SECOND TERM EXAMINATION, 2011–2012
INFORMATICS PRACTICES (065)
CLASS–XII
M.M. : 70

General Instructions:
(i) All questions are compulsory.
(ii) Programming Language is Netbeans, Mysql.

1. (a) Which of the following is not a characteristic of open source software? (1)
   (i) Its source code is available for modification.
   (ii) It is owned by a company or an individual.
   (iii) It can be downloaded by Internet.

(b) A table ACCOUNT in a database has 6 columns and 60 rows. The DBA has added 3 more columns and 50 more rows to the table. But the table has about 15 records where balance is null. What is the degree and cardinality of this table now? (1)

(c) Define the following: (1)
(d) (i) Hub (ii) Switch

(e) Which of the following software’s are open source: (1)
   LINUX, MS WINDOWS 7, PHOTOSHOP, MYSQL

(f) What is snooping and phishing? (2)

(g) Explain the difference between domain name and URL with the help of appropriate example of each. (2)

(h) List down merits of open standards. (2)

2. (a) ABC public school has developed a JAVA application through which the parents are able to see their deposited fee details of their ward. What should the school do so that parents/students are able to view the details shown in text field without being able to modify them? (1)

(b) While working in Netbeans, Rajmeeta included a Listbox in the form. Now she wants the list of her friends’ names to be displayed in it. Which property of Listbox control should she use to do this? (1)

(c) What is the basic structure of HTML file? (1)

(d) Is justified alignment to a paragraph assigned in HTML? Justify your answer. (1)

(e) Write code in Java to find out if the number is palindrome or not. (2)

(f) What will be the values of x and y after execution of the following code? (2)
   ```
   int x, y = 0;
   for(x=1; x<5; ++x)
   ```

P.T.O.
y = x++;  
--y;  

(g) Write down some features of XML.  

3.  
(a) If a database "Employee" exists, which Mysql command helps you to start working in that database?  

(b) The LastName column of a table "Directory" is given below:  

LastName  
Batra  
Sehgal  
Bhatia  
Sharma  
Mehta  

Based on this information, find the output of the following queries:  
(i) SELECT lastname FROM Directory WHERE lastname like "_a%";  
(ii) SELECT lastname FROM Directory WHERE lastname not like "%a".  

(c) Rajan created a table named Item, he wants to see those items whose price is between 200 and 800. He wrote a query-  

SELECT * FROM Item WHERE price > 200 OR < 800;  

Help Rajan to run the query by removing the errors from the query by rewriting it.  

(d) Sanket wants to implement referential integrity in the tables being created. Which constraint should be used by Sanket while doing so?  

(e) What is the role of primary key in the table?  

(f) Write SQL command to display current system date.  

(g) How can we see the list of existing tables?  

(h) Which two statements complete a transaction?  

- DELETE emp;  
- DESCRIBE emp;  
- ROLLBACK TO SAVEPOINT C;  
- GRANT SELECT ON emp TO SCOTT;  
- ALTER TABLE emp MODIFY COLUMN sal;  
- SELECT MAX(sal) FROM emp WHERE dept_id = 10;Sadsa  

4.  
(a) Define a class with reference to object oriented programming.  

(b) What will be the content of jtextField1 after executing the following code:  

int Num = 6;  
Num = Num + 1;  
if ( Num > 5)
(c) Rewrite the following program code using switch statement:

```java
if (d == 1)
    day = "Monday";
else if (d == 2)
    day = "Tuesday";
else if (d == 3)
    day = "Wednesday";
else
day = "-";
```

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

```java
int i=2; j=5;
while j>i
    jTextField1.setText("j is greater");
    j--;++i;
    JOptionPane.showMessageDialog("Hello");
```

(e) What will be the contents of `jTextField1` and `jTextField2` after executing the following code:

```java
String s = "ABC Micro Systems";
jTextField1.setText(s.length()+" ");
jTextField2.setText(s.toLowerCase());
```

(f) Richika is a programmer at Alpha Builders. To calculate wages to be paid to labourers she has developed the following GUI in Netbeans
Male and Female labourers are respectively paid at the rate of Rs. 140/- per day and Rs. 160/- per day. Skilled labourers are paid extra at the rate of Rs. 50/- per day.

(i) What should be done, so that only one of the radio buttons (Male and Female) can be selected at a time?  
(ii) Write code to do the following:
   (a) Calculate and display the Total wages in corresponding label when the “Calculate Wages” button is pressed.
   (b) Clear the Name and No. of days worked text fields.
   (c) Close the application when the “STOP” button is pressed.
   (Assume any suitable names for various controls on the form)

5. (a) What is a datatype? Name some datatypes used in MySQL?  
(b) Consider the table HOSPITAL given below. Write command in SQL for the following questions:
   (i) To show all information about the patients of cardiology department.
   (ii) To list the names of female patients who are in orthopedic department.
   (iii) To display patients name, charges, age for only male patients.
   (iv) To count the number of patients with age>30.

<table>
<thead>
<tr>
<th>NO.</th>
<th>NAME</th>
<th>Age</th>
<th>Department</th>
<th>Date of adm.</th>
<th>Charges</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tarun</td>
<td>12</td>
<td>Surgery</td>
<td>01/01/98</td>
<td>300</td>
<td>M</td>
</tr>
<tr>
<td>2</td>
<td>Zubin</td>
<td>36</td>
<td>Orthopedic</td>
<td>12/01/98</td>
<td>250</td>
<td>F</td>
</tr>
<tr>
<td>3</td>
<td>Ankita</td>
<td>16</td>
<td>Orthopedic</td>
<td>24/02/98</td>
<td>300</td>
<td>F</td>
</tr>
</tbody>
</table>

(i) Select round(29.21,1), round(32.76,1);  
(ii) Select power(2,5);  
(d) What is a join? Explain with a suitable query?

6. (a) Write an SQL query to create the table ‘Menu’ with the following structure:

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Constraint</th>
</tr>
</thead>
<tbody>
<tr>
<td>ItemCode</td>
<td>Varchar(5)</td>
<td>Primary Key</td>
</tr>
<tr>
<td>Item Name</td>
<td>Varchar(20)</td>
<td>Default ‘CPU’</td>
</tr>
<tr>
<td>Category</td>
<td>Varchar(20)</td>
<td>Check either Software or Hardware</td>
</tr>
<tr>
<td>Price</td>
<td>Decimal(5,2)</td>
<td>Greater than 1000</td>
</tr>
</tbody>
</table>
(b) In a database there are two tables 'Patient' and 'Doctors' are shown below:

<table>
<thead>
<tr>
<th>Name</th>
<th>Patient_No.</th>
<th>Date_Adm</th>
<th>Doctor_No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kishor</td>
<td>P104</td>
<td>2009-05-15</td>
<td>502</td>
</tr>
<tr>
<td>Ragini</td>
<td>P202</td>
<td>2010-01-11</td>
<td>165</td>
</tr>
<tr>
<td>Reshu</td>
<td>P754</td>
<td>2007-12-31</td>
<td>325</td>
</tr>
<tr>
<td>Kanti</td>
<td>P612</td>
<td>2010-04-22</td>
<td>165</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Doctor_No.</th>
<th>Doctor_Name</th>
<th>Speciality</th>
</tr>
</thead>
<tbody>
<tr>
<td>122</td>
<td>M. K Singh</td>
<td>Dentist</td>
</tr>
<tr>
<td>165</td>
<td>R. K. Tiwari</td>
<td>Neurology</td>
</tr>
<tr>
<td>325</td>
<td>V. K. Chauhan</td>
<td>Surgery</td>
</tr>
<tr>
<td>502</td>
<td>N. Singh</td>
<td>Nephrology</td>
</tr>
<tr>
<td>530</td>
<td>K. P. Sinha</td>
<td>Urology</td>
</tr>
</tbody>
</table>

(i) Name the columns which can be made Primary Key in both the tables.
(ii) What will be the cardinality of Cartesian product of both the tables?

(c) Consider the tables given below:

<table>
<thead>
<tr>
<th>Table : Books</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Book_Id</th>
<th>Book_Name</th>
<th>Author_Name</th>
<th>Publisher</th>
<th>Price</th>
<th>Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>B0001</td>
<td>Harry Potter</td>
<td>J.K. Rolling</td>
<td>BPB</td>
<td>525</td>
<td>Fiction</td>
<td>15</td>
</tr>
<tr>
<td>B0013</td>
<td>Vision 2020</td>
<td>A.P.J.A. Kalam</td>
<td>TMH</td>
<td>333</td>
<td>Informative</td>
<td>10</td>
</tr>
<tr>
<td>B0152</td>
<td>Let Us C++</td>
<td>Y.K</td>
<td>BPB</td>
<td>625</td>
<td>Text</td>
<td>50</td>
</tr>
<tr>
<td>B1102</td>
<td>Applied Physics</td>
<td>H.C. Verma</td>
<td>745</td>
<td>Text</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>B2314</td>
<td>Godan</td>
<td>Premchand</td>
<td>125</td>
<td>Novel</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table : Issued</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Book_Id</th>
<th>Date of Issue</th>
<th>Member_ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>B0152</td>
<td>15-12-2010</td>
<td>M008</td>
</tr>
<tr>
<td>B2314</td>
<td>25-10-2010</td>
<td>M112</td>
</tr>
<tr>
<td>B0001</td>
<td>31-12-2010</td>
<td>M110</td>
</tr>
</tbody>
</table>

With reference to these tables, write commands in SQL for (i) and (ii) and output for (iii) below-

(i) To display the name of the book issued to member M112.
(ii) To display the type wise no. of books and total quantity of all type of books.
(iii) SELECT Book_Name, Quantity FROM Books WHERE publisher IN("TMH", NULL);
7.  (a) What benefit does an e-business offer to the customers? (1)
(b) How has society benefited from e-governance? (2)
(c) Mr. Kartik is working as a Manager in Flash Telecomm. He wants to create the forms with the following functions. Choose appropriate controls from Text Field, Label, Radio Button, Check Box, List Box, Combo Box, Command Button and write in the third column. (2)

<table>
<thead>
<tr>
<th>S No.</th>
<th>Control Used to</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Enter Name of Customer</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Enter Mobile No.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Select Connection Type</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Display total Amount of Bill</td>
<td></td>
</tr>
</tbody>
</table>