CLASS XII
SAMPLE PAPER-065
INFORMATICS PRACTICES

TIME ALLOWED : 3 Hrs   **M.M : 70**

1.(a) Which communication channel is suitable for communication in hilly areas and why?   (2)
Ans. Radiowaves, as these waves are omnidirectional so no problem of hills in between.

   (b) With what aim UNICODE was developed?   (1)
Ans. Unicode provides a unique number for every character, no matter what the platform, what the
program is and what the language is.

   (c) Give one example of URL and one example of domain name.   (1)
Ans. Example of URL: http://cbse.nic.in/newsite/index.html
       Example of Domain Name: http://www.cbse.nic.in

   (d) What is the purpose of a server in a network? Name any two types of servers.   (2)
Ans. Server is a computer that facilitates sharing of resources and information.

   (e) Name one open source Indian operating system.   (1)
Ans. BOSS

   (f) What do the following top level domains signify?   (1)
        (i) .com   (ii) .org
Ans.   **.com** stands for Commercial   and **.org** stands for organization.

   (g) Expand the following (i) GSM   (ii) WLL   (1)
Ans. (i) Global system for mobile communication (ii) Wireless in Local Loop

   (h) In how many different ways can you type Indian Script on a computer?   (1)
Ans. Phonetic Based and Key map Based entry.

2. (a) Name any two commonly used methods of jComboBox control.   (1)
Ans. getSelectedIndex() and getSelectedItem()

   (b) What is difference between the use of isSelected() and setSelected() methods used with jCheckBox
       control in java?   (1)
Ans. isSelected() – It's used to check whether the jCheckBox is selected/checked or not.
       setSelected() – It's used to select or deselect the jCheckBox.

   (c) Write a **while** loop code in java to display "CBSE" 5 times on separate lines on the screen. (2)
Ans. int n=1;
     while(n<=5)
    {
     System.out.println(n);
     n++;
    }

   (d) Name any two attributes used in <img> tag of HTML.   (1)

CBSE Sample Papers | CBSE Guess Papers | CBSE Practice Papers | Important Questions | CBSE PSA | CBSE_OTBA |
Proficiency Test | 10 Years Question Bank | **CBSE Guide** | CBSE Syllabus | Indian Tutors | **Teacher' Jobs** CBSE eBooks |
Schools | Alumni | CBSE Results | CBSE Datesheet | **CBSE News**

Ans. (i) src   (ii) width

        <img src= "welcome.gif" width=200>

(e) Write one similarity and one point of difference between <BR> and <HR> tags of HTML.   (1)

Ans. Similarity – Both are empty tags

     Difference-
 tag has no attributes whereas; <HR> tag has attributes such as width, height.

(f) What will be the value of **t and s** after execution of the following code: (1)

```
int t;
int s;
s=6;
t=(8 * s++) % 7;
```

Ans. Value of t will be 6 and s will be 7

(g) List two purposes of **+** operator in java.   (1)

Ans. Two purposes of **+** operator are :

    (i)   **+** operator is used to add two numbers

    (ii)   **+** operator is used to concatenate strings

(h) Identify the error in the following HTML code. Rewrite the correct code.   (1)

      <UL TYPE= "a" START=4>

Ans. <UL TYPE= "circle">

(i) Write a method (function) in Java that takes an integer as parameter and return sum of its divisors.

    (2)

Ans.
```
int fun(int N)
{
int s=1,D;
for(D=2;i<=N;i++)
 {
   if(N % D ==0)
     s=s+ D;
 }
 return s;
}
```

(j) Give the output of the following code: (1)

```
int x=0;
while(x++ <=5)
{
System.out.print("x\t");
}
```

Ans. x x x x x x

3.(a) Consider the following table GARMENT and answer the following questiuons: (2)

GCODE	DESCRIPTION	PRICE	FCODE	READYDATE
1023	FORMAL SHIRT	1150	F03	2012-12-19
1001	INFORMAL SHIRT	1250	F01	2014-01-12
1024	BABY TOP	750	F02	2013-06-06

| 1019 | FROCK | 750 | F03 | 2015-06-06 |

(i)   Name the Candidate Keys.
(ii)   What is cardinality of the table GARMENT.

Ans. (i) **GCODE and DESCRIPTION (ii) 4**

(b) Write a SQL command to delete a column 'Remarks' from table STUDENT.   (1)
Ans. Alter Table Student drop column remarks;

(c) Add a NOT NULL constraint in the table STUDENT in which a column STREAM is declared   (1)
     as Varchar(20) and NULL.
Ans. Alter Table Student modify Stream Varchar(20) Not Null;

(d) Which character is used in the SELECT statement to return all the colums in the table student? (1)
Ans.   use of character *****
       Select * from student;

(e) Define referential integrity constraint with reference to RDBMS. What is its use?   (2)
Ans. Referential integrity constraint also called foreign key is column in child table that refers/derives its
data from corresponding column of parent table.
It is used to join two tablees.

(f) What do you mean by the term **DBMS.** Write any of its two advantages.   (1)
Ans. DBMS stand for Database Management system. It is a software package used to create
database/table. Also used for adding, accessing and managing contents in a database.

(g) Write SQL command to create a SAVEPOINT named as A1.   (1)
Ans. SAVEPOINT A1;

(h) Rewrite the following SQL statement after correcting error(s). Underline the correction(s) made.
       INSERT IN STUDENT(RNO,NAME) VALUE(5, 'RAMITA');   (1)
Ans.   INSERT <u>INTO</u> STUDENT(RNO,NAME) <u>VALUES</u>(5, 'RAMITA');

4. (a) What is the use of keywords (i) extends (ii) implements?   (1)
Ans. (i) Keyword **extends** is used to inherit the properties of base class by derived class.
       Eg. **class derived extends base**
    (ii) Keyword **implements** is used while implementing (using) an **interface** by a class.
       Eg. **class X implements interface1**

(b) Find the output of the following code snippet: (2)

```
String A="Audio Visual";
String B= A.toLowerCase();
for(int i=0; i<B.length();i++)
{
    String Str1=B.subString(i,i+1);
    jTextArea1.append(Str1+ " ");
}
```
Ans.   a u d I o v I s u a l

CBSE Sample Papers | CBSE Guess Papers | CBSE Practice Papers | Important Questions | CBSE PSA | CBSE OTBA |
Proficiency Test | 10 Years Question Bank | **CBSE Guide** | CBSE Syllabus | Indian Tutors | **Teacher' Jobs** CBSE eBooks |
Schools | Alumni | CBSE Results | CBSE Datesheet | CBSE News

(c) How many times will the following loop execute? What will be the value of **y** ?   (1)

```
int x=2,y=50;
do
{
++x;
y -= x++;
}while(x<=10);
```

Ans. Loop will execute 5 times and value of **y** will be 15.

(d) What will be the output of the following code? Also name the constructor function if any.   (2)

```
public class EMP{
public EMP(int x, float y)
        {
        float res=calculate(x,y);
        System.out.println("result"+res);
        }

float calculate(int L,float B)
        {
        show();
        return L*B;
        }



void show()
        {
        System.out.print(" Output Is=");
        }
public static void main(String args[])
        {
        EMP obj = new EMP(5,6.5);
        }
    }
```

Ans. Output is=32.5
    Constructor function is **EMP()**

(e) Rewrite the following program code using **if else if** statement   (1)

```
String remarks;
int num= Integer.parseInt(jTextField1.getText());
switch(num)
{
    case 0: remarks= "You have not won any point";
        break;
    case 1: remarks= "You have not won one point";
        break;
    case 2: remarks= "You have not won two points";
        break;
    default: remarks= "All the best";
```
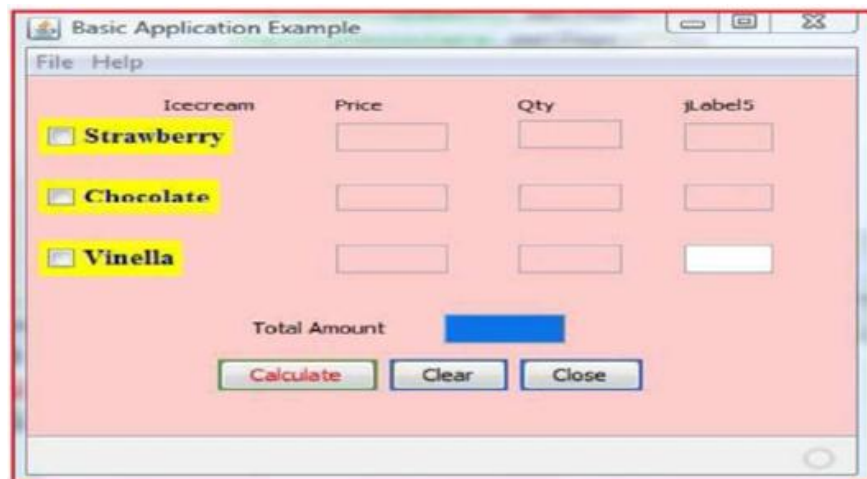
```
        }
Ans.    String remarks;
        int num= Integer.parseInt(jTextField1.getText());
        if(num==0)
            remarks= "You have not won any point";
        else if(num==1)
          remarks= "You have not won one point";
        else if(num==2)
          remarks= "You have not won two points";
        else
           remarks= "All the best";
```

(f) Assume the following interface built using Netbeans used for bill calculation of an
    ice-cream parlor. The parlor offers three varieties of ice-cream – vanilla, strawberry,
    chocolate. Vanilla ice cream costs Rs. 40, Strawberry Rs. 45 and Chocolate Rs. 60. A customer
    can chose one or more ice-creams, with quantities more than one for each of the variety
    chosen. To calculate the bill, parlor manager selects the appropriate check boxes according to
    the varieties of ice-cream chosen by the customer and enter their respective quantities.

Write Java code for the following:

   (i)   On the click event of the button 'Calculate', the application finds and displays the total bill of
            the customer. It first displays the rate of various ice-creams in the respective text fields. If a
            user doesn't select a check box, the respective ice-cream rate must become zero. The bill is
            calculated by multiplying the various quantities with their respective rate and later adding
            them all.   (3)
   (ii)   On the Click event of the clear button all the text fields and the check boxes
            get cleared.   (2)
   (iii)   On the click event of the close button the application gets closed.   (1)

Ans.   (i)   // coding for Calculate Button

              if(jchkStrawberry.isSelected()==true)

```
                jTxtPriceStrawberry.setText("45");
        else
        {
                jTxtPriceStrawberry.setText("0");
                jTxtQtyStrawberry.setText("0");
        }
        if(jChkChocolate.isSelected()==true)
                jTxtPriceChocolate.setText("60");
        else
        {
                jTxtPriceChocolate.setText("0");
                jTxtQtyChocolate.setText("0");
        }
        if(jChkVinella.isSelected()==true)
                jtxtPriceVinella.setText("40");
        else
        {
                jtxtPriceVinella.setText("0");
                jTxtQtyVinella.setText("0");
        }
        int r1,r2,r3,q1,q2,q3,a1,a2,a3,gt;
        r1=Integer.parseInt(jTxtPriceStrawberry.getText());
        r2=Integer.parseInt(jTxtPriceChocolate.getText());
        r3=Integer.parseInt(jtxtPriceVinella.getText());
        q1=Integer.parseInt(jTxtQtyStrawberry.getText());
        q2=Integer.parseInt(jTxtQtyChocolate.getText());
        q3=Integer.parseInt(jTxtQtyVinella.getText());
        a1=r1*q1;
        jTxtAmtStrawberry.setText(""+a1);
        a2=r2*q2;
        jTxtAmtChocolate.setText(""+a2);
        a3=r3*q3;
        jTxtAmtVinella.setText(""+a3);
        gt=a1+a2+a3;
```

CBSE Sample Papers | CBSE Guess Papers | CBSE Practice Papers | Important Questions | CBSE PSA | CBSE OTBA |
Proficiency Test | 10 Years Question Bank | **CBSE Guide** | CBSE Syllabus | Indian Tutors | **Teacher' Jobs** CBSE eBooks |
Schools | Alumni | CBSE Results | CBSE Datesheet | **CBSE News**

jTxtTotalAmt.setText(""+gt);

(ii)   // coding for Clear Button

    jTxtPriceStrawberry.setText("");

    jTxtPriceChocolate.setText("");

    jtxtPriceVinella.setText("");

    jTxtQtyStrawberry.setText("");

    jTxtQtyChocolate.setText("");

    jTxtQtyVinella.setText("");

    jTxtAmtStrawberry.setText("");

    jTxtAmtChocolate.setText("");

    jTxtAmtVinella.setText("");

    jchkStrawberry.setSelected(false);

    jChkChocolate.setSelected(false);

    jChkVinella.setSelected(false);

(iii)   // coding for Close Button

    System.exit(0);

5.   Write two points of difference between DDL and DML commands.   (2)
Ans. (i) DDL (Data Definition Language) commands work on database schema object such as table. whereas; DML(Data Manipulation Language) commands are used to manipulate the data in the table.

(ii) DDL (Data Definition Language) commands are automatically committed whereas; DML commands not automatically committed so can be rollbacked.

   (b) Giving suitable example write any one way to assign comments in MySQL.   (2)
Ans. /* this is the way to assign multiline comment */
   # this is the way to assign single line comment
   -- this is the way to assign single line comment

   (c) Consider the following table named "SBOP" with details of account holder. Write commands of MySQL for (i) to (iv) and output for (v) to (vi)   (1x6=6)

TABLE:SBOP

Accountno	Name	Balance	DateOfopen	Transaction
SB-1	Mr.Akhil	15000.00	2011-02-24	7
SB-2	Mr.Sham	23567.89	NULL	8
SB-3	Mrs.Sakshi	49700.00	2012-02-04	5
SB-4	Mr.Gopal	23812.35	2013-09-22	NULL
SB-5	Mr.Dennis	63459.80	2009-11-10	15

(i)   To display Accountno, Name and DateOfopen of account holders having 8 or more transactions.

Ans. SELECT Accountno, Name,DateOfopen from SBOP where Transaction>=8.

CBSE Sample Papers | CBSE Guess Papers | CBSE Practice Papers | Important Questions | CBSE PSA | CBSE OTBA |
Proficiency Test | 10 Years Question Bank | **CBSE Guide** | CBSE Syllabus | Indian Tutors | **Teacher' Jobs** CBSE eBooks |
Schools | Alumni | CBSE Results | CBSE Datesheet | **CBSE News**

(ii)   To display all information of account holders who have performed some transactions.
Ans. SELECT * from SBOP where Transaction is not NULL;

(iii)   To add another column Address with datatype and size as VARCHAR(25).
Ans. ALTER TABLE SBOP ADD ADDRESS VARCHAR(25);

(iv)   To display the month's day with reference to DateOfopen for all account holders.
Ans. SELECT DAY(DateOfopen) from SBOP;

(v)   SELECT NAME,TRANSACTION FROM SBOP where Name Like "%L";
Ans.   Mr. Akhil   7
         Mr. Gopal   NULL

(vi)   SELECT ROUND(BALANCE,-3) FROM SBOP.
Ans.   15000
         24000
         50000
         24000
         63000

6.   (a) How is Primary key constraint different from Unique key constraint?   (1)
Ans. In a table, there can be only one Primary key constraint whereas; it may have more than one unique key constraint.

   OR

Primary key constraint is used to identify a tuple (record) uniquely, cannot be null. Unique key constraint makes sure that duplicate values in a specified column are not accepted, however it may be null.

   (b) Write two points of difference between Single Row and Aggregate functions of MySQL.   (1)
Ans.

Single Row function	Aggregate function
Works one single value/ row	Works on multiple values in a single column
Returns one value for each row	Returns one value after operating on single/multiple rows
Accepts one or more arguments	Accepts only one argument

   (c) Giving suitable example, explain the concept of table alias.   (1)
Ans. Table alias is another/short temporary name of a table created for convenience while writing SQL select query statement. Eg. Select T.Itemcode, Itemname,price from Item I, Transaction T where I.Itemcode=T.Itemcode;

   (d) Explain "Atomicity" property in database transaction.   (1)
Ans. Atomicity also called All or none property ensures that either all operations of the transaction are reflected properly in the database, or none are.

   (e) Study the following tables DOCTOR and PAYMENT and write SQL commands for the questions
      (i) to (iv) and give outputs for (v) to (vi)   (1x6=6)

TABLE: DOCTOR

DOCID	Name	Dept	Sex	Experience
101	John	Ent	M	12
104	Smith	Orthopedic	M	5
107	George	Cardiology	M	10

CBSE Sample Papers | CBSE Guess Papers | CBSE Practice Papers | Important Questions | CBSE PSA | CBSE OTBA |
Proficiency Test | 10 Years Question Bank | **CBSE Guide** | CBSE Syllabus | Indian Tutors | **Teacher' Jobs** CBSE eBooks |
Schools | Alumni | CBSE Results | CBSE Datesheet | CBSE News

114	Lara	Skin	F	3
109	K George	Medicine	F	9
105	Johnson	Orthopedic	M	10
117	Lucy	Ent	F	3
111	Bill	Medicine	F	12
130	Morphy	Orthopedic	M	15

TABLE: PAYMENT

ID	Basic	Allowance	Consultation
101	12000	1000	100
104	23000	2300	500
111	32000	4000	500
114	12000	5200	100
101	42000	1700	200
105	18900	1690	300
130	21700	2600	300

(i)   Display the names of all the doctors who are in 'Medicine' department having more than 10 years' experience.

Ans. SELECT NAME FROM DOCTOR WHERE DEPT= "MEDICINE" AND EXPERIENCE>10;

(ii)   Display the average salary of all the doctors working in 'Ent' department where Salary = Basic + Allowance.

Ans. SELECT AVG(BASIC+ALLOWANCE) AS "Average Salary" FROM DOCTOR,PAYMENT WHERE DOCTOR.ID=PAYMENT.ID AND DEPT="ENT";

(iii)   Display the Number of doctors in each department.

Ans. SELECT DEPT, COUNT(*) FROM DOCTOR GROUP BY DEPT;

(iv)   Display the highest consultation fee among all male doctors.

Ans. SLECT MAX(CONSULTATION) FROM DOCTOR,SALARY WHERE DOCTOR.ID=PAYMENT.ID AND SEX= "M";

(v)   What will be the cardinality if equi join is performed on these two tables.

Ans. Cardinality will be 7.

(vi)   SELECT COUNT (DISTINCT Dept) FROM DOCTOR;

Ans. 5

Q7 (a) How is m-Commerce beneficial to businessmen?   (1)

  Ans. m-Commerce (mobile commerce) is the buying and selling of goods and services
through wireless technology using mobile phones or PDAs and m-Commerce can help the businessmen in acquisition of new customers and increased sales.

(b) Define the term ICT(Information and communication technology). How does ICT impact our daily life?   (2)

Ans. Information and Communication technology or ICT, is defined as the combination of Information technology with other related technologies specifically communication technology.

ICT has made a huge impact on almost every aspect of our daily lives- Its power has influenced engineering, health, aerospace, communications, education, research, banking, finance, defence, entertainment etc.

(c) How does e-governance help in reducing corruption? Write 2 points.   (1)

Ans. (i) **Transparent transactions** -

CBSE Sample Papers | CBSE Guess Papers | CBSE Practice Papers | Important Questions | CBSE PSA | CBSE OTBA |
Proficiency Test | 10 Years Question Bank | **CBSE Guide** | CBSE Syllabus | Indian Tutors | **Teacher' Jobs** CBSE eBooks |
Schools | Alumni | CBSE Results | CBSE Datesheet | **CBSE News**

Passport details of passport holders are available on **passport.gov.in** web site by which fake passport can be identified easily and passport department can control the crime.
(ii) Less number of trips to the offices so no red tapism.

(d) Ram works for Customer Supports Executive. He wishes to create controls on a form for the following functions. Choose appropriate controls from text box, text area, Label, Option Button, Combo box, List box, Command button. (1)

S no	Control used to	Control
1	Enter A/C type (prepaid / postpaid)	
2	Reset Form	

Ans. (1) Option Button/ Combo Box   (2) Command Button

IQBAL SINGH
PGT
CONTACT NUMBER   :   09814913883
EMAIL   :   iqbal_mailbox@rediffmail.com