CLASS XII
SAMPLE PAPER
INFORMATICS PRACTICES

Time: 3 Hrs   **MM :70 Marks**

1. (a) Name any two Indian scripts included in UNICODE. [1]
    (b) Write one example each of URL and IP address. [1]
    (c) Differentiate between Intrusion problem and Denial of Service attack? [1]
    (d) Name the protocol used by DNS names server? [1]
    (e) Explain the two network addressing system? [2]
    (f) Write the advantages of using UNICODE to represent text. [2]
    (g) Which of the following are open standards and which are proprietary standards? [2]
       (i) OGG   (ii) WMA
       (iii) DOC   (iv) PNG

2. (a) What will be the value of y after execution of the following code : [1]

    ```
    int x, y = 0;
    for (x=1; x<=5; ++x)
        y=x++ + ++x;
          --y;
    ```

    (b) While working with NetBeans, Jaqulene included a ListBox in the form. Now, she wants [1]
    her friend's name to be displayed in it. Which property of ListBox control should she use
    to do this?

    (c) Give two points of difference between IF and Switch statement. [1]
    (d) Which HTML tag inserts a horizontal straight line on a web page? [1]
    (e) What is the purpose of a XML document ? Give example of a XML code. [2]
    (f) Jennifer wants to write HTML code to create an ordered list starting with "C". Help her
    In writing the code. [2]
    (g) What will be displayed in jTextField1 and jTextField2 after execution of the following code? [2]

    ```
    int num=35, num1=46 ;
    jTextField1.setText(num+num1+" ") ;
    jTextField2.setText(" "+num + num1) ;
    ```

3. (a) What will be the output of the following queries on the basis of employee table? [2]
    Table: employee

Empid	Ename	Salary
A001	Bob	5600
A002	John	Null
A003	Tom	5000

(i) SELECT AVG(Salary) from employee ;

(ii) SELECT Salary+100 AS "new salary" FROM employee WHERE Empid='A002' ;

(b) A table named games has the following contents :   [2]

GCODE	GAMENAME	NO_OF_PLAYER	PRIZE_MONEY
101	CARROM BOARD	2	5000
102	BADMINTON	2	12000
103	TABLE TENNIS	4	8000

Write the output that will be displayed by statements (i) & (ii)

SELECT * FROM GAMES ;
SET AUTOCOMMIT=0 ;
INSERT INTO GAMES VALUES (105 , "CHESS", 2,9000) ;
ROLLBACK ;
SAVEPOINT S1 ;
SELECT * FROM GAMES ;   ------------- **(i)**
INSERT INTO GAMES VALUES (108, "Lawn Tennis" , 4,25000) ;
SAVEPOINT S2 ;
INSERT INTO GAMES VALUES (109, "CRICKET" ,11,20000) ;
ROLLBACK TO S2 ;
SELECT * FROM GAMES ; ----------------- **(ii)**

(c) What will be the output of the following MySQL queries: [2]
  (i) SELECT INSTR ("INTERNATIONAL", "NA");
  (ii) SELECT ROUND (563.345, -2) ;
  (iii) SELECT TRUNCATE(563.345, -2) ;
  (iv) SELECT LEFT(SUBSTR("VIDYAGYAN",5),3) ;

(d) What is the difference between WHERE and HAVING clause?   [1]

(e) Write MySQL query to Change the data type of column PINCODE to VARCHAR(10) in the table
CUSTOMER.   [1]

(f) An attribute A of datatype VARCHAR(30) has the value "Amitabh". The attribute B of   [2]

datatype CHAR(30) has the value "KARAN ARJUN". How many characters are occupied? in attribute A and attribute B ?

4. (a) A Class Fruit has a Subclass Mango. Which of the following is true and why?   [1]

       (i)   Class Mango can have no other parent than fruit.

       (ii)   Class Fruit can have only one subclass Mango.

(b) Write the values of x and y after execution of the following code: [2]

```
int x =10, y =20;
 x = x + y++ ;
 y = y + --x ;
```

(c) Rewrite the following code using while loop: [2]

```
int a, b ;
for(a=10, b=4 ; a<=16; a++,b+=2)
{
        jTextArea1.append ("  " + a++) ;
}
        JOptionPane.showMessageDialog (null, "Finished!!!");
```

(d) Underline the error(s) in the code segment given below and write the correct code: [2]

```
int a;
 a = jTextField1.getText() ;
switch (a) ;
  {
    case 1 : a=a+1 ;
          2 : a=a+2 ;
    case  3 : a=a+3 ;
```

(e) Find the output of the following java code snippet: `   [2]

```
String word = "SuperMan";
String wordlc = word.toLowerCase();
for(int i=0; i<wordlc.length(); i+=4)
{
   String extstr= wordlc.substring(i,i+2);
   jTextArea1.append(extstr+"\n");
}
```

(f) Design the following GUI application in Java and answer the questions that follows:

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VISHWAS BANK

PRINCIPAL [____] TIME [____]

RATE [____]

Account Type

☐ Senior Citizen

○ Fixed Deposit

○ Recurring deposit

[CALCULATE] [CLEAR]

INTEREST [____] AMOUNT [____]

i. Write the code for the Clear button to clear all the Text Fields and checkboxes. Set the default choice in the radio button as fixed deposit. [2]

ii. Write the code for the calculate button to calculate compound interest and amount and display the values in the respective text fields depending on principal, rate and time. Rate is calculated based on the time according to the following table: [4]

Account	Time	Rate (%)
Fixed Deposit	<=1	10
	>1 and <= 5	12
	>5	15
Recurring Deposit	<=2	11
	>2 and <=7	12
	>7	15

An additional rate of 2% is given to the senior citizens i.e. if the senior citizen is checked.
(Formula : Compound Interest = principal(1+Rate/100)^Time

5. (a) In a database there are two tables:

Table: ITEM

ITEM_CODE	ITEM_NAME	PRICE
111	REFRIGERATOR	90000
222	TELEVISION	75000
333	COMPUTER	42000
444	WASHING MACHINES	27000

TABLE: BRAND

ITEM_CODE	BRANDNAME
111	LG
222	SONY
333	HCL
444	IFB

Write MySQL queries for the following: [6]

 i. To display ITEMCODE, ITEMNAME, and corresponding BRAND NAME of those items, whose price is between 20000 and 40000(both inclusive)

 ii. To display ITEMCODE, PRICE and BRANDNAME of the item which has ITEMNAME as Computer.

 iii. To increase the prices of all the items by 14%

 (b) Consider the tables "ITEM" and "BRAND" and answer the following: [2]

 (i) The ITEM_CODE column in the "ITEM" table is the _____key. The ITEM_CODE column in the "BRAND" table is a _____key.

 (ii) Can the "ITEM_CODE" be set as the primary key in table "BRAND"? Give reason.

(c) Differentiate between Group By and order by clause in MySQL. [2]

6.(a) Write SQL query to create a table 'Player' with the following structure: [2]

Field	Type	Constraint
Playerid	Integer	Primary Key
name	Varchar(30)	
height	Integer	
weight	Up to 2 points of decimal	
dateofbirth	Date	Not Null
teamnane	Varchar(30)	

 (b) Table COLLEGE is shown below. Write MySQL queries for (i) to (vi)

 Table: COLLEGE [6]

No	Name	Age	Department	DateOfJoin	Salary	Sex
1	Shalaj	45	Biology	2008/02/13	10500	M
2	Sameera	54	Biology	2010/01/10	9500	F
3	Yagyan	43	Physics	2012/02/27	8500	M
4	Pratyush	34	Chemistry	2012/01/11	7500	M
5	Aren	51	Mathematics	2011/01/22	8500	M
6	Reeta	27	Chemistry	2010/02/14	9000	F

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7	Urvashi	29	Biology	2012/02/10	8500	F
8	Teena	35	Mathematics	2011/02/02	10500	F
9	Viren	49	Mathematics	2008/01/03	9000	M
10	Prakash	22	Physics	2009/02/17	8000	M

(i) To change the basic salary to 10500 of all those teachers from COLLEGE, who joined the college after 01/02/2011 and are above the age of 50.

(ii) To display name, age and salary of all those from COLLEGE, who belong to Physics and chemistry department only.

(iii) To display all the unique department names from COLLEGE.

(iv) To display maximum salary amongst the female teachers and also from the male teachers from COLLEGE.

(v) To display total number of teachers in each department.

(vi) To display details of all those teachers who joined after 2009 and their name has 'e' as a third character.

(c) Describe what does the following clause means: [1]

   i. where salary like '1_%_%'

   ii. where salary like '%100%'

(d) Write any two DDL commands   [1]

7. (a)What is the role of good Back-end in an IT application?   [1]

(b)Identify E-Governance and E-Learning applications from the following: [2]

   i. Online experiments in a virtual laboratory of a college.

   ii. Online application submission for change of address in the passport.

   iii. Online bill payment of water charges to Jal Board of any state.

   iv. Online tutorials for Physics.

(c) Raghuram is working as a Manager in the Santushti Enterprises. He wants to create a form with following functions. Choose appropriate controls for the following: [2]

SNo.	Control used to	control
1	Enter the address	
2	Select the department from the available list	
3	Choose type of employee (Permanent/ Regular)	
4	Display the picture of the employee	

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