INDIAN SCHOOL SOHAR
INFORMATICS PRACTICES– XI
I TERM EXAMINATION

Date: 2 October, 2013   **Marks: 70**
                                                                             Time: 3 Hours
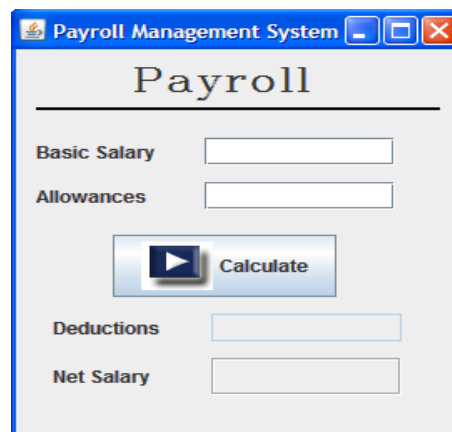
Instructions:
   i) *All questions are compulsory.*
.   ii) *Answer the questions after carefully reading the text.*

1. (a) Differentiate between **while**() and **do…while()** loops.   2

    (b) What is the significance of **default** clause in a **switch** statement?   2

    (c) When does an **if** statement prove more advantageous over a **switch** statement?   2

    (d) What is meant by a variable's scope? Explain using suitable example.   2

    (e) What are unary and binary operators?   2

    (f) Compare **variables** and **constants**.   2

    (g) Construct a Java statement for adding two double type variables 'x1' and 'x2' and   2
         assigning the value to an integer variable 'result'.

    (h) What is the difference between text field and text area?   2

    (i) Consider the following code snippet: 1
             int i=10;
             int n=i++%5;
         What are the values of i and n after the code is executed?

2. (a) Differentiate between **Table** and **Column** constraints.   2

    (b) What is the role of **UNIQUE** constraint? How is a **PRIMARY KEY** constraint   2
         different from **UNIQUE** constraint?

    (c) Write an SQL statement to create a Primary Key constraint on the "P_ID" column   2
         of table Persons, when the table is already created.

    (d) Differentiate between **Candidate** and **Alternate** Keys.   2

    (e) What is the Degree and Cardinality of a table having 5 tuples and 10 attributes?   2

3. (a) Predict the output when num =   i) 0   ii) 1   iii) 2   iv) 3   2
             switch(num){
                case 0: j1.setText("Sunday");
                case 1: j1.setText("Tuesday"); break;
                case 2: j1.setText("Thursday");
                default: j1.setText("Saturday");
             }

(b) Write the output of following code: 2
```
int f=1, i=2;
while(++i<5)
    f*=i;
    System.out.print(f);
```

(c) Find the errors from the following code segment and rewrite the corrected code 2
underlining the corrections made:
```
int i==2; j==1;
do{
    j+=I;
    i+2;
}while j<20
result.setText(j);
```

(d) Rewrite the following code using 'for' loop: 2
```
int i=1, j=5;
while(++i<=5)
    j+=i;
    System.out.print(j);
```

(e) Rewrite the following code using 'if' statement 2
```
switch(a){
    case 'A': a++; break;
    case 'B': a+=2; break;
    default: a+=5; break;
}
```

(f) Write Java code that reads an integer value from jTextField1. It then calculates and 2
displays the product of digits of that number in jLabel1.

(g) Write Java code for finding sum of following series: 2
$1^2 + 2^4 + 3^6 + 4^8 + \ldots + n^m$

4. Read the following case study and answer the questions that follow:

Write Java code for the following:

(i) To set Basic Salary(basicSal), Allowances(allowances), Deductions(ded) and Net Salary(netSal) as 0.   1

(ii) To disable Deductions and Net Salary textfields   1

(iii) When "Calculate" (calcBTN) button is clicked, display Deduction (deduct) and Net Salary(netSal) in their respective TextFields.   2

5. (a) Write SQL command for creating table **SHOP** as per structure given below: 2

Table : SHOP

S_No	S_Name	Sale	Area	Cust_Percent	Rating	City
1	S.M. Sons	250000	West	68.6	C	Delhi
2	Dharohar	500000	South	81.8	A	Mumbai
3	Kriti Art	300000	North	79.8	NULL	Kolkata
4	Ripple	380000	North	88.0	B	Mumbai
5	Biswas Stores	456000	East	92.0	A	Delhi
6	Crystal	290000	South	66.7	A	Kolkata

Table Structure:

Column Name	Data Type	Size	Constraint
S_No	Number	2	Primary Key
S_Name	Varchar	30	Not Null
Sale	Number	6	
Area	Varchar	10	
Cust_Percent	Float	(7,2)	
Rating	CHAR	1	
City	Varchar	20	

(b) Write SQL commands for the following:

i   Add Not Null constraint on Area.   1

ii   List the details of shops whose rating is not known.   1

iii   List the no, name and area of shops located in Delhi or Kolkata.   1

iv   List the details of shops whose rating is not 'C' but having cust percentage more than 65.   1

v   List the No and name of shops in East and West with sale not in the range 200000-300000.   1

vi   Display the different cities in which shops are located.   1

vii   Add a new column Owner of varchar data type and size 20.   1

viii   Create a new table DelhiShops consisting of all details of shops located in Delhi.   1

ix   Increase the cust_percent of 'A' rating shops by 2%.   1

x	Display a report as <Shop_Name> is located in <City> and has a Customer Percentage of <Cust_Percent>.	1
xi	Insert a new row: 7, Pantaloons, 400000, North, 69.9, Delhi	1
xii	Delete the records of shops with sale less than 250000 or rating of 'C'	1
xiii	Show details of shops whose name has 'i' as 3rd and 'd' as 3rd last characters.	1
xiv	List No, Name, Sale and Tax(5% of Sale) for all shops.	1
xv	Display all the details sorted by sale in decreasing order.	1

(c) Predict the output of:
i) Select Round(257.99,-1), Round(257.99,-2);   1
ii) Select Truncate(257.99,-1), Truncate(257.99,-2);   1
iii) Select Round(66.5)%2;   1
iv) Select Instr(Lower("Table"),'A') as ABC;   1
v) Select Trim(Both '.' From '…IP…XI…') as IP;   1

(d) Find the errors and rewrite the corrected queries:
i) Select all Area from Shop;   1
ii) Select Date(Now);   1
iii) Select Ucase("Java", "MySQL") from dual;   1

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