

INFORMATICS PRACTICES

Time allowed : 3 hours

Maximum Marks : 70

Instruction:

- 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 not write any answer script during this period.

QUESTION PAPER CODE NO. 90/1

SECTION A

Q1 Answer the questions after carefully reading the text.

- (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 metres 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
- Q2
- (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 jTextField1 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 tag different from 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
- Q3 (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
Vinavak
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.

- Q4 (a) What will be displayed in 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 jTextField1 after executing the following statement: 1
- ```

jTextAreal.setText("Live\nIn Peace\t and 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.showMessageDialog(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.

The screenshot shows a window titled "Kiddi Land" with a standard Windows-style title bar. Inside the window, there is a form with the following elements:

- Name of Customer**: A text input field.
- Bill Amount**: A text input field.
- Mode of Payment**: Three radio buttons labeled "Platinum", "Silver", and "Gold".
- Offer**: A text input field.
- Additional Offer**: A text input field.
- Net Amount**: A text input field.
- At the bottom, there are three buttons: "Calculate Discount", "Calculate Net Amount", and "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 the 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.
- (b) [when "Calculate Offer"(JButton1) is clicked]
 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) is clicked]
 To calculate net amount as [TotalCost(jTextField2)]-offer(jTextField3)-Additional offer (jT extField4)]
 To display the net amount in jTextField5

- Q5 (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 equi-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	Subjet	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:
6, "Mohan", 500, "English", 73, "Second"
 - (v) SELECT AVG (Stipend) FROM EXAM WHERE DIVISION = "THIRD" ;
 - (vi) SELECT COUNT(DISTINCT Subject) FROM EXAM;
 - (vii) SELECT MIN(Average) FROM EXAM WHERE Subject = "English";
- Q6 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: 2

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
- (iii) To increase the Price of all the Products by 20.
- (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 equal-join query is executed to get the Name from Member Table and corresponding from Division table?

- Q7 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.

INFORMATICS PRACTICES
QUESTION PAPER CODE 90

1. (a) Mr. Kant Sengupta 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) Seven Brothers Fashion Inc. is a fashion company with design unit and market unit 130 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) Modem
- (ii) Repeater
- (iii) UPS
- (c) Which of the following is not a feature of Networking? 1
- (i) Resource Sharing
- (ii) Reliability

- (iii) Uninterrupted Power Supply
 - (iv) Reduced cost
- (d) Name any two Indian scripts included in Unicode. 1
- (e) Ms. Vidya Chauhan is confused between Proprietary Software and Open Source Software. Mention at least two points of difference to help her understand the same. 2
- (f) Identify the type of Topology from the following 2
- (i) In it, each node is connected with the help of a single co-axial cable.
 - (ii) In it, each node is connected with the help of independent cable with the help of a central switching (communication controller).
- (g) Define the following with reference to Threats of Network Security: 2
- (i) Worm.
 - (ii) Trojan Horse
2. (a) While working in Netbeans, Mr. Khorana wants to display 'Pass' or 'Needs to Reappear' message depending on the marks entered in jTextField. Help her to choose the more appropriate statement out of 'If statement' and 'Switch statement'. 1
- (b) How one can make a Text Field un-editable on a Frame? 1
- (c) Which HTML tags are used for making a table and adding rows in HTML document? 1
- (d) How is tag different from tag of HTML? 1
- (e) What will be the value of P and Q after execution of the following code? 2
- ```
int P, Q=100;
for (P=10; P<=12; P++)
{
 Q + P ;
}
JOptionPane.showMessageDialog (this, "P:"+P+" Q:"+Q+"");
```

- (f) Differentiate between XML and HTML. 2
- (g) Write Java code that takes the cost of a pencil from jTextField1 and number of pencils from jTextField2 and calculates total amount as cost\*number to be displayed in jTextField3 and 20% service tax out of total amount in jTextField4. 2
3. (a) Write MySql command that will be used to open an already existing database "CONTACTS". 1
- (b) The Doc\_name Column of a table Hospital is given below: 2

| Doc name  |
|-----------|
| Avinash   |
| Hariharan |
| Vinayak   |
| Deepak    |
| Sanjeev   |

Based on the information, find the output of the following queries:

- (i) `SELECT doc_name FROM Hospital WHERE doc_name like "%v";`
- (ii) `SELECT doc_name FROM Hospital WHERE doc_name like "%e%";`
- (c) A table "Transport" in a database has degree 3 and cardinality 8. 2  
What is the number of rows and columns in it?
- (d) Differentiate between Alternate key and Candidate key. 1
- (e) Define a class with reference to object Oriented Programming. 1
- (f) An employee\_Id consisting of 5 digits is stored in a string variable strEmpld. Now Mr. Deb wants to store this Id in Integer type of variable InteEmpld. Write Java statement to do this. 1
- (g) Sarthak, 'a students of class XII, created a table "Class". Grade is one of the columns 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 Class WHERE Grade ="Null";`
- Help Sarthak to run the query by removing the errors from the query and write the correct query.

- 4 (a) What will be displayed in of jTextField1 after executing the following code? 2
- ```

int m = 16 ;
m = m+1;
if (m<15)
    jTextField.setText (Integer. toString (m) );
else
    jTextField.setText (Integer. toString (m+15) );

```
- (b) Rewrite the following program code using a Switch statement: 2
- ```

if (code ==1)
 Month = "January";
else if (code ==2)
 Month = "February";
else if (code==3)
 Month = "March";
else if (code==4)
 Month = "April";
else
 Month = "No Match";

```
- (c) What will be displayed in jTextArea1 after executing the following statement? 1
- ```

jTextAreal.setText ("cbse\nFinal_Exam \tIp");

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

Int k=2 ;Sum = 0; //Declaring k and sum as Integer
{
 sum = k ;
 k + = 2 ;
}
While (k=<=20);
jTextField1 (Integer.tostring(sum));

```

- (e) Given a String object namely 'subject' having value as "123" stored in it. What will be result of the following?

1

```
JOptionPane.showMessageDialog (null, "" +
(subject.length () + Integer.parseInt (subject)));
```

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

```
int Sum=0, Step=5 ;

int I ;

for (i = 0, i =<5, i++)
{
 Step+=5,
 Sum+=Step ;
}

jTextAreal.showText{" "+Sum);
```

- (g) Mr. Radhey Shyam Bansal the owner of the Kiddi Land Enterprises has asked his programmer Ekta to develop the following GUI in Netbeans:

The screenshot shows a window titled "Kiddi Land" with the following components:

- Name of Customer**: A text input field.
- Bill Amount**: A text input field.
- Mode of Payment**: Three radio buttons labeled "Platinum", "Silver", and "Gold".
- Discount**: A text input field.
- Additional Discount**: A text input field.
- Net Amount**: A text input field.
- Buttons**: "Calculate Discount", "Calculate Net Amount", and "Exit".

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

| Type of Card | Discount      |
|--------------|---------------|
| 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 discount of 5%. Write Java code for the following:

- (i) To assign Additional Discount as 0 (jTextField4) and Net Amount as 0 (jTextField5). Also set them as un-editable.
- (ii) [When "Calculate Discount" (jButton1) is clicked]
  - To calculate discount as per the given criteria and display the same in jTextField3
  - To assign Additional Discount (jTextField4) as 5% of amount (jTextField2) as per the above condition.
  - To enable "Calculate Net Amount" (jButton2) button
- (iii) [When "Calculate Net Amount" (jButton2) button is clicked]
  - To calculate Net Amount as [TotalCost (jTextField2) - Discount (jTextField3) - Additional Discount (jTextField4)]
  - To display the Net Amount in jTextField5

- 5 (a) What is the purpose of ALTER TABLE command in MySql? How is it different from UPDATE command? 2
- (b) Table Employee has 4 records and Table Dept has 3 records in it. Mr. Jain wants display all information stored in both of these related tables. He forgot to specify equi-join condition in the query, How many rows will get displayed on execution of this query? 1
- (c) Consider the EXAM given below. Write commands in MySql for (i) to (iv) and output for (v) to (vii).

**Table: EXAM**

| No | Name     | Stipend | Subjet      | Average | Division |
|----|----------|---------|-------------|---------|----------|
| 1  | Karan    | 400     | English     | 68      | FIRST    |
| 2  | Aman     | 680     | Mathematics | 72      | FIRST    |
| 3  | Javed    | 500     | Accounts    | 67      | FIRST    |
| 4  | Bishakh  | 200     | Informatics | 55      | SECOND   |
| 5  | Sugandha | 400     | History     | 35      | THIRD    |
| 6  | Suparna  | 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 Account or Informatics as Subject. 1
  - (iv) To insert a new row in the table EXAM:  
6 "Mohan", 500, "English", 73, "SECOND";
  - (v) SELECT AVG (Stipend) FROM EXAM 1  
WHERE DIVISION="THIRD";
  - (vi) SELECT COUNT (DISTINCT Subject) FROM EXAM.. 1
  - (vii) SELECT MIN (Average) FROM EXAM  
WHERE Subject= "English";
- 6 (a) Write a MySql command for creating a table "BANK" whose structure is given below: 2

**Table: BANK**

| Field Name  | Datatype | Size | Constraint  |
|-------------|----------|------|-------------|
| Acct_number | Integer  | 4    | Primary key |
| Name        | Varchar  | 3    |             |
| BirthDate   | Date     |      |             |
| Balance     | Integer  | 8    | Not Null    |

- (b) In a database there are two tables "ITEM" and "CUSTOMER" as shown below:

**Table: ITEM**

| ID   | ItemName       | Company | Price |
|------|----------------|---------|-------|
| 1001 | Moisturiser    | XYZ     | 40    |
| 1002 | Sanitizer      | LAC     | 35    |
| 1003 | Bath Soap      | COP     | 25    |
| 1004 | Shampoo        | TAP     | 95    |
| 1005 | Lens Solutions | COP     | 350   |

**Table: CUSTOMER**

| C_ID | CustomerName | City      | ID   |
|------|--------------|-----------|------|
| 01   | Samridhh Ltd | New Delhi | 1002 |
| 05   | Big Line Inc | Mumbai    | 1005 |
| 12   | 97,8         | New Delhi | 1001 |
| 15   | Tom N Jerrv  | Bangalore | 1003 |

Write the commands in SQL queries for the following:

- (i) To display the details of Item, whose Price is in the range of 40 and 95 (Both values included). 1
- (ii) To display the CustomerName. City from table Customer, and ItemName and Price from table item, with their corresponding matching ID. 2
- (iii) To increase the Price of al the Products by 50. 2
- (c) In a Database School there are two tables Employee and Dept as shown below:

**Table: Employee**

| EmpId | Name     | Sal   | Deptno |
|-------|----------|-------|--------|
| T001  | Vishakha | 34000 | 10     |
| T001  | Mridul   | 32000 | 50     |
| T001  | Manish   | 45000 | 20     |



**Table: Dept**

| <b>Deptno</b> | <b>DName</b> | <b>Locaionld</b> |
|---------------|--------------|------------------|
| 10            | Lights       | HH02             |
| 20            | Dance        | FF02             |
| 30            | Production   | AB01             |

- (i) Identify the foreign key in the table Employee. 1
- (ii) What output, will you get, when an equi-Join query is executed to get the NAME from Employee table and corresponding DNAME from Dept table? 1
7. (a) Give one social impact of e-Business. 1
- (b) Write two advantages of e-Learning sites. 1
- (c) Write three important features of e-Governance. Give URL of one of the commonly used - eGovernance portals. 2
- (d) Anuja 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 Marks" in front of a Text Field.
- (ii) An input to choose more than one subject from a set of choices.
- (iii) An input for entering remarks
- (iv) An input for accepting Gender.

## MARKING SCHEME ó INFORMATICS PRACTICES

### General Instructions :

- All answers provided in the marking scheme are SUGGESTIVE.
- Examiners are requested to accept all possible alternative correct answers.
- Semicolon termination and case sensitivity to be ignored in MySQL statements.
- All equivalent MySQL commands for a given query must be accepted.
- Both single quotes and double quotes are acceptable in MySQL commands.

### QUESTION PAPER CODE 90/1

### EXPECTED ANSWERS

#### Q1 Answer the questions after carefully reading the text.

- (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

Ans: Firewall or Intrusion Detection System

*(1 mark for correct answer)*

- (b) Beauty Lines Fashion Inc. is a fashion company with design unit and market unit 135 metres 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

Ans: Repeater

*(1 mark for correct answer)*

- (c) which of the following is not feature of Networking?

1

- (i) Resource sharing

- (ii) Uninterrupted power supply
- (iii) Reduced cost
- (iv) Reliability

Ans: Uninterrupted power supply

*(1 mark for correct answer)*

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

1

Ans: Devnagari, Bengali, Gurmukhi, Gujarati, Kannada, Malayalam, Oriya, Tamil, Arabic, Telugu

*( mark each for naming any two correct Indian scripts)*

(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

| Shareware                                                                                                                                       | Open source software                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Is a proprietary software                                                                                                                       | Is not proprietary software i.e. it does not belong to any person or organization. |
| Source code is not available to the users free of cost                                                                                          | Source code is available to the users.                                             |
| It is provided to users without payment on a trial basis and is often limited by any combination of functionality, availability or convenience. | It is provided to users without payment                                            |

*(1 mark each for any two correct differences)*

(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.

Ans: (i) Star Topology

(ii) Bus Topology

*(1 mark for each correct answer)*

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

Ans: **Trojan Horse**

- Appears to perform a desirable function for the user
- Steals information through a 'backdoor' /Records browsing activities without the knowledge of the user
- Causes system crash or freeze

**Worm**

- Self-replicating malware without user intervention
- Consumes high volume of bandwidth leading to Denial of service (DoS)

*(1 mark for any 1 point under each definition)*

**Note: Any relevant explanation** with regards to **Threats to Network Security** also to be considered as **the correct answer**.

- Q2 (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

Ans: IF statement

*(1 mark for identifying IF as the correct statement)*

- (b) Write a statement to make jTextField1 as un-editable. 1

Ans: jTextField1.setEditable (false) ;

*(1 mark for the correct answer)*

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

Ans: <TABLE> </TABLE> tags are used for making a table.

<TR> </TR> are used for adding rows in a HTML document.

*( mark each for naming both tags)*

**Note: Mentioning only <TABLE> and <TR> also acceptable**

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

Ans: <UL> [stands for unordered list] OR [used to display a bulleted list].  
<OL> [stands for ordered list] OR [used to display an ordered/numbered list].

*(1 mark for anyone correct difference)*

(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+"");

Ans: A:133 B:13

*(1 mark each for correct value of A and B)*

(f) Differentiate between HTML and XML. 2

Ans:

| HTML                               | XML                                    |
|------------------------------------|----------------------------------------|
| Defines how webpage is displayed   | Defines, stores and retrieves the data |
| HTML tags are predefined           | XML tags are not predefined.           |
| New tags cannot be defined         | New tags can be created as per need    |
| HTML tags may not have closing tag | XML tags must have a closing tag.      |
| HTML tags are not case-sensitive.  | XML tags are case-sensitive.           |

*(1 mark each for any 2 correct differences)*

(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

Ans: float Price = Float.parseFloat(jTextField1.getText ());  
int Qty=Integer.parseInt(jTextField2.getText());

```
float Amt= Price* Qty;
float Tax= Amt*0.1;
jTextField3.setText(""+Amt);
jTextField4.setText(""+Tax);
```

( mark for correctly storing the value of price and quantity)

( mark for correct calculation of total amount)

( mark for correct calculation of tax)

( mark for correct displaying of values in TextField3 and TextField4)

*Note: double/int Data type may also be accepted for price*

- Q3 (a) Write MySql command will be used to open an already existing database "LIBRARY".

1

Ans: USE LIBRARY;

(1 mark for correct answer)

*Note: Mentioning only USE command is also acceptable.*

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

2

| Mname   |
|---------|
| Aakash  |
| Hirav   |
| Vinavak |
| 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%";

Ans: (i) Hirav

Rajeev

- (ii) Sheetal  
Rajeev

(i) ( 1/2 mark each for correct line of output)

(ii) ( 1/2 mark each for correct line of output)

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

Ans: 8  
3

(1 mark for each correct answer)

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

|      |                                                                        |                                                                 |
|------|------------------------------------------------------------------------|-----------------------------------------------------------------|
| Ans: | <b>Alternate Key</b>                                                   | <b>Candidate Key</b>                                            |
|      | A key that can act as a primary key but is not selected as primary key | A key that can be set as Primary key is called a candidate key. |

(1 mark for any correct difference/definition)

**OR**

(1 mark for illustrating with example)

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

Ans: The wrapping up of data and functions into a single unit (called class) is known as data encapsulation.

(1 mark for any correct definition)

- (f) A worke\_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

Ans: IntWrkld = Integer.parseInt (strWrkld) ;

(1 mark for correct answer)

(Declaration of IntWrkld as int is optional)

- (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.

Ans: `SELECT * FROM Result WHERE Grade IS NULL;`

*( 2 marks for correct answer)*

Q4 (a) What will be displayed in 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));
```

Ans: 36

*( 2 marks for correct answer)*

(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" ;
```



Ans: switch (code)

```
{
 case 1 : Day = "Monday";
 break ;
 case 2 : Day = "Tuesday";
 break ;
 case 3 : Day = "Wednesday";
 break ;
 case 4 : Day = "Thursday";
 break ;
 default : Day = "No Match" ;
}
```

( *mark for switch* )

( *mark for case labels* )

( *mark for break* )

( *mark for default* )

- (c) What will be displayed In JTextArea1 after executing the following statement: 1  
JTextArea1.setText("Live\nIn Peace\t and harmony");

Ans. Live

In Peace <tab> and harmony

(*1 mark for correct output*)

( *mark if '\n' and/or '\t' not taken into account* )

- (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));
```

Ans: int P=3, sum=0; // Declaring P and sum as Integer

```
do
{
 sum = P;
 P += 3; sum = sum + P or sum += P is also acceptable
} while(P<=12);
jTextField1.setText (Integer.toString (sum));
```

*( mark each for correcting any four errors)*

**OR**

*(1 mark for only identifying any four errors - without making any correction)*

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

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

Ans: 327

*(1 mark for correct answer)*

- (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);
```

Ans: int Total = 0, Jump = 5;

int I;

for (I=0; I<=5; I++)

Using 'i' everywhere is acceptable

{

    Jump += 5;

    Total += Jump;

}

jTextArea.setText (" " + Total);

( mark each for identifying and correcting 4 errors)

**OR**

(1 mark for only identifying 4 errors- without making any correction)

- (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 the 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.
- (b) [when "Calculate Offer"(JButton1) is clicked]  
 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) is clicked]  
 To calculate net amount as [TotalCost(jTextField2)]-offer(jTextField3)  
 -Additional offer (jT extField4)]  
 To display the net amount in jTextField5

Ans:

g(a) jTextField4.setText("0");

1

jTextField5.setText("0");

jTextField4.setEditable(false);

jTextField5.setEditable(false);

( *mark for assigning 0 to anyone of the text fields*)

( *mark for setting anyone as un-editable*)

g(b) double Offer, Aoffer ;

2

int Amount = Integer.parseInt(JTextField2.getText ());

if (jRadioButton1.isSelected ( ) == true)

Offer = 0.2\*Amount; If (jRadioButton1.isSelected ( )) also accepted

else if(jRadioButton2.isSelected ( ) == true)

Offer = 0.15\*Amount ;

else if (jRadioButton3.isSelected ( ) == true)

Offer = 0.1\*Amount ;

jTextField3.setText (“”+Offer);

```
if (Amount>25000)
 Aoffer=0.5*Amount ;
jTextField4.setText (""+Aoffer);
jButton2.setEnabled(true);
```

*(1 mark for calculating discount correctly)*

*( mark for additional discount)*

*( mark for enabling the button)*

*(Any Object names are acceptable for JRadioButton objects)*

*Note: Use of wrapper class like Integer etc. for converting to string is acceptable*

```
g(c) int AmoUut = Integer.parseInt(jTextField2.getText());
double Offer = Double.parseDouble(jTextField3.getText());
double Aoffer = Double.parseDouble (jTextField4.getText ());
double Total = Amount-Offer-Aoffer;
jTextField5.setText(""+Total);
```

*( markior getting the value from textfield)*

*( 1 mark for calculating the net amount)*

*( mark for displaying the net amount)*

*Note: Use of wrapper class like Integer etc. for converting to string is acceptable*

- Q5 (a) What is the purpose of DROP TABLE command in MySql ? How is it different from DELETE command?

2

Ans: The DROP command is used to remove a table

**Difference:**

- DELETE command removes rows from a table while DROP TABLE removes the table (rows as well as the structure)
- DELETE is a DML command while DROP TABLE is a DOL command

- The effect of DELETE command can be rolled back while the effect of DROP TABLE cannot be rolled back

*(1 mark for purpose of DROP TABLE command)*

*(1 mark for anyone difference between DROP TABLE and DELETE commands)*

- (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 equi-join condition in the query. How many rows will get displayed on execution of this query?

1

Ans: 12

*(1 mark for correct answer)*

- (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 | Subjet      | 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

Ans: SELECT Name FROM Result

WHERE Division = 'FIRST'

ORDER BY Name;

*( mark for SELECT with WHERE clause)*

*( mark for ORDER BY)*

*Note: LIKE operator is also acceptable*

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

Ans: SELECT Name, Subject, Stipend \* 12 FROM Result;

( *mark for selecting columns*)

( *mark for computing annual stipend*)

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

Ans: SELECT COUNT(\*) FROM Result WHERE Subject = 'Accounts' OR Subject = 'Informatics';

**OR**

SELECT COUNT (\*) FROM Result WHERE Subject

IN ('Accounts', 'Informatics');

( *mark for using count( )*)

( *mark for WHERE Clause*)

**Note: LIKE operator is also acceptable**

**Note:**

**For parts (iv) to (vii) full 4 marks to be awarded if Non existence of table Exam is identified.**

**Or**

**Exam table is considered as a new table consisting of only 1 tuple and answers provided are correct.**

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

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

Ans: INSERT INTO Result

VALUES (6, 'Mohan', 500, 'English', 73, 'Second');

OR

INSERT INTO Result (<column list>)

VALUES(6, 'Mohan', 500, 'English', 73, 'Second');

(½ mark for INSERT INTO)

(½ mark for writing VALUES in correct order)

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

Ans: 475

*(1 mark for correct answer)*

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

Ans: 6

*(1 mark for correct answer)*

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

Ans: 38

*(1 mark for correct answer)*

Q6 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    |

Ans: CREATE TABLE PAYMENT

(

Loan\_number INTEGER(4) PRIMARY KEY ,

Payment\_number VARCHAR(3) ,

Payment\_date DATE ,

Payment\_amount INTEGER (8) NOT NULL

);

*(1/2 mark for CREATE TABLE)*

*(1/2 mark for fields with data types)*

*(1/2 mark for PRIMARY KEY constraint)*

*(1/2 mark for NOT NULL constraint)*



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

2

**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

Ans SELECT \* FROM Product WHERE Price BETWEEN 40 AND 120;

OR

SELECT \* FROM Product WHERE Price >= 40 AND Price <= 120;

( mark for SELECT)

( mark for BETWEEN/WHERE Clause)

- (ii) To display the ClientName, City from table Client and ProductName and Price from table Product, with their corresponding matching P\_ID

Ans: SELECT Clientname, City, Productname, price, P\_ID

FROM Product, Client

WHERE Client.P\_ID = Product.P\_ID;

*(1 mark for correct use of SELECT and FROM)*

*(1 mark for correct use of WHERE clause)*

*Note: Use of table aliases is acceptable*

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

Ans: UPDATE Product

SET Price = Price + 20;

*(1 mark for UPDATE)*

*(1 mark for SET)*

- (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

Ans: Divno

*(1 mark for correct answer)*

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

|          |         |
|----------|---------|
| Name     | Divname |
| Shankhya | Media   |
| Sunish   | Dance   |

OR

| Name     | Location |
|----------|----------|
| Shankhya | TF02     |
| Sunish   | FF02     |

OR

| Name     | Di vname | Location |
|----------|----------|----------|
| Shankhya | Media    | TF02     |
| Sunish   | Dance    | FF02     |

*(1 mark for providing any of the above outputs)*

**OR**

*(1 Mark for providing any output from the tables mentioned above  
OR writing that the corresponding join column not available)*

**OR**

*(1 mark if Q6(i) is correct)*

Q7 a) What is the impact of e-Learning sites on students learning process? 1

- Ans:
- Students can learn at their own pace.
  - A lesson can be revised any number of times at students' convenience.
  - Students can learn lessons at their homes at their convenient time.

*( 1 mark for anyone correct point)*

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

- Ans:
- Goods sold through e-business are generally cheaper as cost incurred in e-business is less compared to setting up a traditional business.
  - Customers can receive highly customizable service.
  - Even Remote area customers are reached in e-business.
  - Sellers have better understanding of their customers' needs as customers communicate through e-mails.

*( mark each for any two correct points)*

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

2

- Ans:
- Provides citizens access to information about the processes and services
  - Facilitates a speedy, transparent, accountable and efficient process for performing government administrative activities.
  - Uses modern information and telecommunication technologies such as internet, Local area networks to enhance efficiency
  - A lot of productive time of government servants and general public is saved.

**e-Governance portal :**

- [www.incometaxindia.gov.in](http://www.incometaxindia.gov.in)
- [supremecourtofindia.nic.in](http://supremecourtofindia.nic.in)
- [passport.gov.in](http://passport.gov.in)
- <https://www.irctc.co.in>

*( mark each for any three correct features)*

*( mark for anyone correct e-Governance portal)*

- 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.

Ans Label

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

Ans. ListBox/Check Box

- (iii) An input for entering comments of user.

Ans. TextArea (Most Appropriate answer]

TextField [Also acceptable]

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

Ans. RadioButton/ComboBox [Most Appropriate answer]

TextField [Also acceptable]

( *mark each for correct answers*)

### QUESTION PAPER CODE 90

#### EXPECTED ANSWERS

1. (a) Mr. Kant Sengupta 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

Ans Firewall or Intrusion Detection System

(*1 mark for correct answer*)

- (b) Seven Brothers Fashion Inc. is a fashion company with design unit and market unit 130 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) Modem

(ii) Repeater

(iii) UPS

Ans Repeater

(*1 mark for correct answer*)

- (c) Which of the following is not a feature of Networking? 1

(i) Resource Sharing

(ii) Reliability

(iii) Uninterrupted Power Supply

(iv) Reduced cost

Ans Uninterrupted Power Supply

(*1 mark for correct answer*)

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

Ans Devnagari, Bengali, Gurmukhi, Gujarati, Kannada, Malayalam, Oriya, Tamil, Arabic, Telugu

*( mark each for naming any two correct Indian scripts)*

(e) Ms. Vidya Chauhan is confused between Proprietary Software and Open Source Software. Mention at least two points of difference to help her understand the same. 2

Ans **Proprietary software**

- Has to be paid for

- Source code not available

- Cannot be copied / distributed

**Open Source software**

- Free and therefore need not be paid for

- Source code available for change

- Can be copied and distributed

*(1 mark each for any two correct points)*

(f) Identify the type of Topology from the following 2

(i) In it, each node is connected with the help of a single co-axial cable.

(ii) In it. each node is connected with the help of independent cable with the help of a central switching (communication controller).

Ans. i) Bus Topology

ii) Star Topology

*(1 mark for each correct answer)*

(g) Define the following with reference to Threats of Network Security: 2

(i) Worm.

(ii) Trojan Horse

Ans. **Worm**

- Self-replicating malware without user intervention
- Consumes high volume of bandwidth leading to Denial of service (DoS)

**Trojan Horse**

- Appears to perform a desirable function for the user

- Steals information through a 'backdoor' /Records browsing activities without the knowledge of the user
- Causes system crash or freeze

*(1 mark for any 1 point under each definition)*

**Note: Any relevant explanation** with regards to **Threats to Network Security** also to be considered as **the correct answer**.

2. (a) While working in Netbeans, Mr. Khorana wants to display 'Pass' or 'Needs to Reappear' message depending on the marks entered in jTextField. Help her to choose the more appropriate statement out of 'If statement' and 'Switch statement'.
- 1

Ans. IF statement

*(1 mark for identifying IF as the correct statement)*

- (b) How one can make a Text Field un-editable on a Frame?
- 1

Ans <JTextField>.setEditable (false)

*(1 mark for the correct answer)*

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

Ans <TABLE> </TABLE> tags are used for making a table.

<TR> </TR> are used for adding rows in a HTML document.

*( mark each for naming both tags)*

*Note: Mentioning only <TABLE> and <TR> also acceptable*

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

Ans. <OL> stands for ordered list OR This tag is used to display an ordered/ numbered list.

<UL> stands for unordered list OR This tag is used to display a bulleted list.

*(1 mark for anyone correct difference)*

- (e) What will be the value of P and Q after execution of the following code?
- 2

int P, Q=100;

```

for (P=10; P<=12; P++)
{
 Q + P ;
}

JOptionPane.showMessageDialog (this, "P:"+P+" Q:"+Q+"");

```

Ans. P:13 Q:133

*(1 mark each for correct value of P and Q)*

(f) Differentiate between XML and HTML.

2

| XML                                    | HTML                               |
|----------------------------------------|------------------------------------|
| Defines, stores and retrieves the data | Defines how webpage is displayed   |
| XML tags are not predefined.           | HTML tags are predefined           |
| New tags can be created as per need    | New tags cannot be defined         |
| XML tags must have a closing tag.      | HTML tags may not have closing tag |
| XML tags are case-sensitive.           | HTML tags are not case-sensitive.  |

Ans

*(1 mark each for any 2 correct differences)*

(g) Write Java code that takes the cost of a pencil from jTextField1 and number of pencils from jTextField2 and calculates total amount as cost\*number to be displayed in jTextField3 and 20% service tax out of total amount in jTextField4.

2

```

Ans double cost = Double.parseDouble(jTextField1.getText());

int n = Integer.parseInt (jTextField2.getText ());

double amount = cost * n;

jTextField3.setText(amount + "");

jTextFitlld4.setText (amount * 0.20+ "");

```

*( mark for anyone correct conversion statement)*

*( mark for calculation of total amount)*

*( mark for calculation of service tax)*

*( mark for anyone correct setText( ) statement)*

**Note: The data type for cost as float/int is also acceptable**



3. (a) Write MySQL command that will be used to open an already existing database "CONTACTS. 1

Ans USE CONTACTS;

*(1 mark for correct answer)*

*Note: Mentioning only USE command is also acceptable.*

- (b) The Doc\_name Column of a table Hospital is given below: 2

|                 |
|-----------------|
| <b>Doc name</b> |
| Avinash         |
| Hariharan       |
| Vinayak         |
| Deepak          |
| Sanjeev         |

Based on the information, find the output of the following queries:

- (i) SELECT doc\_name FROM Hospital WHERE doc\_name like "%v";  
(ii) SELECT doc\_name FROM Hospital WHERE doc\_name like '%e%';

Ans (i) Sanjeev

- (ii) Deepak  
Sanjeev

*(1 mark for each correct output)*

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

Ans 8  
3

*(1 mark for each correct answer)*

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

|     |                                                                        |                                                                 |
|-----|------------------------------------------------------------------------|-----------------------------------------------------------------|
| Ans | <b>Alternate Key</b>                                                   | <b>Candidate Key</b>                                            |
|     | A key that can act as a primary key but is not selected as primary key | A key that can be set as Primary key is called a candidate key. |

*(1 mark for any correct difference/definition)*

**OR**

*(1 mark for illustrating with example)*

(e) Define a class with reference to object Oriented Programming. 1

Ans A class is a logical unit – a user defined data type. It encapsulates and binds the data members and the methods

*(1 mark for any correct definition)*

(f) An employee\_id consisting of 5 digits is stored in a string variable strEmpId. Now Mr. Deb wants to store this Id in Integer type of variable InteEmpId. Write Java statement to do this. 1

Ans `int InteEmpId = Integer.parseInt (strEmpId) ;`

*(1 mark for correct answer)*

*(Declaration of InteEmpId as 'int' is optional)*

(g) Sarthak, a student of class XII, created a table "Class". Grade is one of the columns 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 Class WHERE Grade ="Null";
```

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

Ans `SELECT * FROM Class WHERE Grade IS NULL;`

*( 2 marks for correct answer)*

4 (a) What will be displayed in of jTextField1 after executing the following code? 2

```
int m = 16 ;
```

```
m = m+1; .
```

```
if (m<15)
```

```
 jTextField.setText (Integer. toString (m)) ;
```

```
else
```

```
 jTextField.setText (Integer. toString (m+15)) ;
```

Ans 32

*(2 marks for correct answer)*

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

2

```
if (code ==1)
 Month = "January";
else if (code ==2)
 Month = "February";
else if (code==3)
 Month = "March";
else if (code==4)
 Month = "April";
else
 Month = "No Match";
```

Ans switch (code)

```
{
case 1 : Month = "January";
 break;
case 2 : Month = "February";
 break; .
case 3 : Month = "March";
 break;
case 4 : Month = "April";
 break;
default : Month = "No Match";
}
```

*( mark for switch)*

*( mark for Case labels)*

*( mark for break)*

*( mark for default label)*

- (c) What will be displayed in jTextArea1 after executing the following statement? 1  
jTextArea1.setText ("cbse\nFinal\_Exam\tIp"); .

Ans Cbse

Final\_Exam<tab>IP

**OR**

Cbse

Final\_Exam IP

*(1 mark for correct output)*

*( mark if '\n' and/or' \t' not taken into account)*

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

```
Int k=2 ;Sum = 0; //Declaring k and sum as Integer
```

```
{
```

```
 sum = k ;
```

```
 k += 2 ;
```

```
}
```

```
While (k=<20);
```

```
jTextField1 (Integer.toString(sum));
```

Ans. int k = 2 \_ \_ sum = 0; // int k = 2; int sum = 0 ;

```
do
```

```
{
```

```
 sum = k; // could also be written as sum = sum + k ;
```

```
 k += 2 ;
```

```
} while (k <= 20);
```

```
jTextField1.setText (Integer.toString (sum));
```

*( mark each for correcting any four errors)*

**OR**

*(1 mark for only identifying any four errors - without making any correction)*

- (e) Given a String object namely 'subject' having value as "123" stored in it. What will be result of the following?

1

```
JOptionPane.showMessageDialog (null, "" +
(subject.length () + Integer.parseInt (subject)));
```

Ans. 126

*(1 mark for correct answer)*

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

```
int Sum=0, Step=5 ;

int I ;

for (i = 0, i =<5, i++)
{
 Step+=5,
 Sum+=Step ;
}

jTextAreal.showText{" "+Sum);
```

Ans. int Sum = 0, Step = 5;

```
int i ;

for (i=0; i <= 5; i++)
{
 Step + = 5;
 Sum + = Step;
}

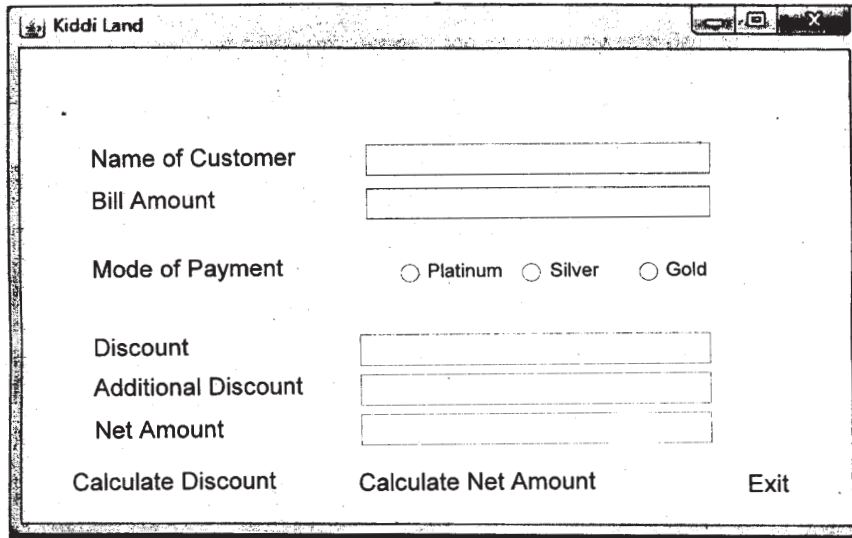
jTextAreal.setText (" " + Sum);
```

*( mark each for identifying and correcting 4 errors)*

**OR**

*(1 mark for only identifying 4 errors- without making any correction)*

- (g) Mr. Radhey Shyam Bansal the owner of the Kiddi Land Enterprises has asked his programmer Ekta to develop the following GUI in Netbeans:



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

| Type of Card | Discount      |
|--------------|---------------|
| 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 discount of 5%. Write Java code for' the following:

- (i) To assign Additional Discount as 0 (jTextField4) and Net Amount as 0 (jTextField5). Also set them as un-editable.
- (ii) [When "Calculate Discount" (jButton1) is clicked]
  - To calculate discount as per the given criteria and display the same in jTextField3
  - To assign Additional Discount (jTextField4) as 5% of amount (jTextField2) as per the above condition.
  - To enable "Calculate Net Amount" (jButton2) button
- (iii) [When "Calculate Net Amount" (jButton2) button is clicked]
  - To calculate Net Amount as [TotalCost (jTextField2) - Discount (jTextField3) - Additional Discount (jTextField4)]
  - To display the Net Amount in jTextField5

g(i)  `jTextField4.setText("0");`  
 `jTextField5.setText("0");`  
 `jTextField4.setEditable(false);`  
 `jTextField5.setEditable(false);`

*( mark for assigning 0 to anyone of the textfields)*

*( mark for setting anyone as un-editable)*

g(ii)  `double discount = 0.0 ;`  
 `double billAmount = Double.parseDouble(jTextField2.getText());`  
 `if (jRadioButton1.isSelected()) discount = 0.20;`  
 `if (jRadioButton2.isSelected()) discount = 0.15;`  
 `(jRadioButton3.isSelected()) discount = 0.10;`  
 `jTextField3.setText(billAmount * discount + "");`  
 `if (billAmount > 25000)jTextField4.setText (billAmount*0.05+"");`  
 `jButton2.setEnabled(true);`

*(1 mark for calculating discount correctly)*

*( mark for additional discount)*

*( mark for enabling the button)*

*(Any Object names are acceptable for JRadioButton objects)*

**Note: Use of wrapper class like Integer etc. for converting to string is acceptable**

g(iii)  `double netAmount = Double.parseDouble(jTextField2.getText()) -`  
 `Double.parseDouble(jTextField3.getText()) -`  
 `Double.parseDouble(jTextField4.getText());`  
 `jTextField5.setText(netAmount + " ");`

*( mark for getting the value from textfield)*

*(1 mark for calculating the net amount)*

*( mark for displaying the net amount)*

**Note: Use of wrapper class like Integer etc. for converting to string is acceptable**

2

- 5 (a) What is the purpose of ALTER TABLE command in MySql? How is it different from UPDATE command?

2

Ans ALTER TABLE command is used to modify the structure of a table.

| <b>ALTER TABLE</b>                                                                                                                                         | <b>UPDATE</b>                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• It is a DDL command</li> <li>• Changes the underlying table structure</li> <li>• Cannot be rolled back</li> </ul> | <ul style="list-style-type: none"> <li>• It is a DML command</li> <li>• Changes values of tuples in a table</li> <li>• Can be rolled back</li> </ul> |

*(1 mark for purpose of ALTER TABLE command)*

*(1 mark for anyone difference between ALTER TABLE and UPDATE commands)*

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

1

Ans. 12

*(1 mark for correct answer)*

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

**Table: EXAM**

| No | Name     | Stipend | Subjet      | Average | Division |
|----|----------|---------|-------------|---------|----------|
| 1  | Karan    | 400     | English     | 68      | FIRST    |
| 2  | Aman     | 680     | Mathematics | 72      | FIRST    |
| 3  | Javed    | 500     | Accounts    | 67      | FIRST    |
| 4  | Bishakh  | 200     | Informatics | 55      | SECOND   |
| 5  | Sugandha | 400     | History     | 35      | THIRD    |
| 6  | Suparna  | 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

Ans. SELECT Name FROM Exam

WHERE Division = 'FIRST'

ORDER BY Name;

( *mark for SELECT with WHERE clause*)

( *mark for ORDER BY*)

*Note: Like operator also acceptable*

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

Ans. SELECT NAME, SUBJECT, STIPEND \* 12

FROM EXAM;

( *mark for selecting columns*)

( *mark for computing annual stipend*)

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

Ans. SELECT COUNT(\*)

FROM EXAM

WHERE SUBJECT IN ('Accounts', 'Informatics');

OR

SELECT COUNT(\*)

FROM EXAM WHERE SUBJECT = 'Accounts' OR SUBJECT = 'Informatics';

( *mark for using count( )*)

( *mark for WHERE Clause*)

*Note: Like operator also acceptable*

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

6 "Mohan", 500, "English", 73, "SECOND";

Ans. INSERT INTO EXAM VALUES (6, "Mohan", 500, "English", 73, "SECOND");

OR

INSERT INTO EXAM (NO, NAME, STIPEND, SUBJECT, AVERAGE, DIVISION)

VALUES (6, "Mohan", 500, "English", 73, "SECOND");

( *mark for INSERT INTO*)

( *mark for writing VALUES in correct order*)

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

Ans. 475

(*1 mark for correct answer*)

- (vi) SELECT COUNT (DISTINCT Subject) FROM EXAM.. 1

Ans. 6

(*1 mark for correct answer*)

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

Ans. 68

(*1 mark for correct answer*)

- 6 (a) Write a MySql command for creating a table "BANK" whose structure is given below: 2

**Table: BANK**

| Field Name  | Datatype | Size | Constraint  |
|-------------|----------|------|-------------|
| Acct_number | Integer  | 4    | Primary key |
| Name        | Varchar  | 3    |             |
| BirthDate   | Date     |      |             |
| Balance     | Integer  | 8    | Not Null    |

Ans CREATE TABLE BANK

(

Acct\_number INTEGER (4) PRIMARY KEY,  
 Name VARCHAR(3),  
 BirthDate DATE,  
 Balance INTEGER ( 8 ) NOT NULL  
 );

*(1/2 mark for CREATE TABLE)*

*(1/2 mark for fields with appropriate data types)*

*(1/2 mark for PRIMARY KEY constraint)*

*(1/2 mark for NOT NULL constraint)*

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

**Table: ITEM**

| ID   | ItemName       | Company | Price |
|------|----------------|---------|-------|
| 1001 | Moisturiser    | XYZ     | 40    |
| 1002 | Sanitizer      | LAC     | 35    |
| 1003 | Bath Soap      | COP     | 25    |
| 1004 | Shampoo        | TAP     | 95    |
| 1005 | Lens Solutions | COP     | 350   |

**Table: CUSTOMER**

| C_ID | CustomerName | City      | ID   |
|------|--------------|-----------|------|
| 01   | Samridhh Ltd | New Delhi | 1002 |
| 05   | Big Line Inc | Mumbai    | 1005 |
| 12   | 97,8         | New Delhi | 1001 |
| 15   | Tom N Jerrv  | Bangalore | 1003 |

Write the commands in SQL queries for the following:

- (i) To display the details of Item, whose Price is in the range of 40 and 95 (Both values included).

Ans SELECT \* FROM ITEM WHERE PRICE BETWEEN; 40 AND 95;

OR

SELECT \* FROM ITEM WHERE PRICE >= 40 AND PRICE <= 95;

( mark for SELECT)

( mark for BETWEEN/WHERE Clause)

- (ii) To display the CustomerName. City from table Customer, and ItemName and Price from table item, with their corresponding matching 10.

2

Ans. SELECT CUSTOMERNAME, CITY, ITEMNAME, PRICE

FROM CUSTOMER CUST, ITEM

WHERE CUST.ID = ITEM.ID;

(1 mark for correct use of SELECT and FROM)

(1 mark for correct use of WHERE clause)

**Note: Use of table aliases is acceptable**

- (iii) To increase the Price of al the Products by 50.

2

Ans UPDATE ITEM SET PRICE = PRICE + 50 ;

(1 mark for UPDATE)

(1 mark for SET)

- (c) In a Database School there are two tables Employee and Dept as shown below:

**Table: Employee**

| Empld | Name     | Sal   | Deptno |
|-------|----------|-------|--------|
| T001  | Vishakha | 34000 | 10     |
| T001  | Mridul   | 32000 | 50     |
| T001  | Manish   | 45000 | 20     |

**Table: Dept**

| Deptno | DName      | Locaionld |
|--------|------------|-----------|
| 10     | Lights     | HH02      |
| 20     | Dance      | FF02      |
| 30     | Production | AB01      |

- (i) Identify the foreign key in the table Employee. 1
- Ans. Deptno
- (1 mark for correct answer)*
- (ii) What output, will you get, when an equi-Join query is executed to get the NAME from Employee table and corresponding DNAME from Dept table? 1
- Ans. Vishakha Lights  
Manish Dance
- ( mark for each correct line)*
7. (a) Give one social impact of e-Business. 1
- Ans Brings rapid change in
- the social fabric characterized by globalization of markets
  - business and government policies
- (1 mark for anyone correct point)*
- (b) Write two advantages of e-Learning sites. 1
- Ans
- Self paced learning
  - Unlimited revisions
  - Facilitates electronic delivery of customized learning objects
  - Facilitates teacher-student interaction
  - Facilitates peer-peer interaction
- ( mark each for any two correct points)*
- (c) Write three important features of e-Governance. Give URL of one of the commonly used - eGovernance portals. 2
- Ans
- Provides citizens access to information about the processes and services.
  - Facilitates a speedy, transparent, accountable and efficient process for performing government administrative activities.
  - Uses modern information and telecommunication technologies such as internet, Local area networks to enhance efficiency
  - A lot of productive time of government servants and general public is saved.

**e.Governance portal:**

- www.incometaxindia.gov.in
- supremecourtindia.nic.in
- passport.gov.in
- https://www.irctc.co.in

( *mark each for any three correct features* )

( *mark for anyone correct e-Governance portal* )

- (d) Anuja 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 Marks" in front of a Text Field.

Ans. Label

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

Ans. ListBox/Check Box

- (iii) An input for entering remarks

Ans. TextArea [Most Appropriate answer]

TextField [Also acceptable]

- (iv) An input for accepting Gender.

Ans. RadioButton/ComboBox [Most Appropriate answer]

TextField [Also acceptable]

( *mark each for correct answer* )