

Std. 12
17-9-2016

Half Yearly Examination in **INFORMATICS PRACTICE (Set - 1)**

Time : 3 hrs.
M. Marks : 70

1. a) Write a statement in Java to declare a String type variable with a name City. [1]
b) Distinguish between '/' and '%' operators. [1]
c) What will be the values of variables agg and agg1 after the execution of the following loops? [2]

Loop 1	Loop 2
<pre>int a = 9, agg = 9; while (a>10) { agg += a; a -= 2; }</pre>	<pre>int b = 9, agg1 = 0; do { agg1 +=b; b -=2; } while (b > 10);</pre>

- d) What will be displayed in JTextArea1 after the execution of the following loop? [1]

```
for(int I = 5; I >=2; I --)
JTextArea1.setText(JTextArea1.getText( ) + " " + Integer.toString(I * I));
```
2. a) The following code has some error(s). Rewrite the correct code underlining all the corrections made: [2]

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

- b) How many times will the following WHILE loop execute? [2]

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

- c) Rewrite the following program code using MULTIPLE IF ELSE instead of SWITCH statement: [2]

```
String tour;
int c1 = Integer.parseInt(jTextField1.getText( ));
switch (c1)
{ case 8 :          tour = "\n You are going to Camp Ramgarh";
  break;
  case 9 :          tour = "\n You are you 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";
}
```

- d) Write the values of sum and x after execution of the following code: [1]

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

- e) What will be the contents of jTextField1 and jTextField2 after executing the following code: [2]

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

- 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:

The screenshot shows a Java Swing window titled "Shiksha Vidyalaya". Inside the window, there are two text input fields at the top labeled "Enter Roll Number" and "Enter Name". Below these, there are three checkboxes, each followed by a text input field: "Community Outreach Programme", "Swachh Bharat Abhiyan", and "Traffic Safety Club". At the bottom of the window, there are three buttons: "Calculate Total Score", "Stop", and "Clear". Below the buttons, there is a label "Total Score" followed by a text input field.

- ❖ A student can participant in more than one activities.
- ❖ Each student gets 10 point for each activity - namely Community Outreach Programme, Swatch Bharat Abhiyan and Traffic Safety Club.

Help the programmer to write code for the following:

- 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 check-box and the total Score should be displayed in the appropriate Text field. [3]
 - ii. When Clear button is clicked, all the Checkboxes should be cleared. [2]
 - iii. When Stop button is clicked, the application should close. [1]
3. a) What will be the value of X1 and the execution of the following code: [1]
String X1 = "Spread", X2 = "PEACE";
X1 = X2.concat(X1);
- b) Write Java statement to make a jTextField1 disabled. [1]
- c) What will be displayed in JTextArea1 after the execution of the following code: [2]
int G=1;
do {
jTextArea1.setText(Integer.toString(G++));
G = G+1;
} while(G <=5);
- d) Give the output of the following Java code: [2]
String name = "Chennai Express";
int TM = name.length(), TN;
TN = 80 - TM;
jTextField2.setText(Integer.toString(TM));
jTextField3.setText(Integer.toString(TN));
- e) Mr. Rangaswami works at a Recreation Park as a system analyst. He has created the following GUI:
When a group arrives at the Recreation Park, the number of people in the group and whether the group wants to enjoy the Water Park or not is entered. Entry fees is Rs500 per person. The person can choose to play at Water Park by selecting the checkbox.
Rides of Water Park will cost Rs 250 extra per person.

Happy Fun and Food Park

No. of People	<input style="width: 90%;" type="text"/>	
Entry Fees	<input style="width: 90%;" type="text"/>	<input type="checkbox"/> Water Park
Water Park Charges	<input style="width: 90%;" type="text"/>	
Total Amount	<input style="width: 90%;" type="text"/>	

Calculate
Clear
Exit

Help him to write code for the following:

- I. On the click of command button 'Calculate', textfield for 'Entry Fees' should display Entry Fees per person x Number of people. [3]
For 'Water Park' checkbox is selected, textfield for 'Water Park Charges' should display Water Park Charges per person x Number of people. TextField for 'Total Amount' should display sum of Entry Fees and Water Park Charges for all the people in the group.
 - II. Write Java code to clear all Textboxes on the click of 'Clear' button. [1]
4. a) What is the difference between "%" and "_" wild card characters with reference to LIKE clause of MySQL? [2]
b) Name a function of MySQL used to give the first occurrence of a string2 in string1. [1]
c) Consider the following table named "EXAM" with details of marks. Write command of MySQL for (i) to (iv) and output for (v) to (vii). [7]

Table :- EXAM

Adno	SName	Percentage	Csection	Steam
R001	Sushant	90.2	12A	Science
R002	Vaidyanath	80.5	12B	Humanities
R003	Miara	68.9	12B	Science
R004	Niara	96.0	12A	Commerce
R005	shinjini	88.9	12D	commerce

- i. To display all information of the students of humanities in descending order of percentage.
 - ii. To display Adno, Name, Percentage and Stream of those students whose name is less than 6 characters long.
 - iii. To add another column Bus_Fees with datatype and size as Decimal (8,2).
 - iv. To increase percentage by 2% of all the Humanities students.
 - v. SELECT COUNT (*) FROM Exam;
 - vi. SELECT SName, Percentage FROM EXAM WHERE Name LIKE "N%";
 - vii. SELECT ROUND (Percentage, 0) FROM EXAM WHERE adno ="R005";
5. a) Write MySQL command to create the table DEPARTMENT with given constraints. [2]

Table : DEPARTMENT

COLUMN_NAME	DATATYPE(size)	CONSTRAINT
DepartmentID	Int(4)	Primary Key
DepName	Varchar(50)	Not Null
ManagerID	Char(4)	
Location	Varchar(30)	

- b) In a Database, there are two tables given below:

Table : EMPLOYEE

EMPLOYEEID	NAME	SALES	JOBID
E1	SUDEEP SINHA	1100000	102
E2	VIJAY SINGH TOMAR	1300000	101
E3	AJAY RAJPAL	1400000	103
E4	MOHIT RAMNANI	1250000	102
E5	SHAILJA SINGH	1450000	103

Table : JOB

JOBID	JOB TITLES	SALARY
101	President	200000
102	Vice president	125000
103	Administration Assistant	80000
104	Accounting Manager	70000
105	Accountant	65000
106	Sales Manager	80000

Write SQL Queries for the following:

- i. To display employee ids, names of employees, job ids with corresponding job titles [2]
 - ii. To display names of employees, sales and corresponding job titles who have achieved sales more than 1300000. [2]
 - iii. To display names and corresponding job titles of those employees who have 'SINGH'(anywhere) in their names. [2]
 - iv. Identify foreign key in table EMPLOYEE. [1]
 - v. Write SQL command to change the JOBID to 104 of the EMPLOYEE with ID as E4 in the table 'EMPLOYEE'. [1]
6. a) Distinguish between Single Row and Aggregate functions of MySQL. Write one example of each. [2]
- b) Consider the following table named "SOFTDRINK". Write commands of SQL for (i) to (iv) and output for (v) to (vii). [1]

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

- i. To display names and drink codes of those drinks that have more than 120 calories. [1]
- ii. To display drink codes, names and calories of all drinks, in descending order of calories. [1]
- iii. To display names and price of drinks that have price in the range 12 to 18 (both 12 and 18 included). [1]
- iv. Increase the price of all drinks in the given table by 10%. [1]
- v. SELECT COUNT (DISTINCT (PRICE)) FROM SOFTDRINK; [1]

- vi. SELECT MAX (CALORIES) FROM SOFTDRINK; [1]
vii. SELECT DNAME FROM SOFTDRINK WHERE DNAME LIKE "%Mango%"; [1]
7. a) How does e-learning allow students to study at their own pace? [2]
b) How does e-governance empower citizens? Write one point. [1]
c) What precaution must be taken with regards to payments while shopping only [1]
d) Define e-business. Name two popularly used e-business website. [2]
e) Suruchi works for a Shopping Mart. She wants to create controls on a form for the following operations: [2]
Choose most appropriate controls out of Text box, Label, Radio Button, List box, Combo box, Check box and Command button.

S. No.	Function
1	Enter the item code
2	Select Item Size (from a list sizes)
3	Enter Quantity
4	Submit the Form

- f) 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: [2]

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