windowOpened()` event should be handle. And for accomplishing the task is<br><br>```java
try
{
   Class .forName("com.mysql.jdbc.Driver");
   con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/customer","root",""
);
   String sql="SELECT CID,CNAME,CADDR FROM CUST;";
   smt=con.createStatement();
   rs = smt.executeQuery(sql);

   rs.next();

   String cid=Integer.toString(rs.getInt(1));
   String cname=rs.getString(2);
   String cadd=rs.getString(3);
``` | |

```
      jTextField1.setText(cid);
      jTextField2.setText(cname);
      jTextArea1.setText(cadd);
}
catch(Exception e){
      e.printStackTrace();
}
```
Code For Next Button –
```
try{
      rs.next();
      String cid=Integer.toString(rs.getInt(1));
      String cname=rs.getString(2);
      String cadd=rs.getString(3);

      jTextField1.setText(cid);
      jTextField2.setText(cname);
      jTextArea1.setText(cadd);
}
catch(Exception e){
      e.printStackTrace();
}
```
Code For Previous Button –
```
try{
      rs.prevoius();
      String cid=Integer.toString(rs.getInt(1));
      String cname=rs.getString(2);
      String cadd=rs.getString(3);

      jTextField1.setText(cid);
      jTextField2.setText(cname);
      jTextArea1.setText(cadd);
}
catch(Exception e){
      e.printStackTrace();
}
```
Code for Exit Button –
```
      System.exit(0);
```

5(a)	Differentiate between TRUNCATE TABLE and DROP TABLE in SQL.	2

Ans.	**Truncate**	**Drop**
	Data in the table it will be deleted, but the structure of the table is available.	Structure and data in the table both will be deleted.
	This is a DML command	This is a DDL command
	Syntax: TRUNCATE TABLE table_name;	Syntax: DROP TABLE table_name;

(b)	What is data redundancy? What are the problems associated with it?	1

Ans.	Data redundancy means duplication of data. It causes duplicate data at different locations which destroys the integrity of the database.	
(c)	**What does isolation property imply?**	1
Ans.	Isolation property implies that each transaction is unaware of other transactions executing concurrently in the system.	
(d)	**Explain atomicity property of transaction.**	2
Ans.	Atomicity property ensures that either all operations of the transaction are reflected or none are. This property has two states: Successful or Unsuccessful. Successful state means a transaction must complete successfully and its effect should be visible in the database. Unsuccessful state means if a transaction fails during execution, then all its modifications must be undone to remove the effect of failed transaction.	
(e)	**Name the clauses for the following:** i. To display the record in specified range. ii. Eliminate the redundant data from the query result. iii. Deletes the rows from table_name and returns the number of rows deleted iv. To find the rows that do not match in the list	2
Ans.	i. BETWEEN ii. DISTINCT iii. DELETE iv. NOT IN	

Write SQL commands for the statements (i) to (vi) and give outputs for SQL queries (vii) to (x) on the basis of the table Shop.

 Table: Shop

No.	Shop_name	Sale	Area	Cust_percent	Rating	City
1	West side	250000	West	68.6	C	Delhi
2	Pantaloons	500000	South	81.8	A	Chennai
3	Sir's & Her's	300000	North	79.8	B	Amritsar
4	Sports king	380000	North	88.0	B	Baroda
5	Biswas stores	456000	East	92.0	A	Delhi
6	Big Bazar	290000	South	66.7	A	Kolkota
7	Levis'	230000	East	50.0	C	Jamshedpur
8	Peter England	428000	South	90.0	A	Chennai

(i) To display the name of all shops which are in Area South and sale more than average sales.
(ii) To display shop name and Customer Percentage of all the shops having cust_percentage is more than 77 and less than 90.
(iii) To display list of all the shops with sales less than 300000, in ascending order of shop name.
(iv) To display the city along with sum of sale for each city.
(v) To display all the columns where rating is A in the descending order of area;
(vi) To display all the Area where more than one shop is there.
(vii) Select min(sale) from SHOP where Sale>300000 Group by Sales;
(viii) Select Count(Distinct City) from Shop;
(ix) Select Avg(Sale) from Shop where Area='South';
(x) Select Avg(Cust_percentage), sum(sale) from shop where Rating='A';

| Ans. | (i) SELECT Shop_name FROM Shop WHERE Area LIKE 'South' AND Sale>AVG(Sale);
(ii) SELECT Shop_name, Cust_percent FROM Shop WHERE Cust_percent BETWEEN 70 AND 99; | |

		OR	
		SELECT Shop_name, Cust_percent FROM Shop WHERE Cust_percent >70 AND Cust_percent < 99;	
	(iii)	SELECT Shop_name from Shop WHERE Sale<300000 ORDER BY Shop_Name;	
	(iv)	SELECT City,SUM(Sale) FROM Shop GROUP BY CITY;	
	(v)	SELECT * FROM Shop WHERE Rating LIKE 'A' ORDER BY Area DESC;	
	(vi)	SELECT Area FROM shop GROUP BY AREA HAVING COUNT(Area) >1;	
	(vii)	<u>min(sale)</u> 380000 428000 456000 500000	
	(viii)	<u>Count(Distinct City)</u> 6	
	(ix)	<u>Avg(Sale)</u> 406000.0000	
	(x)	<u>Area</u> East North South	

7 (a) Write the SQL command to create the TEACHER and DEPARTMENT tables including its constraints.   **2**

Table : TEACHER

Column Name	Data Type	Size	Constraint
TNO	CHAR	4	PRIMARY KEY
TNAME	VARCHAR	20	NOT NULL
TADDRESS	VARCHAR	25	
SALARY	DOUBLE	7,2	NOT NULL and DEFAULT 0.0
DEPT_NO	CHAR	4	NOT NULL
DOJ	DATE		

Ans.
```
CREATE TABLE teacher (
TNO CHAR(4) PRIMARY KEY,
TNAME VARCHAR(20) NOT NULL,
TADDRESS VARCHAR(25),
SALARY DOUBLE NOT NULL DEFAULT 0.0,
DEPT_NO CHAR(4) NOT NULL,
DOJ DATE);
```

(b) Write the resulting output of the following: **2**

(i) SELECT SUBSTR(TRIM('   Informatics Practices is very useful subject'),13,17);

(ii) SELECT FLOOR(65467.60) + ROUND(1234.73, 2)

(iii) SELECT ROUND(MOD(14*9,90/9));

(iv) SELECT SUBSTR(UPPER(SUBSTR('India is best',2,8)),2);

Ans.
(i) <u>SUBSTR(TRIM(' Informatics Practices is very useful subject'),13,17)</u>

  Practices is very

(ii) <u>FLOOR(65467.60) + ROUND(1234.73, 2)</u>

   66701.73

(iii) <u>ROUND(MOD(14*9,90/9))</u>

   6

	(iv) <u>SUBSTR(UPPER(SUBSTR('India is best',2,8)),2)</u> DIA IS	

(c)	**Mr. Chandarana is creating a form for his retail store for adding new items, edit existing items, delete items. Help him to choose most appropriate controls from List Box, Combo Box, TextField, TextArea, RadioButton, Checkbox, Label, Button and Text Area for the following entries from user.**
	     1. A message "Enter Item Name" in front of a TextField.
	     2. A message "Select Existing Items from list" in front of a TextField
	     3. An input to select an existing product from list (there 1200 items)
	     4. An input to choose more than one suppliers (there are 4 suppliers)
	     5. An input for entering cost and quantity of item.
	     6. An input for Damaged item or Not.
		2

Ans.	1. Label 2. Label 3. Combo Box 4. Checkbox / List Box 5. TextField 6. RadioButton	