Roll No.

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

- Please check that this question paper contains **8** 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 minutes 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 student will read the question paper only and will not write any answer on the answer script during this period.

INFORMATICS PRACTICES

Time allowed : 3 hours]   *[Maximum marks : 70*

General Instruction :

Answer the questions after carefully reading the text.

1.   (a)   Ms. Taufiq Ahmed wants to prevent unauthorized access to/from his company's local area network. Write the name of a system (software/hardware), which he should install to do the same.   1

(b)   Beauty Lines Fashion Inc. is a fashion company with design unit and market unit 135 meters away from each other. The company recently connected their LANs using Ethernet cable to share the stock related information. But, after joining their LANs, they are not able to share the information due to loss of signal in between. Which device out of the following should you suggest to be installed for a smooth communication ?   1

(i)   UPS

(ii)   Modem

(iii)   Repeater

(c) Which of the following is not a feature of Networking ? 1
    (i) Resource sharing
    (ii) Uninterrupted power supply
    (iii) Reduced cost
    (iv) Reliability

(d) Name any two Indian scripts included in Unicode. 1

(e) Mr. Jayanto Das is confused between Shareware and Open source software. Mention at least two points of differences to help her understand the same. 2

(f) Identify the type of Topology from the following : 2
    (i) If each node is connected with the help of independent cable with the help of a central switching (communication controller)
    (ii) If each node is connected with the help of a single co-axial cable.

(g) Define the following with reference to Threats to Network Security. 2
    (i) Trojan Horse
    (ii) Worm

2. (a) While working in Netbeans, Ms Kanta Surbhi wants to display 'Cleared' or 'Re-attempt required' message depending the marks entered in jTextField. Help her to choose more appropriate statement out of 'If statement' and 'Switch statement'. 1

(b) Write a statement to make jTextArea1 as un-editable. 1

(c) Which HTML tags are used for making a table and adding rows in a HTML document ? 1

(d) How is <UL> tag different from <OL> tag of HTML ? 1

(e) What will be the value of A and B after execution of the following code : 2

int A = 100, B ;

for (B = 10; B < = 12 ; B+ +)

{

    A+=B;

}

JOptionPane.showMessageDialog (this, "A: "+A+" B: "+B+"") ;

(f) Differentiate between HTML and XML. 2

(g) Write Java code that takes the price of a pencil from jTextField1 and quantity of pencils from jTextField2 and calculates total amount as price*quantity to be displayed in jTextField3 and also find 10% tax amount to be displayed in jTextField4. 2

3. (a) Write MySql command will be used to open an already existing database "LIBRARY".   **1**

(b) The Mname Column of a table Members is given below :   **2**

Mname
Aakash
Hirav
Vinayak
Sheetal
Rajeev

Based on the information, find the output of the following queries :
(i) Select Mname from members where mname like "%v" ;
(ii) Select Mname from members where mname like "%e%";

(c) A table "TRAINS" in a database has degree 3 and cardinality 8. What is the number of rows and columns in it ?   **2**

(d) Differentiate between Alternate key and Candidate key.   **1**

(e) Define data encapsulation with reference to Object Oriented Programming.   **1**

(f) An worker_Id consisting of 4 digits is stored in a string variable strWrkld. Now Mr. Jai wants to store this Id in integer type of variable IntWrkld. Write a Java statement to do this.   **1**

(g) Sarthya, a student of class XI, created a table "RESULT". Grade is one of the column of this table. To find the details of students whose Grades have not been entered, he wrote the following MySql query, which did not give the desired result.   **2**

SELECT * FROM Result WHERE Grade = "Null";

Help Sarthya to run the query by removing the errors from the query and write the correct Query.

4. (a) What will be displaced in of jTextField1 after executing the following code.   **2**

int N = 20;

N = N + 1;

If (N < 21)

        jTextField1.setText(Integer.toString(N+10));

else

        jTextField1.setText(Integer.toString(N+15));

(b) Rewrite the following program code using a Switch statement.　　2

```
if (code == 1)
        Day = "Monday";
else if (code == 2)
        Day = "Tuesday";
else if (code == 3)
        Day = "Wednesday";
else if (code == 4)
        Day = "Thursday";
else
        Day = "No Match" :
```

(c) What will be displayed in jTextArea1 after executing the following statement :　　1

jTextArea1.setText ("Live\nIn Peace\tand harmony") ;

(d) The following code has some error(s). Rewrite the correct code underlining all the corrections made :　　2

```
Int P = 3;sum = 0;//Declaring P and sum as Integer
{
        sum = P;
        P + = 3;
}
while (P=<12)
jTextField1(Integer.tostring(sum));
```

(e) Given a string object namely 'VALUE', having value as "324" stored in it. What will be result of the following :　　1

```
JOptionPane.showMessageDialoge(null, " " +
(Value.length ( ) + Integer.parseInt(value)));
```

(f) The following code has some error(s). Rewrite the correct code underlining all the corrections made;　　2

```
int Total=0, Jump=5;
int I;
for (i = 0, I = < 5, i++)
{
        Jump+=5,
        Total+=Jump;
}
jTextArea1.showText (" "+Total);
```

(g) Mr. Ram Kishore, the owner of the Kiddi Land Enterprises has asked his programmer Saumya to develop the following GUI in Netbeans.

```
┌─────────────────────────────────────────────────────────┐
│ ⬚ Kiddi Land                              ▭ ▣  ╳        │
│ ┌─────────────────────────────────────────────────────┐ │
│ │                                                      │ │
│ │    Name of Customer     [                      ]     │ │
│ │    Bill Amount          [                      ]     │ │
│ │                                                      │ │
│ │    Mode of Payment      ○ Platinum  ○ Silver  ○ Gold │ │
│ │                                                      │ │
│ │    Offer                [                      ]     │ │
│ │    Additional Offer     [                      ]     │ │
│ │    Net Amount           [                      ]     │ │
│ │    Calculate Discount    Calculate Net Amount   Exit │ │
│ └─────────────────────────────────────────────────────┘ │
└─────────────────────────────────────────────────────────┘
```

Mr. Ram accepts payment through three types of credit cards. The offer is given according to the following scheme :

Type of Card	Offer
Platinum	20% of amount
Gold	15% of amount
Silver	10% of amount

If the Bill amount is more than Rs. 25,000/- then the customer gets an additional offer of 5%.

Write Java code for the following :

(a) To assign Additional Offer as 0 (jTextField4) and Net amount as 0 (jTextField5). Also set them as un-editable. 1

(b) [when "Calculate Offer" (jButton1) is clicked] 2

To calculate discount as per the given criteria and display the same in jTextField3

To assign Additional offer (jTextField4) as 5% of amount (jTextField2) as per the above condition.

To enable "Calculate Net Amount" (jButton2) button

(c) [When "Calculate Net Amount" (jButton2) button is clicked] 2

To calculate net amount as [TotalCost (jTextField2) – offer (jTextField3) – Additional offer (jTextField4)]

To display the net amount in jTextField5.

5. (a) What is the purpose of DROP TABLE command in MySql ? How is it different from DELETE command ? **2**

(b) Table Employee has 4 records and Table Dept has 3 records in it. Mr. Jain wants to display all information stored in both of these related tables. He forgot to specify egui-join condition in the query. How many rows will get displayed on execution of this query ? **1**

(c) Consider the table RESULT given below. Write commands in MySql for (i) to (iv) and output for (v) to (vii)

Table : Result

No	Name	Stipend	Subject	Average	Division
1	Sharon	400	English	38	THIRD
2	Amal	680	Mathematics	72	FIRST
3	Vedant	500	Accounts	67	FIRST
4	Shakeer	200	Informatics	55	SECOND
5	Anandha	400	History	85	FIRST
6	Upasna	550	Geography	45	THIRD

(i) To list the names of those students, who have obtained Division as FIRST in the ascending order of NAME. **1**

(ii) To display a report listing NAME, SUBJECT and Annual stipend received assuming that the stipend column has monthly stipend. **1**

(iii) To count the number of students, who have either Accounts or Informatics as Subject. **1**

(iv) To insert a new row in the table EXAM : **1**

6, "Mohan", 500, "English", 73, "Second"

(v) SELECT AVG(Stipend) FROM EXAM WHERE DIVISION = "THIRD" **1**

(vi) SELECT COUNT(DISTINCT Subject) FROM EXAM; **1**

(vii) SELECT MIN(Average) FROM EXAM WHERE Subject = "English"; **1**

6. (a) Write a MySQL command for creating a table "PAYMENT" whose structure is given below : **2**

Table : PAYMENT

Field Name	Datatype	Size	Constraint
Loan_number	Integer	4	Primary key
Payment_number	Varchar	3	
Payment_date	Date		
Payment_amount	Integer	8	Not Null

(b) In a database there are two tables "Product" and "Client" as shown below :

Table : PRODUCT

P_ID	ProductName	Manufacture	Price
P001	Moisturiser	XYZ	40
P002	Sanitizer	LAC	35
P003	Bath Soap	COP	25
P004	Shampoo	TAP	95
P005	Lens Solution	COP	350

Table : Client

C_ID	ClientName	City	P_ID
01	Dreamz Disney	New Delhi	P002
05	Life Line Inc	Mumbai	P005
12	98.4	New Delhi	P001
15	Appolo	Banglore	P003

Write the commands in SQL queries for the following :

(i) To display the details of Product whose Price is in the range of 40 and 120 (Both values included)   1

(ii) To display the ClientName, City from table Client and ProductName and Price from table Product, with their corresponding matching P_ID.   2

(iii) To increase the Price of all the Products by 20.   2

(c) In a Database School there are two tables Member and Division as show below.

Table : Member

Empld	Name	Pay	Divno
1001	Shankhya	34000	10
1003	Ridhima	32000	50
1002	Sunish	45000	20

Table : Division

Divno	Divname	Location
10	Media	TF02
20	Dance	FF02
30	Production	SF01

(i) Identify the foreign key in the table Member.   1

(ii) What output, you will get, when an equi-join query is executed to get the NAME from Member Table and corresponding from Division table ?   1

7. (a) What is the impact of e-Learning sites on students learning process ? 1

(b) Write two advantages of e-Business sites. 1

(c) Write three important features of e-Governance ? Give URL of one of the commonly used e-Governance portal. 2

(d) Jaina is creating a form for her practical file. Help her to choose most appropriate controls from List Box, Combo Box, TextField, TextArea, Radio Button, Check box, Label and Command button for the following entries from user. 2

   (i) A message "Enter Name" in front of a Text Field.

   (ii) An input to choose more than one subjects from a set of given choices.

   (iii) An input for entering comments of user.

   (iv) An input for accepting the residential area out of Rural and Urban as options.

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