

CLASS XII

SAMPLE PAPER

INFORMATICS PRACTICES-065

SAMPLE PAPER WITH ANSWER KEY

Time allowed: 3 Hrs

M.M : 70

1. (a) What is the use of TCP/IP protocol? (1)
- (b) State two reasons for which you may like to have a network of computers instead of having stand-alone computers. (1)
- (c) Write briefly about any two threats to network security? (1)
- (d) Mohit says the following numbers indicate an address: (1)
10:B5.03.63:2E: FC
What is the above address called?
- (e) Explain the concept of open standard and proprietary standards. Write one example of each category. (2)
- (f) Name two Indian scripts included in Unicode. (1)
- (g) Giving suitable example write about similarities between Freeware and shareware. (2)
- (h) Name the type of entry: "MERA BHARAT MAHAAN". (1)

2. (a) Name any two container controls available in java. (1)
- (b) Name any two primitive data types that can hold non fractional values. (1)
- (c) In the following program: (2)
(i) How many times will the while loop execute?
(ii) Name the type of loop (Entry/Exit control)

```

int A=4;
while(A>=0)
{
    System.out.println(A-1);
}

```
- (d) Find out the errors if any in the following code: (2)

```

String pass= jPasswordField1.getText();
if(pass == "hello")
new JFrame1().setVisible("true");

```
- (e) What will be the value of **x** and **y** after execution of following code: (2)

```

int x=10,y=11;
if(++x < y)
    x =y;
    y=x;

```
- (f) Rewrite the following **if else** segment using **switch case** statement (2)

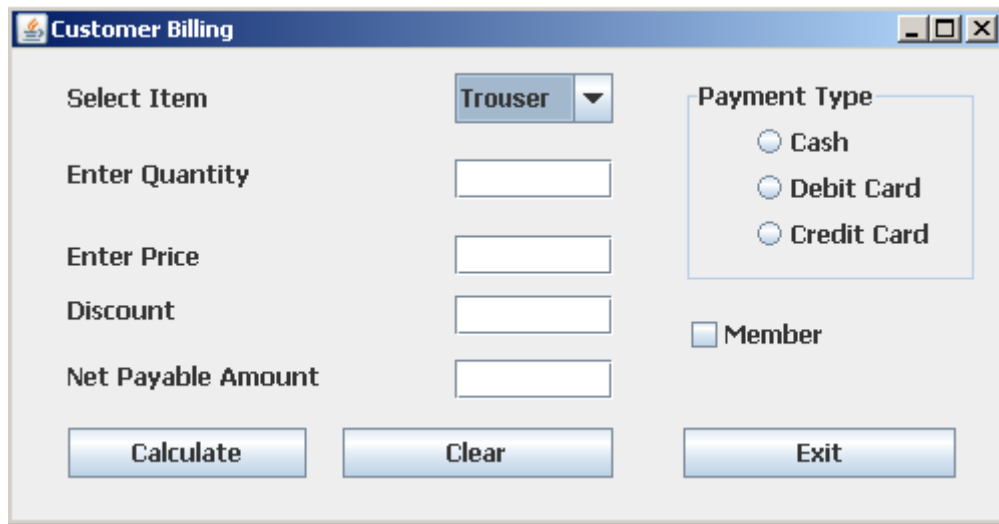
```

char code= 'A';
if(code== 'A')
    System.out.println("Accountant");
if((code== 'A') || (code=='G'))
    System.out.println("Grade IV");
if(code== 'F')
    System.out.println("Financial Advisor");

```
- (g) Write HTML code for the following: (2)
(i) To provide hyperlink to a website <http://www.cbse.nic.in>

(ii) To indent a single word and put a square bullet in front of it?

3. (a) Write MySQL command(s) to see existing tables in a database BANK. (1)
 (b) Write the command to see constraints applied on table named as “Student”. (1)
 (c) Anmol has created a table named **Student**. He wants to see records of those students who have paid their **fee**. He write the following command but not getting the desired output:
 Select Student.* from student where Fee = “Null”
 Help Anmol to run the query by removing the error(s) from the query and rewriting it. (2)
 (d) Giving suitable example write briefly about referential integrity constraint. (2)
 (e) What is the use of HAVING clause? (1)
 (f) Write one difference and one similarity between EQUI JOIN and CROSS JOIN. (2)
 (g) What is the use of **SAVEPOINT** command in MySQL. (1)
4. (a) In what sequence the initialization, testing and execution of body is done in **do while** loop? (1)
 (b) What is polymorphism? (1)
 (c) Name the method to set the caption of jButton1 swing control. (1)
 (d) Name the method to make jTextField1 as disable on a JFrame. (1)
 (e) Name the keyword used to inherit the properties of base class. (1)
 (f) Giving suitable example explain briefly the usage of keyword **final** while declaring a variable. (2)
 (g) Ms. Sheela works in a shopping mall. To calculate net payable amount she has developed the following GUI in NetBeans.



Control Name	Controls	Description
Text field	txtQty	To accept Quantity
Text field	txtPrice	To accept Price
Text field	txtDiscount	To display discount
Text field	txtNetPayable	To display Net Payable Amount
ComboBox	cmbItem	To accept item name
RadioButton	rBtn1	To select payment mode as Cash
RadioButton	rBtn2	To select payment mode as Debit Card
RadioButton	rBtn3	To select payment mode as Credit Card
CheckBox	chkBox	To select as Member

The shop accepts payments in three modes- Cash, Debit Card, Credit Cards. The discount on Amount (Quantity * Price) is given as per mode of payment is as follows-

Mode of payment	Discount
Cash	12%
Debit Card	Nil
Credit Card	8%

If the Member check box is checked then the customer gets an additional discount of 5% on net payable amount.

I. Write the code to make the textfields for Discount(txtDiscount) and Net Payable (txtNetPayable) uneditable. (1)

II. Write code to do the following-

a) When Calculate button is clicked the discount on Amount (Quantity * Price) and net payable amount (Amount-discount) is calculated as per the given criteria and displayed in discount and net payable text boxes. (3)

b) When Clear button is clicked all the text boxes, radio buttons and check box should be cleared. (1)

c) Close the application when Exit button is pressed. (1)

Q5 (a) Given following table **Emp** : (1x2=2)

Emp_No	Emp_Name	Basic_Pay
6985	Kriti	10000
5874	Kiran	15000
6787	Kirti	NULL
5898	Ravina	20000
9999	Kiran	NULL

What will the output of:

(i) Select Count(Distinct Emp_Nmae), Avg(Basic_Pay) from Emp;

(ii) Select Emp_Name, Basic_Pay+100 from Emp;

(b)What is output of: (1x2=2)

(i) Select INSTR(RIGHT("Welcome",4), "L");

(ii)Select MID("DOMESTIC AND INTERNATIONAL", LENGTH(CONCAT("eMARKET", "ING")),4);

(c)Write Sql commands for the queries (i) to (vi) based on a table **OnLineShop** :- (1x6=6)

RELATION: OnLineShop

Code	Item_Name	Company	Qty	City	Price
101	Maggi	Kissan	20	Rajkot	70.00
102	Biscuit	Parle	70	Mehsana	100.00
105	Jam	Maggi	60	Ahmedabad	95.00
406	Sauce	Nestle	50	Rajkot	86.00
110	Chocolate	Cadbury	53	Mehsana	209.00
107	Cake	Hide & Seek	20	Junagadh	380.00

(i) To display names of the items whose name starts with 'C' in ascending order of city.

- (ii) To display code, item name and city of the products whose company is Maggi, Nestle or Parle.
- (iii) To count the companies from the table.
- (iv) To increase the price by Rs 10 of all items whose item name is starting with “c”.
- (v) Change the column name company to producer.
- (vi) Display the sum of price city wise.

Q6 (a) (i) Write SQL command to create the table “**Books**” with the following structure:

(2)

Field	Type	Constraint
Book_Id	Varchar(6)	Primary Key
Book_Name	Varchar(25)	
Author_Name	Varchar(30)	
Publisher	Varchar(20)	
Price	Integer	
Type	Varchar(15)	Should be Magazine or Text Book
Quantity	Integer	Not Null

(b) Giving suitable example explain the concept of Cartesian product.

(2)

(c) Consider the following tables **VEHICLE** & **CUSTOMER**

(2x3=6)

Table : VEHICLE

Vcode	VehicleName	Make	Color	Capacity	Price
501	A-Star	Suzuki	Red	3	4
503	Indigo	Tata	Silver	3	4
502	Innova	Toyota	White	7	15
509	SX4	Suzuki	Silver	4	14
510	C Class	Mercedes	Red	4	35

Table :CUSTOMER

Ccode	Vcode	Cname	City
1001	501	Hemant Sahu	Chandigarh
1001	509	Raj Lal	Amritsar
1002	503	Feroza Shah	Banglore
1003	503	Ketan Dhal	Delhi
1003	509	BM Rai	Amritsar

- (i) Identify the composite primary key and foreign key in customer table.
- (ii) Write SQL command to display the Vcode, CName and City of those customers who have purchased Indigo Or A-Star.
- (iii) What will be the cardinality if Equi join is performed on tables VEHICLE & CUSTOMER. Also write SQL command for the same.

Q7(a) Write any two limitations of e-commerce.

(2)

(b) How e-Learning is helpful in self-paced learning.

(1)

(c) Sangita works for the Bank. She wishes to create controls on a form for following functions. What controls would you suggest for the following types of input:

(2)

Sno	Control Used to	Control
1	To display heading in front of a TextField	
2	To show description of customer	
3	Display image of customer	
4	Reset the Form	

Answer Key

1. (a) TCP/IP suite to split the info packets into small logical parts and assign the address to each part for smooth communication. protocol is used to transfer information reliably. Assembling and acknowledgement is also done after successful communication.

or

Transmission Control Protocol/Internet Protocol, is a suite of communication protocols used to interconnect network devices on the internet.

- (b) Reduced cost, fast communication, reliability
 (c) Snooping, DOS
 (d) MAC address
 (e) Open standard- internationally acceptable standard. Eg. MP3,JPEG. Proprietary standards are company restricted. DOC,XLS
 (f) Gurumukhi, Devanagari
 (g) Freeware and shareware are available with freedom to use, copy and without purchasing although with time restriction.
 (h) Phonetic based entry

2. (a) JFrame,JPanel
 (b) byte,short,int
 (c) (i) Infinite times (ii) Entry
 (d)

```
String pass= (new String) jPasswordField1.getPassword();
if(pass.equals("hello"))
new JFrame1().setVisible(true);
```

(e) x=11,y=11

- (f)

```
char code= 'A';
Switch(code)
{
case 'A':    System.out.println("Accountant");
case 'G':    System.out.println("Grade IV"); break;
case 'F':    System.out.println("Financial Advisor");
}
```

(g) (i) ``

(ii) `<UL type=" square">`

3. (a) USE BANK; SHOW TABLES;
 (b) DESCRIBE STUDENT; OR SHOW CREATE TABLE STUDENT;
 (c) Select Student.* from student where Fee IS NOT Null;
 (d) Referential integrity constraint is implemented using foreign key to refer data from parent table.
 (e) To apply condition on grouped data.
 (f) EQUI JOIN and CROSS JOIN.
 Difference – common column required in equi join whereas; it is not required in cross join.
 Similarity –applied on two or more tables
 (g) **SAVEPOINT** is used for partial rollback.

4. (a) Initialization, execution of body and testing is done **do while** loop.
 (b) Polymorphism or function overloading refers to writing more than one function with same name but (i) with different number of parameters or (ii) different type of parameters.
 (c) setText()
 (d) setEnabled(false)
 (e) extends
 (f) value cannot be changed
 (g)

(I) . txtDiscount.setEditable(false); txtNetPayable. setEditable(false);

(II)

(a) double disc=0, net_amt=0;

```
int qty= Integer.parseInt(jTextField1.getText());

float price= Float.parseFloat(jTextField2.getText());

float amt= qty*price;

if(jRadioButton1.isSelected())

    disc= 0.12*amt;

else if((jRadioButton2.isSelected()))

    disc=0;

else if((jRadioButton3.isSelected()))

    disc=0.08*amt;

net_amt= amt-disc;

if(jCheckBox1.isSelected())

    net_amt= net_amt- 0.05* net_amt;

jTextField3.setText(""+disc);

jTextField4.setText(""+net_amt);
```

(b) txtQty.setText(""); txtPrice. .setText(""); txtDiscount.setText(""); txtNetPayable. setText("");

Rb.setSelected(false); chk.setSelected(false);

(c) System.exit(0);

Q5 (a) Given following table **Emp** :

(1x2=2)

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6985	Kriti	10000
5874	Kiran	15000
6787	Kirti	NULL
5898	Ravina	20000
9999	Kiran	NULL

What will the output of:

- (i) 4, 15000
(ii) Kriti 11000
 Kiran 16000
 Kirti NULL
 Ravina 21000
 Kiran NULL

(b) (i) 0 (ii) AND

(c)

RELATION: OnLineShop

Code	Item_Name	Company	Qty	City	Price
101	Maggi	Kissan	20	Rajkot	70.00
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406	Sauce	Nestle	50	Rajkot	86.00
110	Chocolate	Cadbury	53	Mehsana	209.00
107	Cake	Hide & Seek	20	Junagadh	380.00

- (i) Select Item_name from OnLineShop where Item_name Like 'C%' order by city;
 (ii) Select code, item_name, city from OnLineShop where company IN(" Maggi", "Nestle", "Parle");
 (iii) Select count(Distinct company) from OnLineshop;
 (iv) Update onlineshop set price= price+ where item_name Like "c%";
 (v) Alter table OnLineshop change company producer varchar(20);
 (vi) Select city,sum(price) from OnLineshop group by city;

Q6 (a) (i) CREATE table **Books** (Book_Id Varchar(6) Primary Key, Book_Name Varchar(25), Author_Name Varchar(30), Publisher Varchar(20), Price Integer, Type Varchar(15) Check Type In("Magazine", "Text Book"), Quantity Integer Not Null);

(b) In Cartesian product rows are multiplied and column are added. It is binary product of the tables, If a table1 has 4 rows, 3 columns and table2 has 5 rows, 4 columns the after cross join/Cartesian product degree and cardinality of output will be 7 and 20 respectively.

(c) Consider the following tables **VEHICLE & CUSTOMER**

Table : VEHICLE

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1003	503	Ketan Dhal	Delhi
1003	509	BM Rai	Amritsar

(i) Composite primary key is Ccode+Vcode in table Customer and foreign key in customer table is Vcode.

(ii) Select Vcode,CName,City from Vehicle,Customer where Vehicle.Vcode=Customer.Vode and VehicleName IN(" Indigo", "A-Star");

(iii) Cardinality if Equi join is performed on above tables will be 5.

Select * from Vehicle,Customer where Vehicle.Vcode=Customer.Vode;

Q7(a) Literacy level, awareness, availability of resources .

(b) Contents are available online 24x7 so can be accessed anytime, anywhere thus one can learn at own speed and helpful in self-paced learning.

(c)

Sno	Control Used to	Control
1	To display heading in front of a TextField	Label
2	To show description of customer	TextArea
3	Display image of customer	Label
4	Reset the Form	Button