Roll No. ☐☐☐☐☐☐☐

Candidates must write the Code on the title page of the answer-book.

- Please check that this question paper contains **11** printed pages.
- Code number given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
- Please check that this question paper contains **7** questions.
- **Please write down the Serial Number of the question before attempting it.**
- 15 minute time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the students will read the question paper only and will not write any answer on the answer-book during this period.

PARIKSHA 2019   PARIKSHA 2019

INFORMATICS PRACTICES

*Time allowed : **3** hours*   *Maximum Marks : **70***

Instructions :

   (i)   ***All** questions are compulsory.*

   (ii)   *Answer the questions after carefully reading the text.*

   (iii)   *Q. **2** and Q. **4** have to be answered w.r.t. Java Language.*

   (iv)   *Q. **3**, **5** & **6** have to be answered w.r.t. MySQL.*

1. (a) ABC bank has many computers connected in a building. What type of network is formed ? Name two hardware resources that can be shared by the computers connected in the bank network. **2**

(b) Write one example of situation when you would use a Remote access software such as Team Viewer. **2**

(c) Distinguish between ASCII and Unicode. Write 2 points. **2**

(d) What are Cookies on a computer ? **2**

(e) Explain in brief any two freedoms offered by open source software. **2**

2. (a) Distinguish between Java and Netbeans. **1**

(b) Name two data types of Java used to store fractional numbers (numbers with decimals). **1**

(c) (i) Which property of jList component lets us add items in a ListBox ? **2**
(ii) Esha has created a List box on her form and has set the selectionMode property to MULTIPLE_INTERVAL. What is the purpose ?

OR

(ii) Write one difference between Listbox and Combobox.

(d) What is the meaning of "Markup" in Hypertext Markup language ? Which software is used to create HTML code ? **2**

OR

Distinguish between the purpose of HTML and XML.

(e) What will be displayed in jTextField1 and jTextField2 ? **2**

```
int x,y,z,t;
x = 7;
y = 10;
z = x+y*3;
t = x + y;
jTextField1.setText(""+z);
jTextField2.setText(""+t);
```

(f) Consider the following code :   **2**

```
    salary = 20000;

    grade = 'g';

switch(grade)

{

case 'x' :  salary = 25000;

            break;

case 'y' :  salary = 30000;

            break;

}
```

What will be the value of salary variable after execution of the above code ? What will happen if 'break' statements are omitted from the above code.

<div align="center">

OR

</div>

Write equivalent code of the above mentioned code using if elseif statement instead of switch statement.

3. (a) Ajay has applied a Constraint on a column (field) such that Ajay will certainly have to insert a value in this field, when he inserts a new row in the table. Which constraint has Ajay used ?   **1**

(b) 'STUDENT' table has a column named 'REMARK' that stores Remarks. The values stored in REMARK column in different rows are "PASS" or "NOT PASS" or "COMPTT" etc.   **1**

Write SQL query to display details of all rows except those that have REMARK as "PASS".

(c) Consider the following table : **2**

Table : Results

STUDENTID	NAME	EXAMID	SCORE
10	Leena	1	20
10	Leena	2	25
11	Samarth	1	30
11	Samarth	2	35
12	Jai	1	14
12	Jai	2	15
14	Shoaib	1	32
14	Shoaib	2	13

Write the outputs that the following SQL statements will generate :

(i) `SELECT AVG(SCORE) FROM RESULTS WHERE EXAMID = 1;`

(ii) `SELECT EXAMID, AVG(SCORE) FROM RESULTS GROUP BY EXAMID;`

(d) Consider the table : ITEM. Write SQL statement to delete the last row. **2**

PRODUCTID	PRODUCT CODE	QTY	PRICE
101	PEN	500	20.00
102	PEN	800	10.00
103	PEN	1000	20.00
104	PENCIL	700	10.00
105	PENCIL	800	20.00

(e) (i) **Write the purpose of setting AUTOCOMMIT=0;** **2**

(ii) **Table 'employees' has the following data**

empid	lastname	salary
101	Sharma	50000
102	Arora	25000

Write the output of the following SQL statements :

SET AUTOCOMMIT = 0;

UPDATE employees

> **SET salary = 70000**

> **WHERE lastname = 'Sharma';**

SAVEPOINT Sh;

UPDATE employees

> **SET salary = 30000**

> **WHERE lastname = 'Arora';**

SAVEPOINT Ar;

SELECT SUM(salary) FROM employees;

ROLLBACK TO SAVEPOINT Sh;

SELECT SUM(salary) FROM employees;

(f) While creating a table, when a column is declared with data type and size as : **2**

DECIMAL(20, 6), how many maximum number of digits may be present to the right of the decimal point ? Which command in SQL is used to see the structure of the table ?

4. (a) Identify error(s) in the following code : **1**

```
switch (7)
{
    case 1   :  r = 7;
                break;
    case 2.1 :  r = r - 1;
                break;

    default  :  r = -1;
}
```

OR

Write the purpose of break inside the switch statement.

(b) Write the values of pr and sum after execution of the following code : **2**

```
int b = 2;
int p = 3;
int pr = 1;
int sum = 5;
for (int i = 1; i <= p; i++)
    {
        pr = pr * b;
        sum = sum + i;
    }
```

(c) What values will be displayed in jTextField1 and jTextField2 when the following code is executed : **2**

```
int a, c;
c = 30;
a = 4;
do
    {
    a = a + c;
    c = c - 5;
    }
    while (c>10);
jTextField1.setText(""+a);
jTextField2.setText(""+c);
```

(d)	Write the following code using 'for' loop instead of 'while' loop :	**2**

```
int K = 7;
int I = -2;
while (I<=7)
{
K = K-7;
I = I+2;
}
```

<div align="center">OR</div>

How many times will the above 'while' loop execute ?

(e)	Write the output that will be produced on jTextField1 by First Code and Second Code.	**2**

First Code :

```
int counter = 1, x = 10;
while (counter > x)
{
x = x + 7;
}
jTextField1.setText(""+x);
```

Second Code :

```
int counter = 1, x = 10;
do
{

x = x + 7;
}
while (counter > x);
jTextField1.setText(""+x);
```

(f) (i) • When checkbox of an item is selected, **Amount**, **Tax** and **Total Amount** should be displayed in front of the item. **4**

For example if 'Vegetable Salad' is selected, 30.00 should be displayed in Amount field, 3.00 should be displayed in tax field and 33.00 should be displayed in Total Amount.

• When "Calculate" is clicked, the *Grand Total Amount* which is sum of total amount of all the item, *Discount* and *Amount to Pay* should be displayed.

(ii) When `'Clear'` button is clicked, all the textfields and checkboxes should be cleared. **1**

(iii) When `'Close'` button is clicked, the application should close. **1**

5. Consider the following table 'Activity'. Write SQL commands for the statements (i) to (viii) and write output for SQL queries (ix) and (x).

Table : Activity

PID	PARTICIPANT	GRADE	EVENT	POINTS	EVENTDATE	HOUSE
101	Amit Dubey	A	Running	200	2018-12-19	Gandhi
102	Shivraj Singh		Hopping bag	300	2019-01-12	Bose
103	Raj Arora	B	Skipping	200	2018-12-19	Gandhi
104	Kapil Raj	A	Bean bag	250	2018-12-19	Bhagat
105	Deepshikha Sen	A	Obstacle	350	2018-03-31	Bose
106	Saloni Raj		Egg & Spoon	200	2018-12-20	Bose

(i) To display names of Participants and points in descending order of points. **1**

(ii) To display names and points of participants who have scored points in the range 200 and 300 (both values included). **1**

(iii) To display House wise total points scored along with House name.　　1

(i.e. display the HOUSE and total points scored by each HOUSE.)

(iv) To display the names and EVENTDATE of participants who took part in the event anytime in the month of December of 2018.　　1

(v) To display names of events that have 'bag' anywhere in the event names.　　1

(vi) To change the name of Event "Egg&Spoon" to "Lemon&Spoon" everywhere in the table "Activity".　　1

(vii) To display the average **POINTS** of all the Participants who have got some grade.　　1

(viii) To display HOUSE wise, Lowest points scored. (i.e. Display house and lowest points scored for each house)　　1

(ix) **SELECT AVERAGE(POINTS) FROM Activity WHERE HOUSE = 'Gandhi' or House = 'Bose';**　　1

(x) **SELECT COUNT(DISTINCT POINTS) FROM ACTIVITY;**　　1

6. (a) Write SQL query to create a table 'Transporter' with the following structure :　　2

Field	Type	Constraint
OrderlId	Integer	Primary key
DriverName	Varchar(50)	**NOT NULL**
ItemTransported	Varchar(50)	
TravelDate	Date	
DestinationCity	Varchar(50)	

OR

What is the difference between PRIMARY KEY constraint and UNIQUE constraint applied on Columns of a table ? Explain with the help of example.

(b) Consider the following tables **SUPPLIER** and **ITEM** and answer the questions that follow : **2**

Table : SUPPLIER

SNo	SName	Area	Email
S01	Quant Computers	East	abc@gmail.com
S02	Superb Media	West	sss@hotmail.com
S03	Media Store	North	
S04	Avon Hardware	North	xyz@gmail.com
S05	AV Tech	South	tmt@hotmail.com

Table : ITEM

INo	IName	Price	SNo
N01	Mother Board	15000	S01
N02	Hard Disk	4000	S01
N03	Keyboard	800	S02
N04	Mouse	300	S01
N05	Mother Board	13000	S02
N06	Key Board	400	S03
N07	Hard Disk	4500	S03

Which column should be set as the Primary key for SUPPLIER table ? Mr. Vijay, the Database Manager feels that Email column will not be the right choice for Primary key. State reason(s) why Email will not be the right choice.

OR

Write the data type and size of INo column of 'ITEM' table.

(c) With reference to the above given tables (in Q6 b), write commands in SQL for (i) to (iii).

(i) To display names of Items, SNo and Names of Suppliers supplying those items for those suppliers who have stores located in North area. **2**

(ii) To display Names of Items, SNo, Price and Corresponding names of their suppliers of all the items in ascending order of their Price. **2**

(iii) To display Item Name wise, Minimum and Maximum Price of each item from the table item. **2**

(i.e. display IName, minimum price and maximum price for each IName.)

OR

What will be the number of rows in the Cartesian product of the above two tables ?

7. (a) State one way with which an online shopper can be sure that he/she is using a secure website. **1**

(b) Write 2 precautions to be followed while doing Online shopping. **2**

(c) Mr. Ibrahim is creating a form for Hair Care Salon application. Help him to choose the most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following entries : **2**

S. No.	Function
1.	To let the user enter **NAME**
2.	To let the user enter **PHONE NUMBER**
3.	To let the user choose **HAIR SERVICE** out of washing / dyeing / styling / straightening. More than one service may be chosen.
4.	To let the user choose one **Mode of Payment** out of the categories : Cash / Credit Card / Debit Cart / Paytm