General Instructions:
- All questions are compulsory
- Marks are indicated against each question
- Programming must be done in Java

SET - A

1. 
   a. What is a cookie? 1
   b. Write short note on Utility Software. 1
   c. Define Input Devices with 2 examples. 2
   d. Define the term Application software with the different categories. 2
   e. What is a Trojan? 1
   f. Define Primary Memory with its divisions. 2
   g. Name the different types of Language Processors. 1

2. 
   a. Write Java code that takes the Principle amount, Rate of interest and Time in jTextfield1, jTextfield2, jTextfield3 respectively and calculate the Simple interest to be displayed in jTextfield4 on the click of a button. 2
   b. Design a GUI desktop application in Java to accept temperature in Celsius in a text field and display temperature in Fahrenheit in another text field on the click of a button. (Hint: f = C * 1.8 + 32) 2

3. 
   a. Differentiate between Text Field and Text Area components. 1
   b. Which method is used to set the editing property of a component at run time. 1
   c. Explain the method toString() with the help of an example. 2
   d. What do you mean by "\n"? 1
   e. Which are the properties to be selected in Text Area to make all the lines in the text are neatly wrapped? 1
   f. What is a variable? Give example. 2
   g. Define GUI and IDE. 2
   h. While making a form in NetBeans, Mr. Tharun wants to enter students result as Pass/Fail into a form. Name the control that he could use in his form. 1

4. 
   a. Design a GUI desktop application in Java to accept marks in 5 subjects in five text fields and calculate the total and average marks. Display the results in separate text fields. Add appropriate labels and an exit button to end the application.
Write code to do the following:

i. Calculate the total and average of five subjects and display it on the click of the button “CALC TOTAL & AVERAGE”.  
ii. Clear all the Text Field entries on the click of the button “RESET”.  
iii. Close the application when the “EXIT” button is pressed.

b. Write code for the following application:
5. What will be the output of the following code segments:
   i. 
   ```java
   String first="ONE";
   String sec="TWO";
   String third=sec.concat(" ")+ first;
   outputTextField.setText(third);
   ```
   ii. 
   ```java
   int a=789;
   int b=10;
   int c=a%b;
   jTextField1.setText(Integer.toString(c));
   ```

6. 
   ```java
   int x = 5;
   int X= 5;
   ```

   Do the above statements refer the same variable name? Justify your answer.

7. 
   a. Which MySQL command will be used to open an already existing database “Payroll”?
   b. Which column in a Bank table can be used as the primary key?
   c. The horizontal subset of a table is known as _________________
   d. Table: PatientAddr

<table>
<thead>
<tr>
<th>Pname</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kathiravan</td>
<td>Mangalore</td>
</tr>
<tr>
<td>Supriya</td>
<td>Pune</td>
</tr>
<tr>
<td>Sudhir</td>
<td>Lucknow</td>
</tr>
<tr>
<td>Kaviya</td>
<td>Bangalore</td>
</tr>
</tbody>
</table>

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

   (i) select Pname from PatientAddr where name like '%ir%';
   (ii) select Location from PatientAddr where Address like '_an%';

e. Define Candidate Key with example.

f. Write an SQL query to create the table ‘Menu’ with the following structure:

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ItemCode</td>
<td>Varchar (5)</td>
</tr>
<tr>
<td>ItemName</td>
<td>Varchar (20)</td>
</tr>
<tr>
<td>Category</td>
<td>Varchar (20)</td>
</tr>
<tr>
<td>Price</td>
<td>Decimal(5,2)</td>
</tr>
</tbody>
</table>
8.
   a. What is the purpose of DELETE TABLE command in SQL? How is it different from DROP command?
   b. Mr. Ravi is working for NEWSYSSoftware Company. He wants to save the details of all the employees. Name a database which would help him to do this job?
   c. Kiran, a student of class XI, inserted a new admission details in the table STUD as follows:
      
      insert into stud values(15, ‘Sanjith’,2002-05-04);
      
      Help Kiran to run the query by removing the errors from the query and rewriting it.
   d. Explain the purpose of Column Alias with example.
   e. Define the term clause.
   f. What is Attribute?
   g. Give the full form of DBMS.

9. Consider the following table : STAFF

<table>
<thead>
<tr>
<th>StaffID</th>
<th>SName</th>
<th>Gender</th>
<th>Experience</th>
<th>Department</th>
<th>DOJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>5600</td>
<td>Nithish</td>
<td>M</td>
<td>6</td>
<td>Biology</td>
<td>2008-06-12</td>
</tr>
<tr>
<td>4468</td>
<td>Kulkarni</td>
<td>F</td>
<td>4</td>
<td>PhysicalEdu</td>
<td>2008-03-05</td>
</tr>
<tr>
<td>5893</td>
<td>Alfred</td>
<td>M</td>
<td>3</td>
<td>ComputerSci</td>
<td>2007-03-08</td>
</tr>
<tr>
<td>2367</td>
<td>Shanthan</td>
<td>M</td>
<td>8</td>
<td>Sociology</td>
<td>2008-03-22</td>
</tr>
<tr>
<td>3572</td>
<td>Kaajal</td>
<td>F</td>
<td>3</td>
<td>Psychology</td>
<td>2010-01-03</td>
</tr>
<tr>
<td>4659</td>
<td>Rohan</td>
<td>M</td>
<td>6</td>
<td>Psychology</td>
<td>2008-06-05</td>
</tr>
<tr>
<td>4563</td>
<td>KiranKumar</td>
<td>M</td>
<td>6</td>
<td>English</td>
<td>2009-07-19</td>
</tr>
</tbody>
</table>

Write MySql commands for the questions (a) to (h) and outputs for the questions (i) to (l).

a) To display the SName and Experience all the staffs those who joined after 2005.
b) To display all the details of the female staffs.
c) To display the staff details of English Department having more than 5 years experience.
d) To display the StaffID, Sname and Gender of the staffs whose names ends with ‘n’ as the last letter.
e) To display the distinct Departments.
f) To display the SName and Department of the staffs those who are having experience in the range of 1 to 5 years.
g) To display details of all the staffs in descending order of their Experience.
h) Insert the next record with the following data:
      
      3454,Arora , M,6,English,2006-04-5

i) Select SName, Experience from Staff where Department NOT IN(‘Sociology’, ‘Psychology’, ‘Biology’);
j) Select StaffID,SName,Gender from Staff order by 4;
k) Select SName, Gender, Department from Staff where Department=’Psychology’ && Experience > 5;
l) Select StaffID, SName, Gender AS “Sex” from Staff;