

CLASS XII

SAMPLE PAPER

INFORMATICS PRACTICES

INSTRUCTIONS :

1. This Question paper is contains 7 Questions and 10 Printed pages.
2. All parts of a question must be done in continuation
3. Answer the questions after carefully reading the text.

Q1. Answer the following questions : 10

- (a) What is an IP address ? How it is different from a MAC address ? (2)
- (b) Two neighborhood schools, at a distance of 120 meters from each other, decided to join their LANs using UTP cables so that they can share their e-learning resources. But after joining their LANs they are not able to share the resources due to loss of signals in between . Which device should they use so that the signal is amplified in between ? (1)
- (c) Explain the difference between URL and Domain name with the help of an example ? (1)
- (d) Which transmission media should be used to transfer data across two offices situated 10 kilometer far from each other? (1)
- (e) Define (a) Snooping (b) Eavesdropping . (1)
- (f) Write two advantages and two disadvantages of following topologies . (i) Bus Topology (ii) Star Topology. (2)
- (g) Expand the terms : OSI, FLOSS, FSF, GNU, GPL, W3C, OSS. (2)

Q2. Answer the following questions : 10

- (a) Write a java method that takes an integer N as input parameter and displays the product of all the digits in the number.(2)
(for example if the number is 345 then the result should be 60 3x4x5.)

- (b) What will be the value of x and y after execution of the following code: (1)

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

- (c) Explain the difference between HTML and XML. (2)
- (d) A phone number , consisting of 10 digits, is stored in a string variable strPhone. Now it is required to store this phone number in a Long type variable lngPhone. Write a java statement to do this. (1)
- (e) Rajan has typed the following code :

```
int ch=Integer.parseInt(jTextField1.getText());
switch(ch)
{
    case 1: jTextField2.setText("Service");
    case 2: jTextField2.setText("Complain");
    case 3: jTextField2.setText("Operator"); break;
    default: jTextField2.setText("Not a valid Entry");
}
```

on entering the value 1,2 or 3 , he is getting the same output. Mention the possible reason for the same. (1)

(f) See the following set of statements on the **STUDENT** table given below . Predict the output produced by statement no. 8. (2)

Rollno	Name	Address	Marks	Grade
1	Lalit	Laxmi Nagar	200	C
2	Amber	Shashtri Nagar	225	C+

- Begin Work;
 - Select * from Student;
 - Delete From Student Where rollno=2;
 - Rollback Work;
 - Insert into student values(3,'Aman', 'KN Nagar',120,'D');
 - Delete From Student Where rollno=1;
 - Rollback Work;
 - Select * from Student;
- (g) What will be the effect of executing the following code ? (1)
- ```
String s1= new String ("Vidhyashram");
String s2= new String ("Jodhpur");
s1=s1 + s2;
System.out.print(s1);
```
- S2 will be concatenated at the end of s1 and stored in s1.
  - S1 will be concatenated at the end of s2 and stored in s1.
  - S1 will be concatenated at the end of s2 and stored in s2.
  - S2 will be concatenated at the end of s1 and stored in s2.
- (h) What is the use of break and continue in a loop? Explain with the help of an example.

(1)

Q3 Answer the following questions :

10

- (a) What is the purpose of distinct clause? Explain with example.(2)  
 (b) Which command(s) is used to see the names of the tables present in a database named VIS . (1)  
 (c) While creating a table 'Customer', Saloni forgot to set the primary key for the table. Give the statement which she should write now to set the column 'CustID' as the primary key of the table? (1)  
 (d) Aakansha wants to add a new column Marks (int(4)) to an existing table student. Write mysql command to do this. (1)  
 (e) The Table Qsales has following information in it. i.e.

| Quarter | Sales |
|---------|-------|
| 1       | 15000 |
| 2       | NULL  |
| 3       | 5000  |
| 4       | 4000  |

Based on this, find the output of the following : (2)

- (i) Select AVG(Sales ) from QSales;  
 (ii) Select Concat('Quarter',Quarter), Sales from QSales;  
 (e) Explain the difference : (3)  
 (i) Primary Key and Foreign Key.  
 (ii) Single row Functions and Group Functions.  
 (iii) Group By and ORDER BY.

Q4. (a) Rewrite the following code using IF statement without effecting the output of the code: (2)

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```
int a=1;
switch (a)
{
case 1: System.out.print("Sunday");break;
case 2: case 3: case 4: case 5: case 6: System.out.print("WeekDay"); break;
case 7: System.out.print("Nearing Weekend"); break;
default : System.out.print("Wrong Number");
}
```

(b) How many times are the following loop executed? (2)

```
int num=5;
do{
 System.out.println(num+1);
 num--;
} while (num !=0);
```

(c) Convert the following code using For loop without effecting the out put: (2)

```
int j=1,s=0;
while (j < 10)
{
 System.out.print(j);
 s = s + j;
 j +=3;
}
System.out.print(s);
```

(d) Explain the difference between <FONT> and <BASEFONT> Tag.

(e) Explain following tags : <A>, <IMG>.

**(f) Read the following case study carefully and answer the questions that follows –**  
 Vidhyashram International School decided to computerized its result making work. The Interface of the application is given below. The maximum marks for First term and Second term is 150 and for Half Yearly 300 and for Annual is 400. The maximum total marks is 1000. A weightage of 2 % should be given if a student is either a NCC cadet or a sports person.

**The grading scheme for the different streams is as follows :**

| Stream          | Marks    | Grade |
|-----------------|----------|-------|
| <b>Science</b>  | > 85     | A+    |
|                 | 70 to 85 | A     |
|                 | 50 to 70 | B     |
|                 | 40 to 50 | C     |
|                 | <40      | D     |
| <b>Commerce</b> | > 75     | A+    |
|                 | 60 to 75 | A     |
|                 | 50 to 60 | B     |
|                 | 40 to 50 | C     |
|                 | <40      | D     |

Initially the textfields totalTF, perTF, gradeTF and button gradeBTN should be disabled . (1)

- (i) On Clicking perBTN button , the total marks and Percentage should be calculated and displayed in respective textfields. (2)
- (ii) On Clicking gradeBTN button. The grade should be calculated and display in textfield. (2)
- (iii) On clicking of clearBTN command button , all textfields and checkboxes should be cleared and radio button for science should be set to default. (1)
- (iv) On clicking of exitBTN button, the application should be closed. (1)

Q5. (a) Write CREATE TABLE command to create the table PRODUCT based on following information : (2) 10

| Field Name | Type    | Size | Constraint               |
|------------|---------|------|--------------------------|
| Product_ID | Number  | 3    | Primary Key              |
| Pname      | Varchar | 20   | Unique                   |
| Category   | Varchar | 10   | Default ' Domestic'      |
| Price      | Number  | 5    | Should be greater than 0 |
| Stock      | Number  | 3    | Should be >0 and <=1000  |

(b)Write SQL commands for the statements ( i ) to ( vi ) and give outputs for SQL Queries (vii) to (x) (8)

Table: CLUB

| GCode | GameName     | Number | Fees  | StartingDate |
|-------|--------------|--------|-------|--------------|
| 101   | Carom Board  | 2      | 5000  | 2004-01-23   |
| 102   | Badminton    | 2      | 12000 | 2003-12-12   |
| 103   | Table Tennis | 4      | 8000  | 2004-02-14   |

|     |             |   |       |            |
|-----|-------------|---|-------|------------|
| 104 | Chess       | 2 | 9000  | 2004-01-01 |
| 105 | Lawn Tennis | 4 | 25000 | 2004-03-19 |

- (i) To display the name of all games with their Gcodes.
- (ii) To display details of those games which are having Fees more than 7000.
- (iii) To display the content of the CLUB table in descending order of startDate.
- (iv) To increase the fees of all games by 1000 rs.
- (v) To List the minimum and maximum fees from CLUB.
- (vi) To display total fees of each sports.
- (vii) `SELECT MAX(StartDate),MIN(StartDate) FROM CLUB;`
- (viii) `SELECT COUNT(*) from CLUB where YEAR(StartDate)=2004;`
- (ix) `SELECT FEES+100 from CLUB where GCode=105;`
- (x) Select GameName, Number\* Fees AS “ Total Fees” from club Where GameName Like ‘C%’;

Q6. (a) Predict the output: (2) 10

- (A) Select Round (1699.989,2);
- (B) Select Truncate (1699.989,-2);
- (C) Select DayofYear(curdate());
- (D) Select MID('Vidhyashram International School',-15,8);

(b) Consider the following tables **TEACHERS** and **SALARY** . Write SQL commands for the statements (i) and (ii) and give outputs for SQL queries (iii) and (iv).

**TEACHERS**

**SALARY**

| TID | NAME           | DEPT        | GENDER | EXP |
|-----|----------------|-------------|--------|-----|
| 101 | Ajay Singh     | Computers   | M      | 11  |
| 104 | Balvir Singh   | Physics     | M      | 5   |
| 107 | Pooja Sharma   | Mathematics | F      | 10  |
| 114 | Monika Parihar | Chemistry   | F      | 3   |
| 109 | Rajan Sharma   | Computers   | M      | 9   |
| 105 | Rajendra Kumar | Physics     | M      | 10  |
| 117 | P. Rathore     | Accounts    | M      | 3   |
| 111 | Aarti Biswas   | Computers   | F      | 15  |

| TID | BASIC | ALLOWANCES | DA   |
|-----|-------|------------|------|
| 101 | 12000 | 1000       | 300  |
| 104 | 23000 | 2300       | 500  |
| 107 | 32000 | 4000       | 500  |
| 114 | 12000 | 5200       | 1000 |
| 109 | 42000 | 1700       | 200  |
| 105 | 19000 | 1600       | 300  |

- (i) To display name and the total salary received by each teacher. (Total Salary = Basic + allowances+DA)(1)
- (ii) To display name and DA of those

teachers who works in computer department and having exp more than 5 years and getting DA more than 500. (1)

(iii). Select Name, Dept, Basic from teachers , Salary Where Dept='Computers' and Teachers.TID=Salary.TID; (1)

(iv). Select Name, Basic + Allowances+DA As “ Total Salary” from Teachers , Salary Where Gender='M' and exp >5 and dept like 'C%' and Teachers.TID=Salary.TID; (1)

(c) Consider the tables **DOCTORS** and **PATIENTS** given below. Write SQL commands for (i) and (ii) and output for (iii).

**Doctors**

**Patients**

| DocID | DocName    | Department | OPD_Days |
|-------|------------|------------|----------|
| 101   | M.Pandey   | ENT        | TTS      |
| 102   | G.P.Gupta  | Paed       | MWF      |
| 201   | C.K.Sharma | Ortho      | MWF      |

| Patno | PatName  | Department | DocID |
|-------|----------|------------|-------|
| 1     | Sakshi   | ENT        | 101   |
| 2     | Shuchita | Ortho      | 201   |
| 3     | Mehak    | ENT        | 101   |
| 4     | Divya    | Paed       | 102   |
| 5     | Madhav   | Ortho      | 201   |

(i) Identify the foreign key in Patients table. (1)

(ii) Display the Pat\_No, Pat\_Name and corresponding DocName for each patient. (1)

(ii) Display the list of all patients whose OPD\_Days are MWF. (1)

(iii) Select OPD\_Days, COUNT(\*) from Doctors, Patients where Patients.department=Doctors.department Group By OPD\_Days; (1)

Q7. Answer the following questions :

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(a) How does e-business improve customer satisfaction? Write one point. (1)

(b) How has our society benefited from e-governance? Write 2 points. (2)

(c) Mr. Devendra works for computer department. He wishes to create controls on a form for the following functions. Choose appropriate controls from Text Field, Label, Option Button, Check Box, List Box, Combo Box, Button and write them in third column. (2)

| S.No. | Control Used to | Control |
|-------|-----------------|---------|
|-------|-----------------|---------|

|    |                                    |  |
|----|------------------------------------|--|
| 1. | Enter last name                    |  |
| 2. | Select Gender                      |  |
| 3. | Choose City from a List of Choices |  |
| 4. | Submit Form                        |  |

This Question paper is strictly based on CBSE pattern. Question paper is given from entire syllabus. Use this for a good practice for your board exams. If find any difficulty, confusion , clarification or any discrepancy , pls feel free to message on my Number 09928206069 and mail on [hitesh.maheshwarimca@gmail.com](mailto:hitesh.maheshwarimca@gmail.com).

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