

Instructions: (i) All questions are compulsory.
 (ii) Programming language: IP

1. Consider the tables given below and answer the question :

BOOK

Book_id	Book name	Author_name	Publisher	Price
C0001	Fast Cook	LataKapoor	EPB	355
F0001	The Tears	William Hopkins	First Publ.	650
T0001	My First c++	Brain & Brooke	FPB	350
T0002	C++ Brain works	A.W. Rossaine	TDH	350
F0002	Thunderbolts	Anna Roberts	First Publ.	750

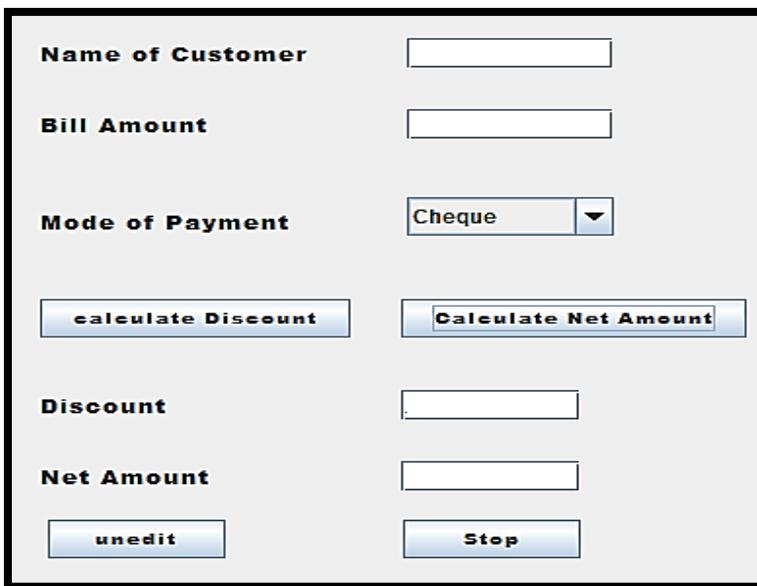
ISSUE

Issue_No	Book_id	Cust_name
101	C0001	Hans
102	F0001	Suman
103	F0005	Rohan

- i) What output will you get when an equi join query is executed to get book name from the book table and cust_name from the table issue? [1]
 - ii) Display book_name , cust_name , publisher and price of the books [2]
 - iii) Display book_name and cust_name whose price in within the range 400 to 700 in descending order of book name [2]
 - iv) Increase the price of all the books by 20% [1]
 - v) Identify the primary key and foreign key in the table Issue [1]
 - vi) Write command to add a new column named Cust_addr in table ISSUE of type varchar(30) [1]
 - vii) Check the field Book_Id of both the tables, find if there is any discrepancy or not. If yes write the reason. [1]
 - viii) What is the degree and cardinality of cross join (Cartesian product) of both the tables? [1]
2. Seema works for a Sports company. She wants to create controls on a form for the following functions. Choose appropriate controls from Text Field, Label, Radio Button, Check box, List, Combo Box, Button and write in the third column. [2]

S. No.	Controls used to	Control
1	Select one from three Team name	
2	Select Sports type	
3	Enter Number of Member	
4	To save the details	

3. Write coding for the JFrame designed for a shop.



- a) Write coding for jButton3 (unedit) to clear all the jTextField [2]
- b) Write coding for jButton4 (Stop) to exit the application [½]
- c) Write coding to for jButton1 (Calculate Discount) based on the Payment type selected by the user from the JComboBox1:- [3]
 - Mode of Payment**Discount(given on Bill Amount)
 - Cash 20%
 - Credit Card 15%
 - Debit Card 10%
- d) Write coding to for jButton2 (Calculate Net Amount) :- [2]
 - Net Amount = Bill amount – Discount

4. a) i. If you have not executed the COMMIT command, executing which command will reverse all updates made during the current work session in MySQL? [1]

- ii. What effect does SET AUTOCOMMIT have in transactions? [1]
- b) Write the value of z after execution of following code: [1]


```
int j =4 , z;
z = (4*j) % 3;
```
- c) Write the difference between statement 1 and statement 2 given below : [1]

Statement1 →A=10and Statement 2 →if(A ==10)
- d) Write two examples of RDBMS software. [1]
- e) Table 'Club' has 4 rows and 3 columns. Table 'Member' has 2 rows and 5 columns. What will be the cardinality of the Cartesian product of them? [1]
- f) A numeric data field CHANGER contains 25565.7765. Write a command to round off CHANGER. [2]
 - i. up to 2 decimal places(i.e., expected result 25565.78)
 - ii. Whole number (i.e., expected result 25566)
- g) Name the methods used to perform the following in NetBeans: [2]
 - i. To set jButton1 true at run time.
 - ii. To return the index value of the selected item from the list.
- h) Gopi Krishna is using a table Employee. It has the following columns: [2]

Code, Name, Salary, Deptcode
 He wants to display maximum salary department wise.
 He wrote the following command
 SELECT Deptcode, Max(Salary) FROM Employee;
 But he did not get the desired result.
 Rewrite the above query with necessary changes to help him get the desired output.
- i) How is NULL value different from 0 (zero) value? [1]
- j) Write the UPDATE statement in MySQL to increase commission by 100.00 in the "Commission" column in the 'Emp' table. [1]
- k) When using the LIKE clause, which wildcard symbol represents any sequence of none, one or more characters? [1]
- l) Rewrite the following SQL statement after correcting error(s). Underline the corrections made. [1]


```
INSERT IN STUDENT VALUE (5, ajay ,78.5);
```
- m) What values will the following statements return? [2]

Employee_ID	NAME	Commission
101	Sabhyata Sharma	NULL
102	DivyaArora	8900
103	Faisal Zaidi	NULL

```
SELECT COUNT(*) FROM Employee;
SELECT COUNT(Commission) FROM Employee;
```

- 5. Mc Donald computerized all the available dishes to be purchased and to calculate the net amount to be paid by the customer as shown in below figure.



- a)Write the code for jButton1 to display the Major Dishes and Starters names and amount in JTextArea1. [6]

Also calculate the total amount to be paid by the customer for the selected dishes and starters. Display the total amount calculated in JTextArea1 and in a dialog box also.
- b) Write coding to clear the value of JTextArea1. [½]
- 6.a) What value will be stored in jTextField2 and jTextField3 after executing the following code: [2]


```
String name="Sid Nayar";
int T=name.length( );
intN=150-T;
jTextField2.setText(Integer.toString(T));
jTextField3.setText(Integer.toString(N));
```

- b) Write the output: [2]

```
System.out.println(Math.pow(4.0,2.0));
System.out.println(Math.round(6.459));
```
- c) Difference between: [2]
 - i. JComboBox and jList
 - ii. isSelected () and getSelectedIndex()
- d) What will be displayed in JTextArea1 after executing the following statement? [1]

```
JTextArea1.setText("cbse\nFinal_Exam\tIP");
```
- e) How can you display multiple lines of un-editable text? [1]
- f) Given a string object named Salary having value as "55000" stored in it. Write output of following. [1]

```
JOptionPane.showMessageDialog(null," "+Salary.length()+Integer.parseInt(Salary));
```
- g) What will be the content of the JTextArea1 after executing the following code: [1]

```
int n = 89;
JTextArea1.setText(Integer.toString(++n));
```
- h) Rewrite the following program code using Switch Case statement: [2]

```
int choice=Integer.parseInt(jTextField1.getText());
if (choice==1)
    jTextField2.setText("January");
else if (choice==2)
    jTextField2.setText("February");
else if (choice==3)
    jTextField2.setText("March");
else if (choice==4)
    jTextField2.setText("April");
else if (choice==5)
    jTextField2.setText("May");
else
    jTextField2.setText("Only 1 to 5 please");
```
- i) Write Java statement to make a jTextField1 uneditable during execution. [1]

7. Create table **SchoolBus** with the following structure (with constraints given below) : [3]

Column Name	Datatype	Size
Rtno	Int	2
Area_Covered	Varchar	20
Capacity	Int	3
Noofstudents	Int	3
Distance	Int	2
Transporter	Varchar	15
Charges	Float	10,2

Ensure the following constraints:

- a) Area_Covered should not be blank.
- b) Rtno should be primary key.
- c) Transporter should be within the list of values ('Air', 'Bts', 'Tel')

8. Write command for the question (i) to (vi) and write output for (vii) to (x) [10]

SchoolBus

Rtno	Area_covered	Capacity	Noofstudents	Distance	Transporter	Charges
1	Vasantkunj	100	120	10	Air	100000
2	HauzKhas	80	80	10	Bts	85000
3	Pitampura	60	55	30	Tel	60000
4	Rohini	100	90	35		100000
5	Yamuna Vihar	50	60	20	Air	55000
6	Vasantkunj	70	80	10	Air	80000

- i) Display highest and lowest charges each transporter and area covered.
- ii) Display area covered for buses covering more than 20 km., but charges less than 80000.
- iii) Display total of Noofstudents traveling for each transporter in descending order of transporter.
- iv) Display total number of Area Covered and total charges for each transporter in ascending order of by total charges.
- v) Add a new record with following data:

Rtno	Area_covered	Capacity	Noofstudents	Distance	Transporter	Charges
11	Motibagh	35	32	10		35000

- vi) Select count(*), Min(Noofstudents) from SchoolBus ;
- vii) To show rtno, area_covered and average cost per student for all routes where average cost per student is - charges/noofstudents.
- viii) Select Area_Covered, charges from SchoolBus where transporter like ' _ t _ ' ;
- ix) Select transporter from SchoolBus where Rtno in (1,5);
- x) Select count(distinct transporter), count(transporter) from SchoolBus;