1
a) Differentiate between RAM and Secondary Storage (1)
b) Define spyware. (1)
c) What are the various tools of Integrated Development Environment? (2)
d) What are the main functions of control unit? (1)
e) Define
i) Address Bus (2)
ii) Spreadsheet Tools
f) Define CIA and BIOS

g) Define the technique used to block unauthorized access in internet. (1)

2 a) How many times the following loop is executed? (1)

```
int num1 = 5, num2 = 50;
while( num1 <= num2 )
```
```
{ num1 = num2 / num1;
}```

b) A phone number consisting of 10 digits, is stored in a string variable strPhone. Now it is required to store this phone number in an integer type variable intPhone. Write a Java statement to do this. (1)

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

```
int i, j = 5;
i = i + j;
if ( i = j ) {
    //TextField1.setText( “i and j are equal” );
else TextField1.setText( “i and j are unequal” );
}
```

d) What will be the output of the following? (2)

(i) int x = 7, y = 75, z;
z = ++x + y --;
z % = 2;
System.out.println ( z +1 );
y /= 2;
System.out.println(y+1);

(ii) int Number1 = 7, Number2 = 5;
int Second = 73;
if( Number1 !=7 || Number2 <= 8 )
if( Second > =75)
    //TextField1.setText( “Code worked” );
else
    //TextField1.setText( “Code might worked” );
else
    //TextField1.setText( “Code will not work” );

e) What are these methods used for? (1)
(i) setEditable() (ii) setVisible()
f) Rewrite the following code using for loop
   ```java
   int x = 10, y = 20;
   int add = 0;
   while(x <= y)
     { add += x;
       System.out.print(" + x");
       x += 2; y -= 2;
     }
   System.out.print(add);
   ```

g) Differentiate between with example
   i) character data type and string data type
   ii) if and switch statement

3 a) Write a java code that accepts two numbers in FirstNumTF and SecondNumTF and display the sum of their squares in ThirdNumTF.

b) Write a suitable java statement to declare a variable City and initialize it with value as "Mumbai".

c) While working in NetBeans, Mr. Ankit wants to display "Hello" using non GUI method, Help him to write the statement.

d) Name the property used to select multiple items from the list.

e) Raman wants to display the greater of two variables ch1 and ch2 entered in JTextField1 and JTextField2 respectively and display the result in JTextField3 but he does not know the code for it. Help him to write the code.

f) What will be the values of p and q after execution of the following code:

   ```java
   int p = 10, q = 100;
   while(p <= 12)
     {  if (p % 2 == 0)
         q += p;
         p += 2;
       }
   JOptionPane.showMessageDialog(null, "P: " + p + " Q: " + q);
   ```

g) Sahil wants to display the value of a variable x of type integer in a textfield. He writes the following statement but he is not getting the result, help him to do this

   ```java
   JTextField1.setText(" x = "+String(x));
   ```

h) What will be displayed in textArea msgTA and textfield JTextField1 after executing the following statements

   i) msgTA.setText("Model Examinations\t2015\nClass XI\nIP");

   ii) JTextField1.setText(" + 20 + 15");

i) What is meant by block in java? Give example.

4. Glamour Garments has developed a GUI application for their company as shown below:
The company accepts payments in 3 modes - Cash, Cheque, Credit Card. The discount given as per mode of payment is as follows.

<table>
<thead>
<tr>
<th>Mode of Payment</th>
<th>Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>8%</td>
</tr>
<tr>
<td>Cheque</td>
<td>7%</td>
</tr>
<tr>
<td>Credit Card</td>
<td>Nil</td>
</tr>
</tbody>
</table>

If the bill amount is more than 15000 then the customer gets an additional discount of 10% on Bill amount. Write the code:

(i) To make the textfields for Discount (txtDisc) and NetAmount (txtNetAmt) uneditable.

(ii) To calculate the discount as per given criteria, when "Calculate" button is clicked and it should be displayed in the discount text field.

(iii) To calculate net amount and it should be displayed in the net amount text field.

(iv) To make Exit button (exitBtn) enabled and then close the application.

5 a) Define the following with example
   i) Candidate key   ii) wild characters

b) Write the purpose of following statement
   SELECT NAME, Marks1 AS "Total" FROM Student ORDER BY Total;

C) Ms. Sujata wants to change the name and marks as 'Chhavi Chanan' and 90 in the columns Sname and Smarks respectively of a student having rollno 15 in the table Class. Write the command to achieve this.

d) Define the purpose of the following
   Indentation, Exception handling

e) Name a
   i) date function that returns a string
   ii) String function that returns a string

f) What controls would you suggest for the following
   i) A brief description of yourself
   ii) A message in front of a text field
   iii) Choose a nationality from a given list
   iv) To save the details

G) Ranbeer has created a table namely Trial that has 7 columns and 3 test records. After testing Ranbeer added three more columns, fourteen more rows but deleted 3 test records. What is the degree and cardinality of the table now?
h) Saumya wants to remove all the rows from a table Employee except empid as A01 or designation manager. She writes the following query.

\[ \text{Drop table * Employee where empid = A01 and Designation NOT = 'Manager';} \]

Write the correct query for her.

i) The 'C.ID' and 'Category' columns of a table Employee are given below:

<table>
<thead>
<tr>
<th>C_ID</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>CLERK</td>
</tr>
<tr>
<td>102</td>
<td>CASHIER</td>
</tr>
<tr>
<td>103</td>
<td>MANAGER</td>
</tr>
<tr>
<td>104</td>
<td>SALESMAN</td>
</tr>
</tbody>
</table>

Based on this information find the output of the following queries:

i) SELECT mid (category, 2, 3) from Employee where category not like "%ER_%";

ii) SELECT instr (category, 'NA') from Employee where C_ID > 102;

6 a) Write the output of the followings:

(i) Select round(-1.58) + pow(2, -2);

(ii) Select round(56.235,-1)+ length("informatics");

b) Differentiate between i) sysdate() and now() 

ii) curdate() and date()

c) Consider the following table Bank and answer the tasks that follow.

**Table: Bank**

<table>
<thead>
<tr>
<th>FieldName</th>
<th>DataType</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer_Account_no</td>
<td>Integer</td>
<td>4</td>
</tr>
<tr>
<td>Customer_Name</td>
<td>Varchar</td>
<td>20</td>
</tr>
<tr>
<td>DateofTransaction</td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>Balance</td>
<td>Integer</td>
<td></td>
</tr>
</tbody>
</table>

i) Name the primary Key with suitable reason.

ii) Write a SQL statement

To add one more attribute company of type varchar size 20

iii) Write a SQL statement

To add one more record with some suitable data

iv) How will you see all the columns with their datatypes and size

v) Write the correct query

Select * from bank where balance != NULL and CustomerName Ankit;

d) Name the clause for the following

(i) To remove the contents of a table along with its structure

(ii) To retrieve specific rows.

7 Write the SQL statements for (a) to (e) and outputs for (f) to (g)
a) To display the different types of connections and models available

b) To display the names of all the customers whose connection day is Monday or Tuesday.

c) To remove the records of customers whose name starts with 'J' and validity is more than 120.

d) To display the position of 'a' in customer name in every record.

e) To display last 2 characters of model in lower case and first 2 characters of customer name in upper case.

f) Select `concat(cname," ",model)` from phone where validity IN (100,200,300) and C_ID < =4;

g) Select length(Cname) "LENGTH", Model "MODEL" from phone where dayofmonth(Activation_date) > =20;