CBSE Class 12 Informatics Practices 2015 - Set Set-4 (Series SSO), Code 90

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). A school with 20 stand-alone computers is considering networking them together and adding a server. State 2 advantages of doing this.

1(b). Distinguish between LAN and WAN.

1(c). What is the purpose of Modem in network ?

1(d). Write one example of IP Address.

1(e). Define 'Domain Name Resolution'.

1(f). Name two threats to security in a network. What is the role of Firewall in Network security ?

1(g). Write one advantage and one disadvantage of Open Source software over Proprietary software.

2(a). Write the value of variable 'c' after execution of the following code:

```
int d;
int c;
d=7;
c = (5*++d) %3;
```

2(b). What is the difference between jTextField and jPasswordfield components ?

2(c). In a SWITCH statement, what is the purpose of 'default' section ?

2(d). After typing the HTML code using a text editor, how do you see how it would look as a web page ?

2(e). Write Java code to assign the value 500 to variable x. Increase the value of x by 50 and store it in variable y.

2(f). Write the output that will be generated by the code given below:

```
int i;
i = 7;
int r;
r=8;
while (i<=10)
{
  System.out.println(r*i);
  i = i+2;
}
```

2(g). "With XML there are no predefined tags" – Explain in brief with the help of an example.

3(a). What is MySQL ?

3(b). Is NULL value the same as 0 (zero) ? Write the reason for your answer.

3(c). Write the UPDATE command to increase the commission (Column name : COMM) by 500 of all the Salesmen who have achieved Sales (Column name : SALES) more than 200000. The table's name is COMPANY.

3(d). While using SQL pattern matching, what is the difference between '_' (underscore) and '%' wildcard symbols ?

3(e). How is Primary key constraint different from Unique key constraint ?

3(f). Write one similarity and one difference between CHAR and VARCHAR data types.

3(g). What is a Transaction ? Which command is used to make changes done by a Transaction permanent on a database ?

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

```
int marks, temperature;
marks = jTextField1.getText());
temperature =
Integer.parseInt(jTextField2.getText());
if (marks < 80) and (temperature >= 40)
{
  System.out.println("Not Good");
}
else;
{
  System.out.println("OK");
}
```

4(b). How many times will the following WHILE loop execute ?

```
int y = 7, sum = 0;
while (y<=15)
{
  sum = sum + y;
  y = y+2;
}
```

4(c). Rewrite the following program code using IF ELSE IF instead of SWITCH statement :

```
String tour;
int cl =
Integer.parseInt(jTextField1.getText());
switch (cl)
{
 case 8:  tour = "\n You are going to Camp
Ramgarh";
          break;
 case 9:  tour = "\n You are going to
Manali, Rohtang
Pass"; break;
 case 10: tour = "\n You are going to
Chail";
          break;
default: tour = " No School tour for you
this time";
}
```

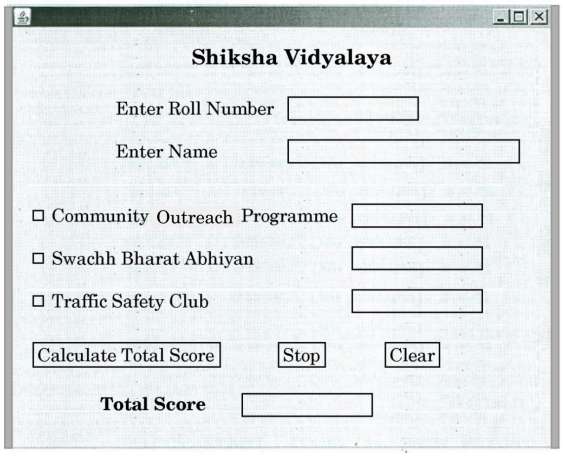
4(d). Write the values of sum and x after execution of the following code:

```
int sum,x;
sum = 7;
x = 5;
sum = sum + (x++);
```

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

```
String s = "Best";
jTextField1.setText(s.length()+" ");
jTextField2.setText(s.toUpperCase());
```

4(f). The students of "Shiksha Vidyalaya" work for different extra curricular activities like 'Community Outreach Programme', 'Swachh Bharat Abhiyan' and 'Traffic Safety Club'. The Programmer at the school has developed a GUI application as shown below:



- A student can participate in more than one activities.
- Each student gets 10 points for each activity – namely Community Outreach Programme, Swachh Bharat Abhiyan and Traffic Safety Club.

Help the programmer to write code for the following:

4(f)(i). (i) When 'Calculate Total Score' button is clicked, the points for each activity (that is selected) should be displayed in the text field in front of that activity's checkbox and the Total Score should be displayed in the appropriate Text field.

4(f)(ii). (ii) When Clear button is clicked, all the Textfields and Checkboxes should be cleared.

4(f)(iii). (iii) When Stop button is clicked, the application should close.

5(a). Distinguish between Single Row and Aggregate functions of MySQL. Write one example of each.

5(b). Consider the following table named "SOFTDRINK". Write commands of SQL for (i) to (iv) and output for (v) to (vii).

Table: SOFTDRINK

DRINKCODE	DNAME	PRICE	CALORIES
101	Lime and Lemon	20.00	120
102	Apple Drink	18.00	120
103	Nature Nectar	15.00	115
104	Green Mango	15.00	140
105	Aam Panna	20.00	135
106	Mango Juice Bahaar	12.00	150

5(b)(i). (i) To display names and drink codes of those drinks that have more than 120 calories.

5(b)(ii). (ii) To display drink codes, names and calories of all drinks, in descending order of calories.

5(b)(iii). (iii) To display names and price of drinks that have price in the range 12 to 18 (both 12 and 18 included).

5(b)(iv). (iv) Increase the price of all drinks in the given table by 10%.

5(b)(v). (v)
```
SELECT COUNT(DISTINCT(PRICE))
FROM SOFTDRINK;
```

5(b)(vi). (vi)
```
SELECT MAX (CALORIES) FROM
SOFTDRINK;
```

5(b)(vii). (vii)
```
SELECT DNAME FROM SOFTDRINK
WHERE DNAME LIKE "%Mango%";
```

5(c). What is the degree and cardinality of 'SOFTDRINK' TABLE ?

Table: SOFTDRINK

DRINKCODE	DNAME	PRICE	CALORIES
101	Lime and Lemon	20.00	120
102	Apple Drink	18.00	120
103	Nature Nectar	15.00	115
104	Green Mango	15.00	140
105	Aam Panna	20.00	135
106	Mango Juice Bahaar	12.00	150

6(a). Write MySQL command to create the Table 'LIBRARY' with given constraints.

Table: LIBRARY

COLUMN_NAME	DATATYPE(SIZE)	CONSTRAINT
BookId	Int(10)	Primary Key
BookName	Varchar(40)	Not Null
Type	Char(4)	
Author	Varchar(40)	
No_Copies	Int(6)	
Price	Decimal(8,2)	

6(b). In a Database Company, there are two tables given below:

Table: SALES

SALESMANID	NAME	SALES	LOCATION ID
S1	ANITA SINGH ARORA	250000	102
S2	Y.P. SINGH	1300000	101
S3	TINA JAISWAL	1400000	103
S4	GURDEEP SINGH	1250000	102
S5	SIMI FAIZAL	1450000	103

Table: LOCATION

LOCATIONID	LOCATIONNAME
101	Delhi
102	Mumbai
103	Kolkata
104	Chennai

Write SQL queries for the following:

6(b)(i). (i) To display SalesmanID, names of salesmen, LocationID with corresponding location names.

6(b)(ii). (ii) To display names of salesmen, sales and corresponding location names who have achieved Sales more than 1300000.

6(b)(iii). (iii) To display names of those salesmen who have 'SINGH' in their names.

6(b)(iv). (iv) Identify Primary key in the table SALES. Give reason for your choice.

6(b)(v). (v) Write SQL command to change the LocationID to 104 of the Salesman with ID as S3 in the table 'SALES'.

7(a). How does e-learning allow students to study at their own pace ?

7(b). How does e-governance empower citizens ? Write one point.

7(c). Sabeena is creating a form for the hotel where she works. Help her to choose most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, Checkbox, Label, and Command Button for the following entries:

S.No.	Function
1	To input name
2	To allow enter gender out of M or F
3	To allow selecting type of room out of Deluxe, SemiDeluxe, General
4	To allow entering preferences of guest in the form of a paragraph

- End of Question Paper -