Sample Paper : 2013-14

MM-70

Class – XII   **Subject : Informatics Practices (065)**   **Time - 3 Hrs.**

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Note: **(i)** Programming Language – Java & MySql

(ii) Write answers of all the sub-questions of each question together.

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1. a) Which transmission medium should be used to transfer data across two continents at very high speed ?   [1]

   b) Suresh wants to upload and download files from/to a remote internet server, write the name of the relevant communication protocol, which will let him to do the same.   [1]

   c) Two neighbourhood schools, at a distance of 120 meters from each other, decide to join their LANs using UTP cable, so that they can share their e-learning resources. But, after joining their LANs they are not able to share the resources due to loss of signal in-between. Which device should they use so that signal is amplified in-between ?   [1]

   d) Arrange the following communication channels in ascending order of their data transmission rates.   [1]

     Ethernet Cable, Optical Fiber, Telephone Cable, Co-axial Cable

   e)   Differentiate between Hub and Switch.   [2]

   f)   Define the following : (i) Snooping   (ii) W3C   [2]

   g)   What is Linux?   [2]

2. a) While making a form in NetBeans, Mr. Rakesh wants to display a list of countries to allow the users to select their own country. Suggest him to choose most appropriate control out of ListBox and ComboBox.   [1]

   b) How can we make a textField uneditable on a frame?   [1]

   c) What is DTD?   [1]

   d) Write the use of <H1> tag in HTML.   [1]

   e) What will be the value of x and y after execution of the following code-   [2]

```
int x , y = 0 ;
for (x  = 1 ; x < = 5 ;  ++x )  {
    y = x++
    y -- ;       }
```

f) Mention the purpose of each of the following HTML tags-   [2]

         <IMG>,   <P>,   <HR>,   <U>

g) Write a java code that takes the price of a fan from jTextField1 and quantity of fan from jTextField2 and calculates total amount as price * quantity to be displayed in jTextField3 and also find 10% tax amount to be displayed in jTextField4.   [2]

Q.3)   a) Which command is used in MySQL to make the changes in database permanently?   [1]

      b) Neena is not able to change a value in a column to NULL. What constraint did she specify when she created the table.   [1]

      c) Ms. Rekha created two tables with RollNo as primary key in Table1 and foreign key in Table2. While inserting a row in Table2, she is not able to enter a value in the column RollNo. What could be the possible reason for it?   [1]

      d) A table EMPLOYEE in a database has 5 columns and five rows in it. What is its cardinality? What will be its cardinality, if 3 rows are added in the table?   [1]

      e) A phone_no consisting of 10 digits is stored in a string variable strPhone. Now Ms. Sudha wants to store this number in integer type of variable intPhone. Write a java statement to do this.   [2]

      f) Amit created a table called Supplier in MySQL. He does not require the email_ID column available in the Supplier table. Which command will he issue to remove the email_ID from the Supplier table.   [2]

      g) The Book_No and Title columns of a table "Library" are given below :

Book_No	Title
101	Basic For Beginners
102	Teach Yourself C++
103	Data Structure
104	Mastering FoxPro 2.6
105	Relational Database Management System

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

(i) Select Title from Library whre Title like '%e' ;

(ii) Select Title from Library where Book_No < 103 ;

h)   Differentiate between alternate key and candidate key.   [2]

4)   a)   What message will be displayed after the execution of the following code
                                                                                      [1]

```
int a = 50, b = 35 ;
int c = a - b ;
c = c + 15 ;
 if (c <= 25)
        jOptionPane.showMessageDialog (null, "Very");
 else
        jOptionPane.showMessageDialog (null, "Nice");
```
                                                                          Pg – 2 /6

   b) Write about Inheritance with reference to Object Oriented Programming (OOP)?   [1]

   c)   Why it is necessary to put break statement after every case in a switch statement?   [1]

   d)   (i) How many times the following loop gets executed ?   [1 + 1]
```
int x = 20  , y = 50 ;
while (x <= y)
  {   x += 5 ;
  }
```

        (ii)   What will be contents of jTextField1 and jTextField2 after executing the
                following code:
                jTextField1.setText(S.toUpperCase());
                jTextField2.setText("" + Math.pow(4,3));

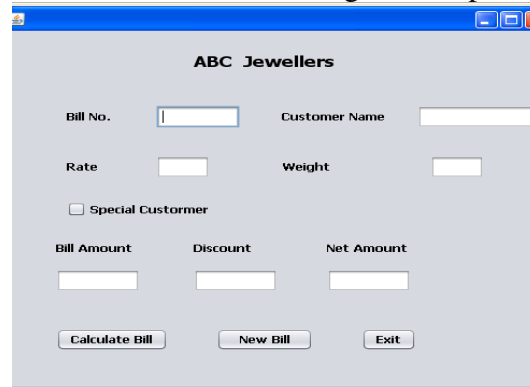   e) Convert the following code using **switch**   [2]

```
if (CNum  = =  1)
        Comp = "Yamaha" ;
else if (BNum = =  2)
        Comp = "Honda" ;
else if (code = =  3)
        Comp = "Hero" ;
else if (code = =  4)
        Comp = "TVS" ;
else
        Comp = "Mahindra…" ;
```

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f) The following code has some errors. Rewrite the correct code underlining all the correction made. [2]

```
Int x = 7 ; sum   0;   // declaring x and sum as integer
   {   sum = x ;
        x += 5 ;
   } while (x =< 30)
jTextField1 (Integer.toString (sum)) ;
```

g) ABC Jwellers has developed a GUI application to calculate the Bill amount for its shop as shown below. Note - 10 % discount will be given to special customers

(i) Write the code to make the textFields for Bill Amount, Discount and Net Amount un-editable. [1]

(ii) Write code to do the following:

(a) Calculate the Bill Amount, Discount and Net amount and display them in respective textFields when "Calculate Bill" button is pressed. [3]

(b) Clear all the textFields and uncheck the Special Customer check box when the "New Bill" button is pressed. [2]

(You can assume any suitable names for various controls on the form)

5) (a) Differentiate between Drop Table and Delete command used in MySQL. [2]

(b) Write the output of the following SQL queries – [2]

(i) Select INSTR ('INFORMATICS PRACTICES', 'IC') ;

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(ii) Select TRUNCATE(7363.32,1) ;

(iii) Select RIGHT('I AM THE BEST', 6) ;

(iv) Select DayName('2014-02-10') "Today is" ;

(c) Consider the table ITEM given below. Write the commands in SQL for (i) to (iv) and output for (v) to (viii)   [6]

S_No	Item_Name	Company	Cost	Pur_Qty	Dt_of_Pur
1	Monitor	Samsung	6300	20	2010-05-30
2	CPU	Intel	8000	30	2010-07-23
3	Mouse	Samsung	250	25	2010-08-14
4	UPS	Intex	2100	10	2010-06-19
5	Printer	HP	8400	4	2010-11-27
6	Scanner	HP	4500	6	2010-08-14

(i)   to display Name of the item and cost of those items, which were purchased after 02-Aug-2010.

(ii)   to display information of those items whose purchase quantity is more than 10 arranged by date of purchase.

(iii) To display the average cost pirce of the items of HP company.

(iv)   To show all the information of those items whose name starts with the letter 'M'

(v)   Select count(*) form Item where cost > 6000 and Pur_Qty < 25 ;

(vi)   Select Max(Pur_Qty) from Item where cost < 5000;

(vii) Select Avg(Cost) from Item where Pur_Qty < 25 ;

(viii) Select Cost + 200 as "Selling_Price" from Item where Item_Name = 'CPU'

6) (a) Write SQL command to create the following table 'Voter' with following structure-   [2] Pg – 4 /6

Field Name	Field Type	Constraint
Voter_ID	Integer(8)	Primary Key
Voter	Integer(8)	Not Null
Gender	Char(1)	
Address	Varchar(25)	
City	Varchar(15)	

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(b) In a database, there are two tables   [2]

PRODUCT

PROD_ID	PROD_NAME	PRICE
P001	Floppy	10
P002	CD	15
P003	DVD	25

ORDERS

ORD_NO	ORD_DT	PROD_ID	QTY
1	2010-08-04	P004	500
2	2010-09-12	P001	150
3	2010-07-16	P003	200
4	2010-1-02	P001	250
5	2010-10-26	P002	400

    (i)   Identify the foreign key column in the table Orders.

    (ii)   How many rows and columns will be there in the Cartesian Product of these two tables.

(c) Consider the tables Patient and Test given below :   [6]

Patient

Name	Sex	Address	City	T_Code
Pushpa	F	379, Sec-1	Rohtak	4
Mohit	M	218, Sanjay Nagar	Sonipat	1
Sonia	F	32, Luxmi Nagar	Gohana	2
Anu	F	212, Karol Bagh	Delhi	3
Anupam	M	184, D.L.F.Colony	Rohtak	2
Nidhi	F	1247, Sec-1	Panipat	4

TEST

T_Code	Test_Name	Charges
1	Hemoglobin	20
2	TLC/DLC	100
3	Urine	40
4	Thyroid	350

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

    (i)   Display Patient name, Sex, City and Test Name of the patients of Rohtak City.

    (ii)   Display the patient details for all Thyroid patients.

    (iii)   Select Count(name) from patient, test where Test.T_Code = Patient.T_Code and Test_Name = 'TLC/DLC';

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Q.7)   (a) What is an Interface ?   [1]

         (b) How is E-Learning beneficial to the students?   [2]

         (c) What controls will you suggest for the following inputs: [2]

S.No	Controls Used to	Control
1	A mouse click	
2	Typed Text (Single Line)	
3	Typed text which should remain hidden	
4	Multiple items from a group of names	

=====*****=====

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