GULF SAHODAYA (SAUDI CHAPTER) EXAMINATION - 2015

SUB: INFORMATICS PRACTICES 
GRADE : XI 

MARKS: 70 
TIME : 3 Hrs 

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

1. 
   a. _____ = 1024 MB
   b. Differentiate between Compiler and Interpreter.
   c. What is a Cookie?
   d. Define Output Device with 2 examples.
   e. Write down the four major functions of an operating system.
   f. Mention any four rules you follow when you decide your next password for your email-id account.

2. 
   a. What is the main difference between a while loop and a do while loop? Explain with example.
   b. Write the difference between Text Field and Text Area components.
   c. How many times the following loop gets executed?

   ```java
   i = 0;
   while (i > 20)
   {
   //Statements
   }
   ```

   d. Mr. Shobhit is creating a form to enter the details of the employees. He wants to enter the net salary in words in a text field. Which property of the TextField can be used to tell the user to enter it in words when the user moves the cursor over the component without clicking it.

   e. Write the equivalent while loop for the following:

   ```java
   int i, sum = 0;
   for (i = 1; i <= 10; i++)
   sum = sum + i;
   ```

   f. Write Java code for the following:

   ```java
   i. 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.
   ```
ii. Write Java code that takes the side of a square in TextField1 and calculate the area of square (side * side) to be displayed in TextField2.

3.

a. Differentiate between Syntax error and Runtime error with examples.

b. What will be the output of the following code?

```java
int x, y = 2;
z = --x + y++;
System.out.println(z);
System.out.println(y);
```

c. Rewrite the following program code using switch statement.

```java
if (grade == 'A')
    textField1.setText("Excellent");
else if (grade == 'B')
    textField1.setText("Very Good");
else if (grade == 'C')
    textField1.setText("Average");
else
    textField1.setText("Wrong Grade");
```

d. Will the following program execute successfully? If not, state the reason(s).

```java
int x = 20;
do
    {x % 3 = = 0}
        System.out.print(2 * x);
    else
        System.out.print(3 * x);
} while x > 0;
```

e. Design a GUI application (Grade) to calculate grade using Java NetBeans IDE. The grade is calculated depending on the percentage of mark in five subjects as English (txtEng), Accounts (txtAcc), Business Studies (txtBst), Informatics Practices (txtInf) and Economics (txtEco). The grade will be calculated as follows:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;= 90</td>
<td>A+</td>
</tr>
<tr>
<td>&gt;= 80 &amp;&lt; 90</td>
<td>A</td>
</tr>
<tr>
<td>&gt;= 70 &amp;&lt; 80</td>
<td>B</td>
</tr>
<tr>
<td>&gt;= 60 &amp;&lt; 70</td>
<td>C</td>
</tr>
<tr>
<td>&gt;= 50 &amp;&lt; 60</td>
<td>D</td>
</tr>
<tr>
<td>&lt;= 50</td>
<td>F</td>
</tr>
</tbody>
</table>

The following is the screen used to calculate student grade:
Enter roll number, name and five marks in respective text boxes and do the following:

(i) Write the code for Calculate Total, Percentage & Grade button (named as cmdCalc) to calculate total (txtTotal), percentage (txtPer) and grade (txtGr). Also display the same in respective text boxes.  

(ii) Write the code for Clear button (named as cmdClear) to clear all the textbox contents.  

(iii) Write the code for Exit button (named as cmdExit) to close the application.  

f. A loop that never ends is called ____________________________  

4. 

a. Define Candidate Key with example.  

b. Distinguish between Row and Column.  

c. What is NULL? What happens when you perform arithmetic calculations on NULL values?  

d. Define Single row functions with 2 examples.  

5. 

a. 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>
b. In a Student table, out of Roll Number, Name, Address which column can be set as Primary key and why?

2

c. What is the purpose of DROP TABLE command in SQL? How is it different from DELETE command?

2

d. Mr. Satish wants to remove a column AC_Type from the table 'Account'. Write the MySQL query to help him to do this.

1

e. A numeric data field CNT contains 35675.8765. Write a command to round off CNT to
   (i) Whole number.
   (ii) Upto 3 decimal places.

2

f. Name the commands for the following:
   (i) To create the table.
   (ii) To change the structure of the table.

2

g. Write an SQL statement to display the position of "play" in "display".

1

6. Write SQL commands for (a) to (f) on the basis of the table TRAIN and the output for (g)

6 + 4 = 10

Table : TRAIN

<table>
<thead>
<tr>
<th>No</th>
<th>TrainNo</th>
<th>Name</th>
<th>Class</th>
<th>SeatNo</th>
<th>Age</th>
<th>FareperTicket</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>S0001</td>
<td>ANU</td>
<td>I</td>
<td>11</td>
<td>16</td>
<td>700</td>
</tr>
<tr>
<td>2</td>
<td>S0002</td>
<td>SAGAR</td>
<td>AC-CHAIR</td>
<td>34</td>
<td>43</td>
<td>1300</td>
</tr>
<tr>
<td>3</td>
<td>S0003</td>
<td>SAMIR</td>
<td>AC-I</td>
<td>2</td>
<td>58</td>
<td>5000</td>
</tr>
<tr>
<td>4</td>
<td>S0004</td>
<td>GAURAV</td>
<td>II</td>
<td>23</td>
<td>17</td>
<td>600</td>
</tr>
<tr>
<td>5</td>
<td>S0005</td>
<td>KAPIL</td>
<td>I</td>
<td>3</td>
<td>25</td>
<td>1700</td>
</tr>
<tr>
<td>6</td>
<td>S0005</td>
<td>ANKUR</td>
<td>II</td>
<td>6</td>
<td>20</td>
<td>500</td>
</tr>
<tr>
<td>7</td>
<td>S0003</td>
<td>PRIYA</td>
<td>AC-II</td>
<td>2</td>
<td>11</td>
<td>1200</td>
</tr>
</tbody>
</table>

a. To display the Name and Seat No. where Class is II.

b. To display Train No. and Seat No. where the Fare per Ticket is >1300.

c. To display list of passengers having Name starting with 'A' in ascending order of Train No.

d. To display the Train numbers from the table TRAIN. A train number should appear only once.

e. To display the Name, TrainNo, SeatNo along with their Age of all the passengers.

f. To insert a new passenger in the table with the following data.
   8. 'S0002', 'RAMAMLAL', 'II', 2, 66, 3000
g. Write the output of the following SQL command [Include the last inserted values in part (i)]

(i)  Select * from Train where age between 40 and 60;
(ii) Select Name, SeatNo where Class = 'II';
(iii) Select * from Train where FareperTicket < 2000 AND Age > 30;
(iv) Select TrainNo, Name, SeatNo where Name like '_.A%';

7.

a. What is e-governance?


c. Vijayan works for the Customs Department. He wishes to create controls on a form for the following functions. Choose appropriate controls from Textbox, Label, Option button, Check box, List box, Combo box, Command button and write in the third column.

<table>
<thead>
<tr>
<th>SNo.</th>
<th>Control used to:</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enter last name</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Enter gender</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Choose city from a list of cities</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>To enter suggestion in the form of a paragraph</td>
<td></td>
</tr>
</tbody>
</table>

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