1. Multiple Choice Questions:-(10)

i) ___________ is a volatile memory.
   a) ROM   b) RAM   c) DVD   d) Flash memory.

ii) A Bit stands for
    a) Boolean Digit   b) Binary Digit   c) Binary Decimal   d) Byte Digit

iii) Which of the following is an utility software?
     a) Word   b) Railway Reservation System   c) DBMS   d) Compression Software

iv) A ___________ is used to block unauthorized access and to inspect network traffic.
    a) Anti-virus   b) Trojan   c) Firewall   d) Cookie

v) The Swing control components are contained in the ___________.
    a) Design Window   b) Inspector Window   c) Properties Window   d) Palette Window

vi) What will be the output of “Hello”.concat(“World”);
    a) Hello World   b) HelloWorld   c) World Hello   d) WorldHello

vii) The storage provided by variables is ___________.
     a) Temporary   b) Permanent   c) Volatile   d) None of these.

viii) The vertical subset in a table is known as ___________.
     a) Tuple   b) Row   c) Attribute   d) Relation

ix) The ___________ statement is used to extract data from a table in SQL.
    a) SELECT   b) DISPLAY   c) READ   d) EXTRACT

x) Which keyword is used to return only different values in a column?
   a) DIFFERENT   b) EXCLUSIVE   c) DISTINCT   d) UNIQUE
2. Answer the following:-
   a) What is the function of the Control Unit? 
   b) Define the term software. 
   c) What is a language processor? Give example of language processors. 
   d) Differentiate between a virus and a worm.

3. a) Explain the design window in Java.
   b) Rahul wants to design a GUI application in java using radio button. After running the program, he finds that he is able to select both the radio buttons? What should he do so that he is able to select only one radio buttons at a time?
   c) Define the following:-
       i) Java Virtual Machine(JVM)   ii) IDE
   d) List any four characteristics of Java.
   e) Differentiate between text area and text field component.
   f) What is the usage of the following method?
       i) getText()   ii) parseInt()

4. a) Java is platform independent. Explain.
   b) What is the result of 7%5?
   c) Write any 2 rules for naming a variable in java.
   d) Item code consisting of 5 digits is stored in an integer type variable int ItemCode. Mr. Srikant wants to store this Item code in a String type variable called strItemCode. Write appropriate Java statement to help him in performing the same.
   e) What do you mean by data types in java? What is the difference between int and double data type in java?
   f) Write a Java code to accept principal amount, rate of interest and time as input from the user and calculate the simple interest.
5.a) Consider the following screen shot and answer the following questions given below:

![Screen Shot]

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Control Name</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Num1TF</td>
<td>JTextField</td>
<td>To enter first number</td>
</tr>
<tr>
<td>Num2TF</td>
<td>JTextField</td>
<td>To enter second number</td>
</tr>
<tr>
<td>ResultTF</td>
<td>JTextField</td>
<td>To display the result</td>
</tr>
<tr>
<td>+Btn</td>
<td>JButton</td>
<td>To add the two numbers</td>
</tr>
<tr>
<td>-Btn</td>
<td>JButton</td>
<td>To add the two numbers</td>
</tr>
<tr>
<td>*Btn</td>
<td>JButton</td>
<td>To add the two numbers</td>
</tr>
<tr>
<td>/Btn</td>
<td>JButton</td>
<td>To add the two numbers</td>
</tr>
<tr>
<td>RESETBtn</td>
<td>JButton</td>
<td>To clear the text fields</td>
</tr>
<tr>
<td>STOPBtn</td>
<td>JButton</td>
<td>To close the program</td>
</tr>
</tbody>
</table>

A) Write the code for the following:-

i) +Btn to add both the numbers and display the result in ResultTF.  

ii) -Btn to subtract both the numbers and display the result in ResultTF.  

iii) *Btn to multiply both the numbers and display the result in ResultTF.  

iv) /Btn to divide both the numbers and display the result in ResultTF.

B) Write the code for RESET button to clear all text fields.  

C) Write the code for STOP button to exit the program.

6.A. a) What is a database?  

b) If a database “Employee” exists, which MySql command helps you to start working in that database?  

c) What is the purpose of WHERE and ORDER BY clause in MySql?
d) What is the difference in the output of SELECT statement if we write the keyword ALL in place of DISTINCT? (2)

e) Differentiate between DDL and DML commands. (2)

f) Define the following:
   i) Keyword
   ii) Primary Key
   iii) Clause (3)

B. Write MySQL commands for the following:

a) To create a table STOCK with the following specifications: (2)

<table>
<thead>
<tr>
<th>Name of Column</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Id</td>
<td>Integer</td>
</tr>
<tr>
<td>Name</td>
<td>Varchar(20)</td>
</tr>
<tr>
<td>Company</td>
<td>Varchar(20)</td>
</tr>
<tr>
<td>Price</td>
<td>Decimal(3,2)</td>
</tr>
</tbody>
</table>

b) To remove the row having Id as 1005. (1)
c) To view the structure of the table. (1)
d) To add a row with the following values
   (101, 'Computer', 'Dell', 42000) (1)
e) To display the existing tables in a database names SCHOOL. (1)

7. Consider the Table SHOPPE given below. Write command in MySQL for (i) to (viii) and output for (ix)

<table>
<thead>
<tr>
<th>Code</th>
<th>ItemName</th>
<th>Company</th>
<th>Qty</th>
<th>City</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>102</td>
<td>Biscuit</td>
<td>Hide &amp; Seek</td>
<td>100</td>
<td>Delhi</td>
<td>10.00</td>
</tr>
<tr>
<td>103</td>
<td>Jam</td>
<td>Kissan</td>
<td>110</td>
<td>Kolkata</td>
<td>25.00</td>
</tr>
<tr>
<td>101</td>
<td>Coffee</td>
<td>Nestle</td>
<td>200</td>
<td>Kolkata</td>
<td>55.00</td>
</tr>
<tr>
<td>106</td>
<td>Sauce</td>
<td>Maggi</td>
<td>56</td>
<td>Mumbai</td>
<td>55.00</td>
</tr>
<tr>
<td>107</td>
<td>Cake</td>
<td>Britannia</td>
<td>72</td>
<td>Delhi</td>
<td>10.00</td>
</tr>
<tr>
<td>104</td>
<td>Maggi</td>
<td>Nestle</td>
<td>150</td>
<td>Mumbai</td>
<td>10.00</td>
</tr>
<tr>
<td>105</td>
<td>Chocolate</td>
<td>Cadbury</td>
<td>170</td>
<td>Delhi</td>
<td>25.00</td>
</tr>
</tbody>
</table>

(i) To display the details of all items. (1)
(ii) To display the city of items without duplicates. (1)
(iii) To display the names and company of the items whose name starts with 'C'. (1)
(iv) To display the details of all items of Kolkata city in ascending order of code. (1)
(v) To display the code, name and quantity of all items of Nestle Company. (1)
(vi) To display the details of all items whose quantity ranges from 56 to 150 (both values included). (1)
(vii) To display item name, company and city of all items whose price is above 25. (1)
(viii) To delete the records of Mumbai city. (1)
(ix) Write the output for the following:
   a) Select ItemName, Qty FROM Shoppe WHERE Company=’Britannia’;
   b) Select ItemName FROM Shoppe WHERE ItemName LIKE ‘_a%’;
   c) Select Code, ItemName, Qty FROM Shoppe WHERE City=’Delhi’ ORDER BY Code Desc;
   d) Select Company FROM Shoppe WHERE ItemName IN (”Jam”, ”Coffee”);
1. **Multiple Choice Questions:**

   i) When the electrical power is disrupted or cut off, data and programs are lost in
      a) ROM  b) Hard disk  c) RAM  d) Secondary storage

   ii) _________ is a secondary memory device
       a) Mouse  b) DVD  c) ALU  d) Speaker

   iii) Which of the following is a system software?
       a) Windows  b) Word  c) DBMS  d) Compression Software

   iv) A _________ is used to block unauthorized access and to inspect network traffic.
       a) Anti-virus  b) Trojan  c) Firewall  d) Cookie

   v) _________ is used to display and edit the attributes of the currently selected window.
       a) Design Window  b) Inspector Window  c) Properties Window  d) Palette Window

   vi) What will be the output of "Hello".concat(" ").concat("World");
       a) Hello World  b) HelloWorld  c) World Hello  d) WorldHello

   vii) The storage provided by variables is _________.
       a) Temporary  b) Permanent  c) Volatile  d) None of these.

   viii) The horizontal subset in a table is known as _________.
       a) Relation  b) Column  c) Attribute  d) Tuple

   ix) The _________ statement is used to delete data from a table in SQL.
       a) DELETE  b) DROP  c) TRUNCATE  d) REMOVE

   x) Which SQL keyword is used to sort the rows in the output?
      a) SORT ORDER  b) SORT  c) ORDER BY  d) SORT BY
2. Answer the following:
   a) What is the function of the ALU? (1)
   b) Define the term hardware. (1)
   c) What is a language processor? Give example of language processors. (2)
   d) Compare digital signature and digital certificate. (2)

3. a) Explain the inspector window in Java. (1)
    b) Rahul wants to design a GUI application in java using radio button. After running the program, he finds that he is able to select both the radio buttons? What should he do so that he is able to select only one radio button at a time? (1)
    c) Define the following:-(2)
       i) Byte code       ii) GUI
    d) Is Java case sensitive? What do you mean by the term case sensitive? (2)
    e) Differentiate between text area and text field component. (2)
    f) What is the usage of the following method? (2)
       i) setText( )     ii) parseDouble( )

4. a) Java is platform independent. Explain. (1)
    b) What is the result of 15%5? (1)
    c) Write any 2 rules for naming a variable in java. (1)
    d) Item code consisting of 5 digits is stored in an integer type variable intItemCode. Mr. Srikant wants to store this Item code in a String type variable called strItemCode. Write appropriate Java statement to help him in performing the same. (2)
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![Image of a calculator interface]

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A) Write the code for the following:-
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   b) If a database “Employee” exists, which MySQL command helps you to start working in that database?
   c) What is the purpose of LIKE and WHERE clause in MySQL?
d) What is the difference in the output of SELECT statement if we write the keyword ALL in place of DISTINCT? (2) 

e) Differentiate between DDL and DML commands. (2) 

f) Define the following:- (3) 
   i) Keyword 
   ii) Candidate Key 
   iii) Statement 

B. Write MySql commands for the following:- 

a) To create a table STOCK with the following specifications: (2) 
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b) To remove the row having Company Name as 'BPL'. (1) 

c) To view the structure of the above table. (1) 

d) To add a row with the following values (1) 
   (101, 'Computer', 'Dell', 42000) 

e) To display the existing tables in a database named SCHOOL. (1) 

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<td>105</td>
<td>Chocolate</td>
<td>Cadbury</td>
<td>170</td>
<td>Delhi</td>
<td>25.00</td>
</tr>
</tbody>
</table>

(i) To display the details of all items. (1) 
(ii) To display the city of items without duplicates. (1) 
(iii) To display the names and company of the items whose name ends with 'E'. (1) 
(iv) To display the details of all items of Kolkata city in descending order of code. (1)
(v) To display the code, name and quantity of all items of Nestle Company.

(vi) To display the details of all items whose quantity ranges from 56 to 150 (both values included).

(vii) To display item name, company and city of all items whose price is below 50.

(viii) To delete the records of Mumbai city.

(ix) Write the output for the following:

   a) Select ItemName, Qty FROM Shoppe WHERE Company='Cadbury';

   b) Select ItemName FROM Shoppe where ItemName LIKE '_a%';

   c) Select Code, ItemName, Qty FROM Shoppe WHERE City='Delhi' ORDER BY Code;

   d) Select Company FROM Shoppe WHERE ItemName IN ("Sauce", "Maggi");