CBSE Class 12 Informatics Practices 2012 - Set 90 (Series SMA)

Question Paper

Conducted by the Central Board of Secondary Education (CBSE)

Time Allowed: 3 Hours **Maximum Marks: 70**

General Instructions

(i) This question paper contains 7 questions.

(ii) All questions are compulsory, except where an internal choice is provided.

(iii) Read each question carefully before answering it.

Questions

1(a). Raj Kamal International School is planning to connect all computers, each spread over distance within 45 meters. Suggest an economical cable type having high-speed data transfer, which can be used to connect these computers.

1(b). Name two Indian Scripts included in UNICODE.

1(c). Write examples of one Proprietary and one Open Source Software.

1(d). Name any two most popularly used internet browsers.

1(e). Ms. Rani Sen, General Manager of Global Nations Corporate recently discovered that the communication between her company's accounts office and HR office is extremely slow and signals drop quite frequently. These offices are 125 metres away from each other and connected by an ethernet cable.

(i) Suggest her a device, which can be installed in between the offices for smooth communication.

(ii) What type of network is formed by having this kind of connectivity out of LAN, MAN and WAN?

1(f). Give an advantage of using Star topology over Bus topology. Show a network layout of Star topology to connect 5 computers.

1(g). Give suitable example of URL and Domain name.

2(a). While making a Form in Netbeans, Mr. Harihar Jha 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.

2(b). What is the purpose of break keyword while using Switch Case Statement? Illustrate with the help of an example.

2(c). Write the name of HTML tag used to include numbered list in a HTML Web Page.

2(d). Write HTML code for the following: To provide hyperlink to a website "http://www.cbse.nic.in"

2(e). What will be the content of the jTextArea1 after executing the following code (Assuming that the jTextArea1 had no content before executing this code)?

```
for (int C=1; C=4; C++)
{
   jTextArea1.setText(
      jTextArea1.getText() + " " +
      Integer.toString(C*C));
}
```

2(f). Which of the following units measures the speed with which data can be transmitted from one node to another node of a network? Also give the expansion of the suggested unit.

(i) KMph

(ii) KMpl

(iii) Mbps

2(g). Write Java code that takes value for a number (n) in jTextField1 and cube (n*n*n) of it to be displayed in jTextField2.

3(a). Write MySql command to open an existing database.

3(b). Ms. Mirana wants to remove the entire content of a table "BACKUP" alongwith its structure to release the storage space. What MySql statement should she use?

3(c). Give one difference between ROLLBACK and COMMIT commands used in MySql.

3(d). A table STUDENT has 4 rows and 2 columns and another table TEACHER has 3 rows and 4 columns. How many rows and columns will be there if we obtain the Cartesian product of these two tables?

3(e). Mr. Sanghi created two tables with CITY as Primary Key in Table1 and Foreign Key in Table2. While inserting a row in Table2, Mr. Sanghi is not able to enter a value in the column CITY. What could be the possible reason for it?

3(f). 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(s) to help her in performing the same.

3(g). Mr. Janak is using a table with following columns:

Name, Class, Course_Id, Course_name

He needs to display names of students, who have not been assigned any stream or have been assigned Course_name that ends with "economics".

He wrote the following command, which did not give the desired result.

```
SELECT Name, Class FROM Students
WHERE Course_name = NULL OR
Course_name="%economics";
```

Help Mr. Janak to run the query by removing the error and write the correct query.

4(a). What message will be displayed after the execution of the following code?

```
int Age=64,Relaxation=4;
int ModiAge=Age-Relaxation;
if (ModiAge<60)
   jOptionPane.showMessageDialog(Null,"NOT
eligible");
else
   JOptionPane.showMessageDialog(Null,
"Eligible");
```

4(b). Rewrite the following program code using a If statement:

```
int C=jComboBox1.getSelectedIndex();
switch(C)
{
   case 0 : Amount=Bill;break;
   case 1 : Amount=0.9*Bill;break;
   case 2 : Amount=0.8*Bill;break;
   default : Amount=Bill;
}
```

4(c). How many times does the following while loop get executed?

```
int K=5;
int L=36;
while (K<=L)
{
   K+=6;
}
```

4(d). What will be displayed in jTextArea1 after executing the following statement?

```
jTextArea1,setText
("GREAT\nCOUNTRY\tINDIA");
```

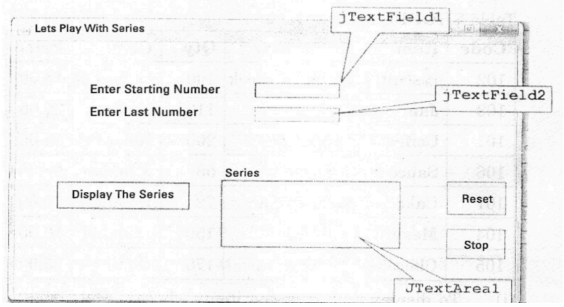
4(e). What will be the values of variables 'm' and 'n' after the execution of the following code?

```
int P,Q=0;
for(P=1;P<=4;P++)
{
   Q+=P;
   Q--;
}
```

4(f). Given a string object named Pay having value as "68000" stored in it. Obtain the output of the following:

```
JOptionPane.showMessageDialog(null,
   "
"+Salary.length()+Integer.parseInt(Salary)
);
```

4(g)(i). Janav Raj is a programmer at Path Educo Enterprises. He created the following GUI in NetBeans. Help him to write code for the following :



(i) To display series of odd or even numbers (depending on Starting Number - jTextField1 is even or odd) in the jTextArea on the click of command button [Display The Series].

For example:

If the Start Number is 5 and Last Number is 11, Text Area Content will be: 5 7 9 11

If the Start Number is 2 and Last Number is 10, Text Area Content will be: 2 4 6 8 10

4(g)(ii). Janav Raj is a programmer at Path Educo Enterprises. He created the following GUI in NetBeans. Help him to write code for the following :

(ii) To clear both the text fields and text area, on clicking [Reset] button.

4(g)(iii). Janav Raj is a programmer at Path Educo Enterprises. He created the following GUI in NetBeans. Help him to write code for the following :

(iii) To terminate the application on the click of [Stop] button. (Assume Suitable names for the various controls on the Form)

5(a). What is the purpose of ORDER BY clause in MySql? How is it different from GROUP BY clause?

5(b). Table SCHOOL has 4 rows and 5 columns. What is the Cardinality and Degree of this table?

5(c)(i). Consider the Table SHOPPE given below. Write command in MySql for (i) to (iv) and output for (v) to (vii).

Table SHOPPE:

Code	Item	Company	Qty	City	Price
102	Biscuit	Hide & Seek	100	Delhi	10.00
103	Jam	Kissan	110	Kolkata	25.00
101	Coffee	Nestle	200	Kolkata	55.00
106	Sauce	Maggi	56	Mumbai	55.00
107	Cake	Britannia	72	Delhi	10.00
104	Maggi	Nestle	150	Mumbai	10.00
105	Chocolate	Cadbury	170	Delhi	25.00

(i) To display names of the items whose name starts with 'C' in ascending order of Price.

5(c)(ii). Consider the Table SHOPPE given below. Write command in MySql for (i) to (iv) and output for (v) to (vii).

Table SHOPPE:

Code	Item	Company	Qty	City	Price
102	Biscuit	Hide & Seek	100	Delhi	10.00
103	Jam	Kissan	110	Kolkata	25.00
101	Coffee	Nestle	200	Kolkata	55.00
106	Sauce	Maggi	56	Mumbai	55.00
107	Cake	Britannia	72	Delhi	10.00
104	Maggi	Nestle	150	Mumbai	10.00
105	Chocolate	Cadbury	170	Delhi	25.00

(ii) To display Code, Item name and City of the products whose quantity is less than 100.

5(c)(iii). Consider the Table SHOPPE given below. Write command in MySql for (i) to (iv) and output for (v) to (vii).

Table SHOPPE:

Code	Item	Company	Qty	City	Price
102	Biscuit	Hide & Seek	100	Delhi	10.00
103	Jam	Kissan	110	Kolkata	25.00
101	Coffee	Nestle	200	Kolkata	55.00
106	Sauce	Maggi	56	Mumbai	55.00
107	Cake	Britannia	72	Delhi	10.00
104	Maggi	Nestle	150	Mumbai	10.00
105	Chocolate	Cadbury	170	Delhi	25.00

(iii) To count distinct Company from the table.

5(c)(iv). Consider the Table SHOPPE given below. Write command in MySql for (i) to (iv) and output for (v) to (vii).

Table SHOPPE:

Code	Item	Company	Qty	City	Price
102	Biscuit	Hide & Seek	100	Delhi	10.00
103	Jam	Kissan	110	Kolkata	25.00
101	Coffee	Nestle	200	Kolkata	55.00
106	Sauce	Maggi	56	Mumbai	55.00
107	Cake	Britannia	72	Delhi	10.00
104	Maggi	Nestle	150	Mumbai	10.00
105	Chocolate	Cadbury	170	Delhi	25.00

(iv) To insert a new row in the table Shoppe: '110','Pizza','Papa Jones',120,"Kolkata",50.0

5(c)(v). Consider the Table SHOPPE given below. Write command in MySql for (i) to (iv) and output for (v) to (vii).

Table SHOPPE:

Code	Item	Company	Qty	City	Price
102	Biscuit	Hide & Seek	100	Delhi	10.00
103	Jam	Kissan	110	Kolkata	25.00
101	Coffee	Nestle	200	Kolkata	55.00
106	Sauce	Maggi	56	Mumbai	55.00
107	Cake	Britannia	72	Delhi	10.00
104	Maggi	Nestle	150	Mumbai	10.00
105	Chocolate	Cadbury	170	Delhi	25.00

(v) `Select Item from Shoppe where Item IN("Jam", "Coffee");`

5(c)(vi). Consider the Table SHOPPE given below. Write command in MySql for (i) to (iv) and output for (v) to (vii).

Table SHOPPE:

Code	Item	Company	Qty	City	Price
102	Biscuit	Hide & Seek	100	Delhi	10.00
103	Jam	Kissan	110	Kolkata	25.00
101	Coffee	Nestle	200	Kolkata	55.00
106	Sauce	Maggi	56	Mumbai	55.00
107	Cake	Britannia	72	Delhi	10.00
104	Maggi	Nestle	150	Mumbai	10.00
105	Chocolate	Cadbury	170	Delhi	25.00

(vi) `Select Count(distinct(City)) from Shoppe;`

5(c)(vii). Consider the Table SHOPPE given below. Write command in MySql for (i) to (iv) and output for (v) to (vii).

Table SHOPPE:

Code	Item	Company	Qty	City	Price
102	Biscuit	Hide & Seek	100	Delhi	10.00
103	Jam	Kissan	110	Kolkata	25.00
101	Coffee	Nestle	200	Kolkata	55.00
106	Sauce	Maggi	56	Mumbai	55.00
107	Cake	Britannia	72	Delhi	10.00
104	Maggi	Nestle	150	Mumbai	10.00
105	Chocolate	Cadbury	170	Delhi	25.00

(vii) `Select MIN(Qty) from Shoppe where City="Mumbai";`

6(a). Write MySql command to create the Table STOCK including its Constraints.

Table STOCK:

Name of Column	Type	Size	Constraint
Id	Decimal	4	Primary Key
Name	Varchar	20	
Company	Varchar	20	
Price	Decimal	8	Not Null

6(b)(i). In a Database there are two tables:

Table ITEM:

ICode	Iname	Price
101	Television	75000
202	Computer	42000
303	Refrigerator	90000
404	Washing Machine	27000

Table BRAND:

ICode	Brand
101	Sony
202	HP
303	LG
404	IFB

Write MySql queries for the following:

(i) To display ICode, IName and corresponding Brand of those Items, whose Price is between 20000 and 45000 (both values inclusive).

6(b)(ii). In a Database there are two tables:

Table ITEM:

ICode	Iname	Price
101	Television	75000
202	Computer	42000
303	Refrigerator	90000
404	Washing Machine	27000

Table BRAND:

ICode	Brand
101	Sony
202	HP
303	LG
404	IFB

Write MySql queries for the following:

(ii) To display ICode, Price and BName, of the item which has IName as "Television".

6(b)(iii). In a Database there are two tables:

Table ITEM:

ICode	Iname	Price
101	Television	75000
202	Computer	42000
303	Refrigerator	90000
404	Washing Machine	27000

Table BRAND:

ICode	Brand
101	Sony
202	HP
303	LG
404	IFB

Write MySql queries for the following:

(iii) To increase the price of all the Items by 15%.

6(c)(i). Given below is a Table Patient.

Name	P_No	Date_Admn	Doc_No
Vimla Jain	P0001	2011-10-11	D201
Ishita Kohli	P0012	2011-10-11	D506
Vijay Verma	P1002	2011-10-17	D201
Vijay Verma	P1567	2011-11-22	D233

(i) Identify Primary key in the table given above.

6(c)(ii). Given below is a Table Patient.

Name	P_No	Date_Admn	Doc_No
Vimla Jain	P0001	2011-10-11	D201
Ishita Kohli	P0012	2011-10-11	D506
Vijay Verma	P1002	2011-10-17	D201
Vijay Verma	P1567	2011-11-22	D233

(ii) Write MySql query to add a column Department with data type varchar and size 30 in the table Patient.

7(a). What social impact does e-Governance have on society?

7(b). Write two important features of e-Business. Give two most commonly used e-Business sites.

7(c). Mr. Anurag Das working as Manager in Vivian Enterprises wants to create a form in NetBeans to take various inputs from user. Choose appropriate controls from Label, TextBox, Radio Button, CheckBox, ListBox, ComboBox & Command Button and write them in the third column:

SNo	Control used to	Control
1.	Enter Name, Address and Salary	
2.	Select Gender (Male/Female)	
3.	Select Department from available List	
4.	Choose Hobby of Employee (Singing/Dancing/Skating/Swimming)	

- End of Question Paper -