INFORMATICS PRACTICES

Time allowed : 3 hours   *Maximum Marks : 70*

General Instructions :

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

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

1. (a) Vidya College has three departments that are to be connected into a network. Which of the following communication medium (out of the given options), should be used by the college for connecting their departments for very effective High Speed communication ? **2**
   - Coaxial Cable
   - Optical Fiber
   - Ethernet Cable

   Also name the type of network (out of PAN/LAN/WAN) formed.

   (b) State reason why Star topology requires more cable length than Bus topology. **2**

   (c) Seema needs a network device that should regenerate the signal over the same network before the signal becomes too weak or corrupted. **2**

   Amit needs a network device to connect two different networks together that work upon different networking models so that the two networks can communicate properly.

   Name the devices that should be used by Seema and Amit.

   (d) How is a domain name related to an IP address ? **2**

   (e) How is firewall useful in ensuring network security ? **2**

2. (a) Identify the odd one out of the following Java statements. State reason for your choice. **1**
   - (i) for
   - (ii) do while
   - (iii) switch
   - (iv) while

   (b) Write the purpose of parseInt( ) method. **1**

   (c) Identify invalid variable names out of the following. State reason if invalid. **1**
   - (i) for
   - (ii) - salary
   - (iii) salary12
   - (iv) product

   (d) What is the difference between statements (i) and (ii) ? **1**

```
(i)      t  =  2;
(ii)     if  (t==2)
             d=3;
```

(e)   Write HTML tags to do the following :   **2**

    (i)   Inserting a horizontal line in a web page.

    (ii)   Inserting a line break

(f)   What does 'XML' stand for ? How is the purpose of HTML different from   **2**
    XML ?

(g)   Rewrite the following code using if else if statement :   **2**

```
switch(depcode)

        {

            case 1 :

                allowance  =  4000;

                break;

            case 2 :

                allowance  =  3200;

                break;

            default :

                allowance  =  1000;

        }
```

3.   (a)   What is the meaning of 'Open Source' in the term 'Open Source Database   **1**
    Management System' ?

(b)   In a table 'Employee', a column 'Occupation' contains many duplicate   **1**
    values. Which keyword would you use if you wish to list only different
    values ?

(c)   How is ALTER TABLE statement different from UPDATE statement ?   **1**

(d)   Charvi wants to delete the records where the "FirstName" is "Rama" in   **1**
    the 'Emp' Table. She has entered the following SQL statement. An error
    is being displayed. Rewrite the correct statement.

```
DELETE  'Rama'  FirstName  FROM  Emp;
```

(e) (i) Name 2 Group (Aggregate) functions of SQL. **2**

   (ii) Consider the table :

   Table : Company

CompanyCode	Donations
C101	13000
C102	NULL
C104	7000
C105	4000

What output will be displayed by the following SQL statement ?

```
SELECT  AVG(Donations)  FROM  Company;
```

(f) Given below is the 'Emp' table : **2**

ENO	NAME
1	Anita Khanna
2	Bishmeet Singh

```
SET  AUTOCOMMIT  = 0;

INSERT  INTO  Emp  VALUES  (5,'Farzia');

COMMIT;

UPDATE  Emp  SET  NAME  = 'Farzziya'  WHERE  ENO=5;

SAVEPOINT  A;

INSERT  INTO  Emp  VALUES(6,'Richard');

SAVEPOINT  B;

INSERT  INTO  Emp  VALUES(7,'Rajyalakshmi');

SAVEPOINT  C;

ROLLBACK  TO  B;
```

What will be the output of the following SQL query now **?**

```
SELECT  *  FROM  Emp;
```

(g) Consider the table below : **2**

Table : Company

EMPID	DEPARTMENT	SALARY
E101	PERSONNEL	60000
E102	ACCOUNTS	65000
E103	MARKETING	40000
E104	PERSONNEL	62000
E105	PERSONNEL	50000
E106	MARKETING	35000

Identify error(s) in the following SQL statement. Rewrite the correct SQL statement.

```
SELECT Department, Salary

FROM  Company

GROUP  BY Department;
```

4. (a) Identify programming languages out of the following : **1**

HTML, C + +,JAVA, MySQL

(b) Write Java statement to extract selected item from a given listbox named **1**
"jList1."

(c) What will be displayed in jTextField1 and jTextField2 after the following **1**
code is executed :

```
int  t;

int  x;

x = 12;

t = (3*x + +)/3;

jTextField1.setText(" "+t);

jTextField2.setText(" "+x);
```

(d) Write the output that will be displayed in the textfields by the following Java code :   **2**

```
String x;
String stream="Commerce";
jTextField1.setText((stream.length()+9)+" ");
x=stream.concat("Humanities");
jTextField2.setText(x);
jTextField3.setText(" "+x.substring(2,5));
jTextField4.setText(stream.toLowerCase());
```

(e) Write the value that will be stored in variable sum after execution of following code :   **2**

```
int sum=0,m=4;
for(int i=9;i>=6;i--)
{
    if (i%3==0)
        sum=sum+i;
    else
        sum=sum-i;
}
```

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

```
int a=0;
int b=15;
    do ;
        a=a+3;
        b=b-3;
        while a<=b;
```

(g)   Ms. Sharma works as a programmer in "ABC Car Rental Company" where she has designed a software to compute charges to be paid by the client. A screenshot of the same is shown below :

A client can take any car out of Deluxe/SemiDeluxe/Ordinary for rent.

A client can also opt for services of a guide. Charges vary depending on the type of car opted.

Charges of services of Guide are extra.

Help Ms. Sharma in writing the code to do the following :

(i) After selecting appropriate Radio Button and checkbox(if required), when 'CALCULATE' button is clicked, Amount, Guide Charges and Total Amount should be calculated and displayed in the respective text fields. **2**

Category of Car	Amount (in ₹)
Deluxe Car	1000 per day
Semi Deluxe Car	800 per day
Ordinary Car	700 per day

Amount is obtained by multiplying per day charges of Car with number of days for which the car is taken. **2**

If 'Guide Required' checkbox is selected, Guide charges per day are ₹ 500.00.

Guide Charges is calculated as : Car required for No. of days * 500;

Total Amount = Amount + Guide Charges

(ii) When 'CLEAR' button is clicked, all text fields and checkbox should be cleared. **1**

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

5. (a) Srishti has created the following table with the name 'Veterinary'. **2**

Column Name	Constraint
AnimalId	Primary Key
VaccinationsDate	
AnimalName	Not Null
OwnerName	

One of the rows inserted is as follows :

AnimalId	VaccinationDate	AnimalName	OwnerName
A101	2015-02-12	Sheru	Amit Sharma

(i) What are the data type of columns AnimalId and VaccinationDate in the table Veterinary ?

(ii) Srishti is now trying to insert the following row :

AnimalId	VaccinationDate	AnimalName	OwnerName
A102	2015-08-09	NULL	Abhimanyu Shah

Will she be able to successfully insert it ? Give reason.

(b) Write the output of the following SQL queries : **2**

```
(i)     SELECT  MID('LearningIsFun',2,4);

(ii)    SELECT  ROUND(76.384,2);

(iii)   SELECT  INSTR('INFORMATION  FORM','RM');

(iv)    SELECT  DAYOFYEAR ('2015−01−30');
```

(c) Table "Order" is shown below. Write commands in SQL for (i) to (iv) and output for (v) and (vi) **6**

Table : Order

OrderId	OrderDate	SalesPerson	OrderAmount
O101	2015-09-12	Ravi Kumar	34000
O102	2015-08-15	Rashmi Arora	50000
O103	2015-11-01	Ravi Kumar	55000
O104	2015-12-09	Manjeet Singh	60000
O105	2015-11-10	Rashmi Arora	50000

(i) To display names of SalesPersons (without duplicates).

(ii) To list OrderId and respective OrderAmount in descending order of orderAmount.

(iii) To count the number of orders booked by SalesPersons with names starting with 'R'.

(iv) To list Order ids, order dates and order amounts that were booked after 1st September 2015.

```
(v) SELECT  OrderId, OrderAmount  FROM  Order  where
    OrderAmount  between  50000  and  60000;

(vi) SELECT   concat  (OrderId,   SalesPerson),
     length(SalesPerson)  FROM  Order;
```

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

Field	Type	Constraint
Songid	Integer	Primary key
Title	Varchar (50)	
Duration	Integer	
ReleaseDate	Date	

(b) Consider the tables given below : **2**

Table : Party

PartyId	Description	CostPerPerson
P101	Birthday	400
P102	Wedding	700
P103	Farewell	350
P104	Engagement	450

Table : Client

ClientId	ClientName	Address	Phone	NoOfGuests	PartyId
C101	A.K. Antony	A-151, Adarsh Nagar	99101956	80	P101
C102	Fauzia Aria	K-5/52,Vikas Vihar	893466448	500	P102
C103	Rashi Khanna	D-6, Hakikat Nagar	981166568	50	P101
C104	S.K. Chandra	76-A/2, MG Colony, Adarsh Avenue.	65877756	100	P104

    (i) Name the Primary keys in both the tables.

    (ii) 'P101' data is present twice in column 'PartyId' in 'Client' table - Is there any discrepancy ? Give reason for your answer.

(c) With reference to the above given tables (in Q6 b), Write commands in SQL for (i) and (ii) and output for (iii) given below : **6**

    (i) To display Client names of clients, their phone numbers, PartyId and party description who will have number of guests more than 50 for their parties.

90   **10**

(ii) To display Client Ids, their addresses, number of guests of those clients who have 'Adarsh' anywhere in their addresses.

ClientId	ClientName	Address	Phone	NoOfGuests	PartyId

(iii) `SELECT ClientId, ClientName,NoOfGuests, description, Costperperson,FROM Client, Party WHERE Client.PartyId=Party.PartyId AND NoOfGuests BETWEEN 50 AND 100;`

7. (a) How is an e-commerce business more cost effective than traditional business ? Write two points. **2**

(b) How is e-learning beneficial for old people ? Write one point. **1**

(c) Ms. Ariya is creating a form for PAN CARD application. Help her to choose most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following entries. **2**

S.No	Function
1	To enter NAME
2	To enter MOBILE NUMBER
3	To allow user to choose one CATEGORY out of the categories : Company, Trust, Individual.
4	To enter NATURE OF BUSINESS/PROFESSION in the form of a paragraph

CBSE AISSCE 2016 Marking Scheme for Informatics Practices
(Sub Code: 065 Paper Code 90 Outside Delhi)

1	(a)	Vidya College has three departments that are to be connected into a network. Which of the following communication medium (out of the given options), should be used by the college for connecting their departments for very effective High Speed communication? · Coaxial Cable · Optical Fiber · Ethernet Cable Also name the type of network (out of PAN/LAN/WAN) formed.	2
	Ans	Optical fiber LAN	
		(1 mark each for each correct answer)	
	(b)	State reason why Star topology requires more cable length than Bus topology.	2
	Ans	As Star topology involves a central hub or switch to which all individual node(s) are connected with individual cable, therefore more cabling is required than Bus topology.	
		(2 marks for correct answer) *Note : Full 2 marks to be allotted if reason represented with the help of diagram*	
	(c)	Seema needs a network device that should regenerate the signal over the same network before the signal becomes too weak or corrupted. Amit needs a network device to connect two different networks together that work upon different networking models so that the two networks can communicate properly. Name the devices that should be used by Seema and Amit.	2
	Ans	Seema should use Repeater Amit should use Gateway	

		(1 mark for each correct answer) *Note: ½ mark for mentioning Router instead of Gateway*	
	(d)	How is a domain name related to an IP address?	2
	Ans	Each domain name has a corresponding IP Address.	
		(2 marks for correct answer) *Note :* ● *Full 2 marks to be allotted if reason represented with the help of example.* ● *Full 2 marks to be allotted if definitions of Domain name and IP address are stated.*	
	(e)	How is firewall useful in ensuring network security?	2
	Ans	A Firewall permits only that data to enter or leave a computer/Network for which permissions have been granted by the computer/network administrator.	
		(2 marks for correct answer)	
2	(a)	Identify the odd one out of the following Java statements. State reason for your choice i) for ii) do while iii) switch iv) while	1
	Ans	iii) switch switch is a selection statement but others are looping / iteration statements.	
		(½ mark for identifying) *(½ mark for reason)*	
	(b)	Write the purpose of parseInt() method.	1
	Ans	parseInt() converts a String value to Integer data type.	
		(1 mark for correct answer)	
	(c)	Identify invalid variable names out of the following. State reason if invalid. (i) for (ii) –salary (iii) salary12 (iv) product	1
	Ans	Invalid variable names : i) for and ii) -salary Reason : i) 'for' : is a keyword ii) '-salary' : variable name cannot start with special character	
		(½ mark each for each correct answer) *Note : ½ mark to be awarded if reason not mentioned*	

	(d)	What is the difference between statements (i) and (ii)
		`(i)    t = 2;`
		`(ii)   if (t == 2)`
		`          d = 3;`
			1

Ans		In (i) variable 't' is being assigned the value 2 whereas in (ii) 't' is being checked for equality with 2 OR In (i) assignment operator is used and in (ii) relational operator '==' is used.	
		(*1 mark for mentioning correct difference*)	
	(e)	Write HTML tags to do the following : (i) Inserting a horizontal line in a web page. (ii) Inserting a line break	2
Ans		`(i)    <HR>   or <hr>` `(ii)       or  `	
		(1 mark each for each correct answer) *Note: Full 1 mark to be allotted if <p> or <P> tag is mentioned as answer of (ii) part.*	
	(f)	What does 'XML' stand for? How is the purpose of HTML different from XML?	2
Ans		XML stands for eXtensible Markup Language. HTML is used to create web pages / display data whereas XML is used to describe/store/transport data.	
		(1 mark for expanding XML) *(1 mark for correct difference)* *Note : Full 1 mark to be allotted if only purpose of HTML is specified.*	

	(g)	Rewrite the following code using if else if statement:
		`switch(depcode)`
		`{`
		`case 1 :`
		`        allowance = 4000;`
		`        break;`
		`case 2 :`
		`        allowance = 3200;`
		`        break;`
		`default :`
		`         allowance = 1000;`
		`}`
			2

	Ans	`if (depcode == 1)`
		`        allowance = 4000;`
		`else if (depcode == 2)`
		`        allowance = 3200;`
		`else`
		`          allowance =1000;`	

		(2 marks for correct if-else-if construct and conditions) *(1 mark for correct use of if -else-if construct)* *(1 mark for correct conditions)*	

3	(a)	What is the meaning of 'Open source' in the term 'Open Source Database Management System'?	1
	Ans	Open source means that the software can be studied, copied, redistributed freely and even modified according to one's need without seeking any kind of permission. In order to modify such software the developers also provide the source code to the users.	
		(1 mark for correct answer)	
	(b)	In a table 'Employee', a column 'Occupation' contains many duplicate values. Which keyword would you use if you wish to list only different values?	1
	Ans	The DISTINCT keyword can be used to return only distinct (different) values.	
		(1 mark for correct answer)	
	(c)	How is ALTER TABLE statement different from UPDATE statement?	1
	Ans		

ALTER TABLE	UPDATE
To modify structure of a table	To modify data in a table.
DDL command	DML command

(1 mark for any correct difference)
Note: 1 mark to be awarded if explained using example

	(d)	Charvi wants to delete the records where the "FirstName" is "Rama" in the 'Emp' Table. She has entered the following SQL statement. An error is being displayed. Rewrite the correct statement. `DELETE 'Rama' FirstName FROM Emp;`	1

	Ans	`DELETE FROM Emp WHERE FirstName = 'Rama';`
		OR
		`DELETE FROM Emp WHERE FirstName like 'Rama';`	

		(1 mark for correct answer)	
	e (i)	Name 2 Group (Aggregate) functions of SQL.	1
	Ans	SUM(), MAX(), MIN(), AVG(), COUNT(), COUNT(*)	
		(½ mark each for any 2 Group functions) *Note : Function names without parentheses also to be accepted as correct answers.*	
	e(ii)	Consider the table:	1

Table: Company

CompanyCode	Donations
C101	13000
C102	NULL
C104	7000
C105	4000

What output will be displayed by the following SQL statement:
` SELECT AVG(Donations) FROM Company;`

	Ans	8000	
		(1 mark for correct answer)	
	(f)	Given below is the 'Emp' table:	2

ENO	NAME
1	Anita Khanna
2	Bishmeet Singh

```
SET AUTOCOMMIT = 0;
INSERT INTO Emp VALUES(5,'Farzia');
COMMIT;
UPDATE Emp SET NAME ='Farzziya' WHERE Eno= 5;
SAVEPOINT A;
INSERT INTO Emp VALUES(6,'Richard');
SAVEPOINT B;
INSERT INTO Emp VALUES(7,'Rajyalakshmi');
SAVEPOINT C;
ROLLBACK TO B;
```
What will be the output of the following SQL query now:
```
SELECT * FROM Emp;
```

	Ans		

ENO	NAME
1	Anita Khanna
2	Bishmeet Singh
5	Farzziya
6	Richard

(½ mark for each correct line of output)

	(g)	Consider the table below.	2

Table: Company

EMPID	DEPARTMENT	SALARY
E101	PERSONNEL	60000
E102	ACCOUNTS	65000
E103	MARKETING	40000
E104	PERSONNEL	62000
E105	PERSONNEL	50000
E106	MARKETING	35000

Identify error(s) in the following SQL statement. Rewrite the correct SQL statement.
```
SELECT Department, Salary
FROM Company
GROUP BY Department;
```

	Ans	Some aggregate function like `AVG()`,`SUM()`, `MAX()`, `MIN()` etc. should be mentioned with `SELECT`.
		`SELECT DEPARTMENT, AVG(SALARY)`
		`FROM COMPANY`
		`GROUP BY DEPARTMENT;`
		OR
		Instead of `GROUP BY`, `ORDER BY` may be used.
		`SELECT DEPARTMENT, SALARY`
		`FROM COMPANY`
		`ORDER BY DEPARTMENT;`
		OR
		`GROUP BY DEPARTMENT` is not required
		`SELECT DEPARTMENT, SALARY`
		`FROM COMPANY;`
		OR
		`No Error`	

		(2 marks for correct answer) *Note: Full 2 marks to be allotted if correct statement is written without identification of error.*	
4	(a)	Identify programming languages out of the following: HTML,C++, JAVA,MySQL	1
	Ans	C++, Java	
		(½ mark each for correct identification of programming languages)	
	(b)	Write Java statement to extract selected item from a given listbox named "jList1."	1

	Ans	`String  X  =(String)jList1.getSelectedValue();`
		OR
		`String X=jList1.getSelectedValue().toString();`	

		(1 mark for correct answer) *Note : ½ mark to be allotted if only `getSelectedValue()` is mentioned.*	

	(c)	What will be displayed in jTextField1 and jTextField2 after the following code is executed:
		`int t;`
		`int x;`
		`x = 12;`
		`t = (3*x++)/3;`
		`jTextField1.setText(" "+t);`
		`jTextField2.setText(" "+x);`
			1

	Ans	12 will be displayed in jTextField1 13 will be displayed in jTextField2	
		(½ mark for each correct answer)	
	(d)	Write the output that will be displayed in the textfields by the following Java code:	2
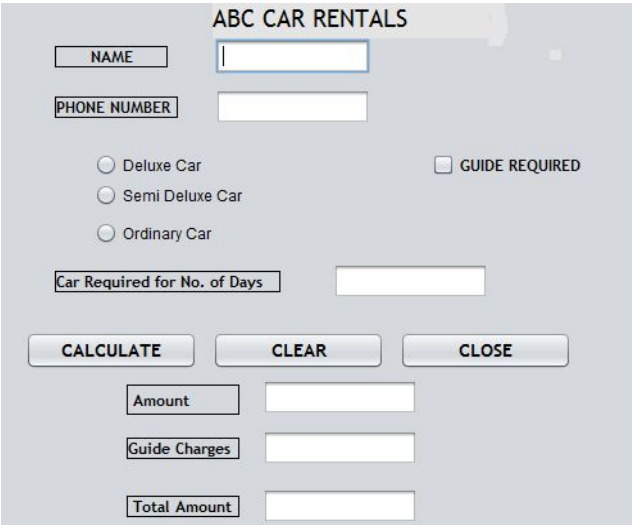
		```String x;```
		```String stream="Commerce";```
		```jTextField1.setText((stream.length()+9)+"");```
		```x = stream.concat("Humanities");```
		```jTextField2.setText(x);```
		```jTextField3.setText(" "+x.substring(2,5));```
		```jTextField4.setText(stream.toLowerCase());```	

	Ans	```jTextField1 : 17```
		```jTextField2 : CommerceHumanities```
		```jTextField3 : mme```
		```jTextField4 : commerce```	

		(½ mark for each correct line of output)	

(e)		Write the value that will be stored in variable sum after execution of following code:
		```int sum = 0, m=4;```
		```for(int i=9;i>=6;i--)```
		```{```
		``` if(i%3==0)```
		``` sum = sum + i;```
		``` else```
		``` sum = sum - i;```
		` }`
			2

	Ans	sum = 0	
		(2 marks for correct value of sum)	

(f)		The following code has error(s). Rewrite the correct code underlining all the corrections made :
		```int a = 0;```
		```int b = 15;```
		``` do ;```
		``` a= a+3;```
		``` b = b-3;```
		``` while a <= b ;```
			2

	Ans	```int a = 0;```
		```int b = 15;```
		`    `<u>`do`</u>
		`        `<u>`{`</u>
		`        a= a+3;`
		`        b = b-3;`
		`        `<u>`}`</u>
		<u>`    while ( a <= b );`</u>	

		(½ mark for correcting each error) **OR** *(1 mark for only identifying any four errors – without making any corrections)*	

(g)		Ms. Sharma works as a programmer in "ABC Car Rental Company" where she has designed a software to compute charges to be paid by the client. A screenshot of the same is shown below:	

A client can take any car out of Deluxe/ SemiDeluxe/ Ordinary for rent.

A client can also opt for services of a guide. Charges vary depending on the type of car opted.

Charges of services of Guide are extra.

Help Ms. Sharma in writing the code to do the following:

(i) After selecting appropriate Radio Button and checkbox (if required), when 'CALCULATE' button is clicked, Amount, Guide Charges and Total Amount should be calculated and displayed in the respective text fields

Category of Car	Amount(in Rs.)
Deluxe Car	1000 per day
Semi Deluxe Car	800 per day
Ordinary Car	700 per day

Amount is obtained by multiplying per day charges of Car with number of days for which the car is taken.

If 'Guide Required' checkbox is selected, Guide charges per day are Rs.500.00.

Guide Charges is calculated as :Car required for No. of days * 500;

Total Amount = Amount + Guide Charges

Ans

```
// Calculation of Amount
if (jRadioButton1.isSelected())
    jTextField3.setText("" + 1000*
Integer.parseInt(jTextField2.getText()));
if (jRadioButton2.isSelected())
```

		``
		        jTextField3.setText("" + 800*
		Integer.parseInt(jTextField2.getText()));
		if (jRadioButton3.isSelected())
		        jTextField3.setText("" + 700*
		Integer.parseInt(jTextField2.getText()));
		``
		
		//Calculation of Guide Charges
		``
		if(jCheckBox1.isSelected())
		        jTextField4.setText("" + 500*
		Integer.parseInt(jTextField2.getText()));
		``
		
		//Total Amount
		``
		jTextField5.setText("" +
		(Integer.parseInt(jTextField3.getText())+
		Integer.parseInt(jTextField4.getText())));
		``	

		(1 mark for correct use of if statement used for calculating amount) *(1 mark for calculating and displaying Amount)* *(1 mark for calculating and displaying Guide Charges)* *(1 mark for calculating and displaying Total Amount)*	
	(ii)	When 'CLEAR' button is clicked, all the textfields and checkboxes should be cleared.	1

	Ans	```
		jTextField1.setText("");
		jTextField2.setText("");
		jTextField3.setText("");
		jTextField4.setText("");
		jTextField5.setText("");
		jTextField6.setText("");
		jCheckBox1.setSelected(false);
		``	

		(½ mark for clearing any text field) *(½ mark for clearing check box)* *Note : NULL in place of "" to be accepted for clearing text field.*	
	(iii)	When 'CLOSE' button is clicked, the application should close.	1
		```System.exit(0);```	
		(1 mark for correct answer)	
5	(a)	Srishti has created the following table with the name 'Veterinary'.	2

One of the rows inserted is as follows :

Column Name	Constraint
AnimalId	Primary Key
VacinnationsDate	
AnimalName	Not Null
OwnerName	

AnimalId	VacinnationDate	AnimalName	OwnerName
A101	2015-02-12	Sheru	Amit Sharma

	(i)	What are the data type of columns **AnimalId** and **VacinnationDate** in the table Veterinary ?	
	Ans	Data type of AnimalId : Varchar/char Data type of VaccinationDate : Date	
		(½ mark each for mentioning correct data type) ***NOTE : Attribute name*** VaccinationDate, VaccinationsDate may be considered the same.	
	(ii)	Srishti is now trying to insert the following row | AnimalId	VacinnationDate	AnimalName	OwnerName | |---|---|---|---| | A102 | 2015-08-09 | NULL | Abhimanyu Shah | Will she be able to successfully insert it? Give reason.	
	Ans	No Reason – Not Null Constraint applied on attribute AnimalName	
		(½ mark for 'NO') **(½ mark for correct reason)**	
	(b)	Write the output of the following SQL queries:	2
	(i)	`SELECT MID('LearningIsFun',2,4);`	
	Ans	`MID('LearningIsFun',2,4)` `earn`	
		(½ mark for correct output)	
	(ii)	`SELECT ROUND(76.384,2);`	
	Ans	`ROUND(76.384,2)` `76.38`	
		(½ mark for correct output)	
	(iii)	`SELECT INSTR('INFORMATION FORM','RM');`	
	Ans	`INSTR('INFORMATION FORM','RM')` `5`	
		(½ mark for correct output)	
	(iv)	`SELECT DAYOFYEAR('2015-01-30');`	
	Ans	`DAYOFYEAR('2015-01-30')` `30`	
		(½ mark for correct output)	
	(c)	Table "Order" is shown below. Write commands in SQL for (i) to (iv) and output for (v) and (vi) **Table: Order**	6

OrderId	OrderDate	SalesPerson	OrderAmount
O101	2015-09-12	Ravi Kumar	34000
O102	2015-08-15	Rashmi Arora	50000
O103	2015-11-01	Ravi Kumar	55000
O104	2015-12-09	Manjeet Singh	60000
O105	2015-11-10	Rashmi Arora	50000

	(i)	To display names of Salespersons (without duplicates).	1
	Ans	`SELECT DISTINCT SalesPerson` `FROM Order;`	
		(½ mark for `SELECT`*)* *(½ mark for* `DISTINCT`*)*	
	(ii)	To list Orderid and respective Order amount in descending order of order amount.	1

	Ans	`SELECT OrderId,OrderAmount`
		`FROM Order`
		`ORDER BY OrderAmount desc;`	

		(½ mark for `SELECT`*)* *(½ mark for* `ORDER BY`*)*	
	(iii)	To count the number of orders booked by Salespersons with names starting with 'R'	1

	Ans	`SELECT COUNT(*)`
		`FROM Order`
		`WHERE SalesPerson LIKE "R%";`	

		(½ mark for `SELECT`*)* *(½ mark for condition using* `WHERE`*)*	
	(iv)	To list Order ids, order dates and order amounts that were booked after 1st September 2015.	1

	Ans	`SELECT OrderId,OrderDate,OrderAmount`
		`FROM Order`
		`WHERE OrderDate >'2015-09-01';`
		`OR`
		`SELECT OrderId,OrderDate,OrderAmount`
		`FROM Order`
		`WHERE OrderDate > 20150901;`	

		(½ mark for `SELECT`*)* *(½ mark for condition using* `WHERE`*)*	
	(v)	`SELECT OrderId, OrderAmount FROM Order where` `OrderAmount between 50000 and 60000;`	1
	Ans		

OrderId	OrderAmount
O102	50000
O103	55000
O104	60000
O105	50000

		(1 mark for correct output)	
	(vi)	`SELECT concat(OrderId,SalesPerson),` `length(SalesPerson) FROM Order;`	1

	Ans			
		concat(OrderId,SalesPerson)	length(SalesPerson)	
		O101Ravi Kumar	10	
		O102Rashmi Arora	12	
		O103Ravi Kumar	10	
		O104Manjeet Singh	13	
		O105Rashmi Arora	12	

(1 mark for correct output)

Note : Full 6 marks is to be awarded for mentioning that 'Order' is a reserved/ keyword in SQL and cannot be used as a Table Name.

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

Field	Type	Constraint
Songid	Integer	Primary key
Title	Varchar(50)	
Duration	Integer	
ReleaseDate	Date	

Ans
```
CREATE TABLE Song
(
        SongId Integer PRIMARY KEY,
        Title Varchar(50),
        Duration Integer,
        ReleaseDate Date
);
```

(½ mark for `CREATE TABLE` *)*
(½ mark for `Primary Key` *constraint)*
(1 mark for Column Names with Data Types)

(b) Consider the tables given below. **2**

Table: Party

PartyId	Description	CostPerPerson
P101	Birthday	400
P102	Wedding	700
P103	Farewell	350
P104	Engagement	450

Table: Client

ClientId	ClientName	Address	Phone	NoOfGuests	PartyId
C101	A.K. Antony	A-151, Adarsh Nagar	99101956	80	P101
C102	Fauzia Aria	K-5/52, Vikas Vihar	893466448	500	P102
C103	Rashi Khanna	D-6, Hakikat Nagar	981166568	50	P101
C104	S.K. Chandra	76-A/2, MG Colony, Adarsh Avenue.	65877756	100	P104

(i)	Name the Primary keys in both the tables	
Ans	Primary key (Table : Party) - PartyId Primary key (Table : Client) - ClientId	
	(½ mark each for identifying Primary key)	
(ii)	'P101' data is present twice in column 'PartyId' in 'Client' table – Is there any discrepancy? Give reason for your answer.	
Ans	There is no discrepancy. PartyId is not the Primary key in table Client, hence repetition is permissible.	
Ans	**(1 mark for valid reason)**	
(c)	With reference to the above given tables (in Q6 b), Write commands in SQL for (i) and (ii) and output for (iii) given below:	6
(i)	To display Client names of clients, their phone numbers,PartyId and party description who will have number of guests more than 50 for their parties.	2
Ans	SQL (below)	

```
SELECT  C.CLIENTNAME, C.PHONE, P.PARTYID,
P.DESCRIPTION
FROM PARTY P, CLIENT C
WHERE P.PARTYID = C.PARTYID
AND C.NOOFGUESTS > 50;
OR
SELECT  C.CLIENTNAME, C.PHONE, C.PARTYID,
P.DESCRIPTION
FROM PARTY P, CLIENT C
WHERE P.PARTYID = C.PARTYID
AND C.NOOFGUESTS > 50;
OR
SELECT  CLIENT.CLIENTNAME, CLIENT.PHONE,
PARTY.PARTYID, PARTY.DESCRIPTION
FROM PARTY, CLIENT
WHERE PARTY.PARTYID = CLIENT.PARTYID
AND CLIENT.NOOFGUESTS > 50;
```

		OR SELECT CLIENT.CLIENTNAME, CLIENT.PHONE, CLIENT.PARTYID, PARTY.DESCRIPTION FROM PARTY, CLIENT WHERE PARTY.PARTYID = CLIENT.PARTYID AND CLIENT.NOOFGUESTS > 50; OR SELECT CLIENTNAME,PHONE,PARTY.PARTYID,DESCRIPTION FROM PARTY, CLIENT WHERE PARTY.PARTYID = CLIENT.PARTYID AND NOOFGUESTS > 50; OR SELECT CLIENTNAME,PHONE,P.PARTYID,DESCRIPTION FROM PARTY P, CLIENT C WHERE P.PARTYID = C.PARTYID AND NOOFGUESTS > 50; *NOTE : && May be considered in place of AND*	

		(½ mark for SELECT) *(½ mark for FROM)* *(½ mark for correct use of join)* *(½ mark for correct use of condition)*	

	(ii)	To display Client Ids, their addresses, number of guests of those clients who have 'Adarsh' anywhere in their addresses.	2

ClientId	ClientName	Address	Phone	NoOfGuests	PartyId

	Ans	`SELECT CLIENTID, ADDRESS, NOOFGUESTS`
		`FROM CLIENT`
		`WHERE ADDRESS LIKE '%Adarsh%';`	

(1 mark for SELECT)
(½ mark for FROM)
(½ mark for condition using WHERE)

	(iii)	`SELECT ClientId, ClientName, NoOfGuests,`
		`description,Costperperson,FROM Client, Party WHERE`
		`Client.Partyid= Party.Partyid  AND NOofGuests BETWEEN`
		`50 AND 100;`
			2

ClientId	ClientName	NoOfGuests	Description	CostPerPerson
C101	A.K.Antony	80	Birthday	400
C103	Rashi Khanna	50	Birthday	400
C104	S.K.Chandra	100	Engangement	450

(2 marks for correct output)
OR
(2 marks for mentioning Error)

7	(a)	How is an e-commerce business more cost effective than traditional business? Write two points.	2
	Ans	● No infrastructure to be set up for shop. ● Faster buying and selling procedure	
		(1 mark each for any two valid points)	
	(b)	How is e-learning beneficial for old people? Write one point.	1
	Ans	● Learning from home ● Learning at own pace ● Learning any time ● Learning any topic	
		(1 mark for any one valid point)	
	(c)	Ms. Ariya is creating a form for PAN CARD application. Help her to choose most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following entries.	2

S.No.	Function
1	To enter NAME
2	To enter MOBILE NUMBER
3	To allow user to choose one CATEGORY out of the categories : Company,Trust,Individual.
4	To enter NATURE OF BUSINESS/PROFESSION in the form of a paragraph

Ans

S.No	Function	Control
1	To enter NAME	TextField
2	To enter MOBILE NUMBER	TextField
3	To allow user to choose one CATEGORY out of the categories: Company,Trust,Individual.	RadioButton/ ComboBox
4	To enter NATURE OF BUSINESS/ PROFESSION in the form of a paragraph	TextArea

(½ mark for each correct answer)