INDIAN SCHOOL SOHAR
SECOND TERM EXAM (2017-2018)
INFORMATICS PRACTICES
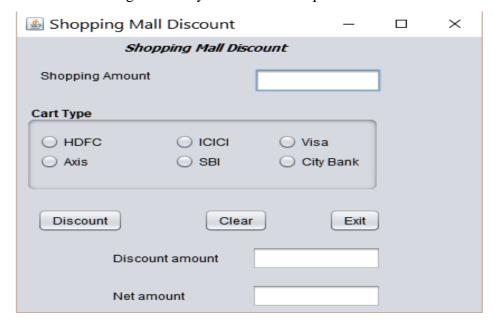
Class: XI	**Marks: 70**
Date: 28-11-17	**Time: 3 hours**

Instructions:
a. *All the questions are compulsory.*
b. *Answer the questions after carefully reading the text.*

1. Answer the following questions:

a) What is BLOB? 1

b) What is the degree and cardinality of a relation having 4 rows and 7 columns? 1

c) Name the classification of SQL Statements. 2

d) Define Alternate key and Candidate key with examples? 2

e) Differentiate between Table and Column constraint. 2

f) Differentiate between Sysdate() and Now() . 2

2.

a) What is the difference between 'x' and "x" in Java? 1

b) State True or False. 1

    i.   An identifier can begin with a digit.

    ii.   Java does not support unsigned datatypes.

c) What is coercion? 1

d) How would you display the following text in a text field namely displayTxt? 1

Welcome to

JAVA

Programming

e) Write the code to display an image in a label namely imgLabel during runtime. 1

f) Write code that obtains the selected item of combobox1 (CB1) and adds it to the list of

combobox2 (CB2). 1

g) What are the limitations of switch? 2

h) Differentiate between entry controlled and exit controlled loops. 2

3.

a) Write equivalent Java expression for the following: 3

    i) $S = \dfrac{(a+b)^n}{\sqrt{3+b}}$ ii) $x^3 + y^3 - \dfrac{\sqrt{xy}}{2}$

    iii) $2 - |e^{2y} - x|$

b) Predict the output after execution of the following code:

    i)   int i=1, j=2; 2

         for(; i<5; i++)

```java
        j+= i;
        System.out.print(++i + j +" ");
        System.out.print(++j + i);
```

ii)
```java
    int i ,ua=0, ub=0, uc=0, fail=0;
    for(i=0 ; i<=5 ; i++) {
    switch(i) {
    case 1: ++ua;
    case 2: ++ub;
    case 3:
    case 4: ++uc;
    default:++fail; } }
    System.out.println("ua=" + ua + ",ub=" + ub +",uc=" + uc + ",fail=" +fail);
```
2

c) Rewrite the following code using 'if…else' statement: 2

```java
int n=itemlist.getSelectedIndex();
switch(n) {
case 0 :  Totalcost=cost*0.1;break;
case 1 :  Totalcost=cost*0.25;break;
case 2 :  Totalcost=cost*0.5;break;
default : Totalcost=cost; }
```

d) Rewrite the following code using 'do….while' loop: 2

```java
int x, i;
for(x=0, i=1; i<10; i++)
x =  i*2;
System.out.println("x="+x+ "i="+i);
```

e) Identify the problem with the following program: 2

```java
String pwd = p1.getPassword( );
if(pwd.equals("Scott") {
}
```

f) Find the errors from the following code segment and rewrite the corrected code: 2

```java
int i=1,j=2;
While(++i<5);
{
I * =  j;
System.out.Println(i); }
```

g) Write java code that reads a number 'n' from jTextField1 and check whether the given number is a palindrome or not. (eg:121 is a palindrome, it remains same when digits are reversed) 2

h) Write a java program to print the sum of the following series. 2

$$1+\frac{1}{4}+\frac{1}{9} +\frac{1}{16} +\ldots\ldots\ldots\ldots..+\frac{1}{100}$$

i) Read the following case study and answer the questions that follows:

The owner of the shopping mall provides handsome discounts on credit cards as:

Card Type	Discount on Shopping Amount
HDFC	12%
ICICI	10%
Visa	9.5%
Axis	10.5%
SBI	8%
City Bank	11.5%

i)   Write the command to disable Discount amount and Net amount textboxes.   1

ii) Write the command for Discount button to compute discount amount and net amount.   2

iii) Write the code for command Clear button (cmdClear) to clear all the text boxes and Radio buttons and set SBI as default choice.   1

iv) When Exit (ExitBtn) is clicked, display a message "Visit again" and close the application.   2

4.   Write SQL Commands for the following on the basis of information given below:

   Smartphones: Table structure

Column name	Data Type	Constraint
MNo	Char(4)	Primary key
Model	Varchar(10)	
Company	Varchar(10)	
LaunchDate	Date	
Rate	Integer(6)	
Discount	Integer(2)	

Smartphones: Table

MNo	Model	Company	LaunchDate	Rate	Discount(%)
101	S6 Edge	Samsung	23-03-2015	50000	15
102	iphone 5S	Apple	20-09-2013	42000	20
103	Redimi Note	Xiaomi	26-10-2017	11000	10
104	Xperia C4	Sony	12-06-2015	29500	
105	Desire 826	HTC	12-04-2015		25
106	G4	LG	20-06-2015	51000	30

i) Create a table smartphones based on the structure given above.   2

ii) Insert a new row with details: 107, Note8, Samsung, 68000.   1

iii) Add a not null constraint on model.   1

iv) Display the details of those smartphones whose rate is not known.   1

v) List the various companies available in ascending order of their launchdate.   1

vi) Remove the primary key constraint from Mno.   1

vii) List the details of Samsung smartphones launched in 2015.   1

viii) Show the Model,Company and Discount of all Smartphones.If discount is not known,display "not on promotion".   1

ix) Change the model of Xiaomi to Mimix and rate to 9000.   1

x) Decrease the Rate of LG by 5%.   1

xi) Change the column name Company to Manufacturer.   1

xii) List the company(uppercase) joined with model(lowercase) of all smartphones priced above 50000.   1

xiii) List the details of smartphones whose Rate is not in range10000 and 30000 sorted by descending order of discount.   1

xiv) Change the datatype of Mno to Integer.   1

xv) List the position of ' e' in model of smartphones whose rate is known.   1

xvi) Add a new column - Specification of type varchar(15) to the table.   1

xvii) List the company having 'S' as the 1st and 'U' as the 5th character in descending order of rate.   1

xviii) List a report as <Model>from <Company> is available at a Discounted rate <discounted rate> for all smartphones. (Discounted rate = Rate*Discount%)   1

5. Write the output of the following Queries:

i) Select Round(7654.352,sign(mod(7,2)));   1
ii) Select mid ('Smart phones', length(' Smart '));   1
iii) Select dayofmonth(curdate( )) + pow(3, sqrt(4));   1

6. Remove the errors (if any) from the following queries and rewrite the corrected ones.

i) Select mod(truncate(120.60),4);   1
ii) Select concat("smart",left("phones",3));   1
iii) Delete table Smartphones;   1

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