

CBSE Class – XII Informatics Practices
CBSE SAMPLE PAPER-01

Time allowed: 3 hours, Maximum Marks: 70

1 (a) The ‘Chalchitra’ theatre has a computer network. The network is in one building.

(i) Name this type of network(out of LAN/MAN/WAN).

(ii) Name one communication channel that can be used for fast communication between workstations of the network. (2)

Ans. (i).LAN

(ii.) Optical fiber cable

(b) Explain in brief any 2 security threats to Computer networks. (2)

Ans. 1. Denial of service attack: It is an attempt to make one or more network resources unavailable to their legitimate users.

2. Snooping: It is gaining unauthorised access to another person’s or organization’s data.

(c) Write the advantages of using Unicode to represent text. (2)

Ans. Unicode encoding standard provides the basis for processing, storage and interchange of text data in any language in all modern software and information technology protocols.

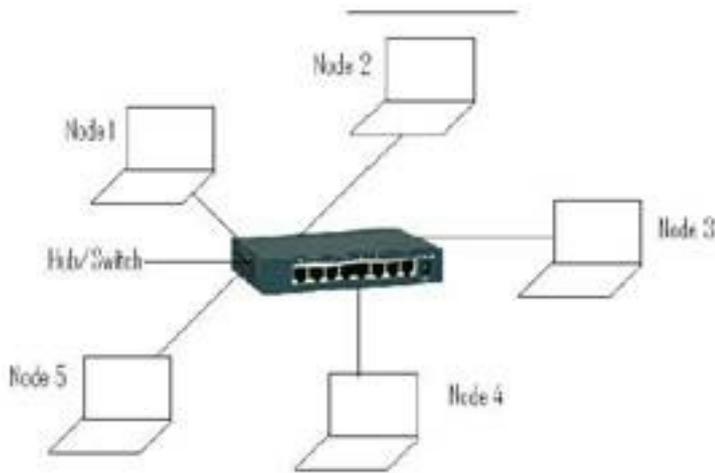
(d) Write one 176.185example each of URL and IP address. (2)

Ans. URL <http://www.cbse.nic.in/welcome.htm>

IP address 122..219

(e) Identify the topology shown below. Write 2 advantages of this topology. (2)

Ans.



Star Topology

Two advantages are as follows:

1. Easy to install
2. Easy to diagnose the fault

2 (a) While working in Netbeans, Ms. Sonia has designed a login page where she wants to display “Welcome” or “Try again” message depending on the password entered by the user in text field named ‘jTextField1’. If password entered is “India”, ‘Welcome’ message should be displayed otherwise ‘Try again’ message should be displayed. Help her in choosing more appropriate statement out of 'If statement' and 'Switch statement'. Give reason for your choice. (1)

Ans. IF statement as String matching can only be done through if statement.

(b) Write Java code to assign the value 10 to variable x and store its square value in another variable y. (1)

Ans. x=10;

y=x*x;

(c) Deepti works as a programmer in a travel company. She has developed the following code to display travel detail according to user’s choice. Help her in rewriting the same code using SWITCH CASE:

```
if(choice==1)
jTextField1.setText("New Delhi to Goa");
else if(choice==2)
jTextField1.setText("New Delhi to Paris");
else if(choice==3)
jTextField1.setText("New Delhi to Bangkok");
else
jTextField1.setText("Pl. choose valid option"); (2)
```

Ans. switch(choice)

```
{
```

```
case 1:
```

```
jTextField1.setText("New Delhi to Goa");
```

```
break;
```

```
case 2:
```

```
jTextField1.setText("New Delhi to Paris");
```

```
break;
```

```
case 3:
```

```
jTextField1.setText("New Delhi to Bangkok");
```

```
break;
```

```
default:
```

```
jTextField1.setText("Pl. choose valid option");
```

}

(d) Shambhavi has to design two web pages with following specifications:

(i) One web page should have an unordered list.

(ii) Another web page should have background “Yellow” in colour.

Suggest her suitable tag(s) and attribute(s) for the above specifications. (2)

**Ans. (i) **

(ii) <body> tag and bgcolor attribute

(e) Albert works as a website developer in Global Website Designers company.

Currently he has created following tags in XML:

<STUDENT>...</STUDENT>

<Student>....</Student>

Are these tags part of HTML code or XML code?

Are these same same or different? (2)

Ans. These tags are part of XML code.

These tags are different.

(f) How many times will the loop execute?

```
int value1 =7,value2=19;
```

```
do
```

```
{
```

```
JOptionPane.showMessageDialog(null,value1+value2);
```

```
value1=value1+2;
```

```
value2=value2-2;
```

}while(value1<=value2); (2)

Ans. 4 times.

3 (a) Consider the table 'emp salary'. (1)

ID	Salary
101	43000
102	NULL
104	56000
107	NULL

To select tuples with some salary ,Siddharth has written the following erroneous SQL statement:

SELECT ID, Salary FROM empsalary WHERE Salary = something;

Write the correct SQL statement.

Ans.(a) SELECT ID, Salary FROM empsalary WHERE Salary is NOT NULL;

(b) Consider the following table 'employee': (1)

Employee

Name	Location
Gurpreet	Mumbai
Jatinder	Chennai
Deepa	Mumbai
Harsh	Chennai
Simi	New Delhi
Anita	Bengaluru

Write the SQL command to obtain the following output:

Location
Mumbai
Chennai
New Delhi
Benglauru

Ans.(b) SELECT DISTINCT Location FROM Employee;

(c) While creating the table Student last week, Ms. Sharma forgot to include the column Game_Played. Now write a command to insert the Game_Played column with VARCHAR data type and 30 size into the Student table? (1)

Ans.(c) Alter Table Student Add (Game_Played VARCHAR(30));

(d) In Marks column of 'Student' table, for Roll number 2, the Class Teacher entered the marks as 45. However there was a totaling error and the student has got her marks increased by 5. Which My 'SQL command should she use to change the marks in 'Student' table. (1)

Ans.(d) UPDATE command.

(e) Consider the table 'Teacher' given below: (2)

Teacher ID	Department	Posts
T101	SCIENCE	32
T012	NULL	30
T103	MATHEMATICS	34

What will be the output of the following queries on the basis of the above table:

(i)Select count(Department) from Teacher;

(ii)Select count(*) from Teacher;

Ans(e). (i.) 2 (ii.) 3.

(f) Consider the Stu table: (2)

--	--

ROLL NO	NAME
1	Ashi
2	Bimmi
4	Akash

The following SQL queries are executed on the above table

```
INSERT INTO Stu VALUES(5,'Gagan');
```

```
COMMIT;
```

```
UPDATE Stu SET name='Abhi' WHERE Rollno = 4
```

```
SAVEPOINT A;
```

```
INSERT INTO Stu VALUES(6,'Chris');
```

```
SAVEPOINT B;
```

```
INSERT INTO Stu VALUES(7,'Babita');
```

```
SAVEPOINT C;
```

```
ROLLBACK TO B;
```

What will be the output of the following SQL query now:

```
SELECT * FROM Stu;
```

Ans.(f) 1 Ashi

2 Bimmi

4 Abhi

5 Gagan

6 Chris

(g) An attribute A of datatype varchar(20) has the value "Amit" . The attribute B of datatype char(20) has value "Karanita" .

How many characters are occupied in attribute A ? How many characters are occupied in attribute B? (2)

Ans(g) 4,20.

4 (a) Following is a list of programming languages:

BASIC, COBOL, C, JAVA

Help Sandhya in identifying Object Oriented language(s) from the above given list. (1)

Ans.(a)Java.

(b) Satyam is designing a frame in Netbeans containing list box. Help him in writing suitable Java statement to extract selected item from a given listbox named "jList1." (1)

Ans.(b) jList1.getSelectedIValue();

(c) What will be displayed in jTextField1 and jTextField2 after the following code is executed: (1)

```
int number = 12;
```

```
if (number <15)
```

```
{
```

```
jTextField1.setText(""+ number) ;
```

```
number++;
```

```
jTextField2.setText(""+ number) ;
```

```
}
```

```
else
```

```
{  
jTextField1.setText("number1");  
  
number++;  
  
jTextField2.setText("number2");  
  
}
```

Ans.(c)12

13.

(d) Find output of the following Java code snippet: (2)

```
String City="Delhi",PinCode="110001",Str="";
```

```
City=City+" "+PinCode;
```

```
JOptionPane.showMessageDialog(null,City);
```

```
int l=City.length();
```

```
int i=0;
```

```
while(i<l)
```

```
{
```

```
Str=Str+City.substring(6);
```

```
i=i+15;
```

```
}
```

```
JOptionPane.showMessageDialog(null,Str);
```

Ans.(d)Delhi 110001

110001.

(e) Rewrite the following code using WHILE loop: (2)

```
int x=100;

for(int i=2;i<=22;i=i+4)

{

jTextArea1.append("\n"+(i+x));

x=x-2;

}
```

Ans.(e) int x=100;

```
int i = 2;

while (i<=22)

{

jTextArea1.append("\n"+(i+x));

x=x-2;

i = i+4;

}
```

(f) The following code has error(s). Rewrite the correct code underlining all the corrections made : (2)

```
int n=5,int i=1,f=1;

do;

{

f=f*i;

i++;
```

```
while(i<=n)
```

```
 jTextField1.setText(""+f);
```

```
Ans.(f) int n=5,i=1,f=1;
```

```
do
```

```
{
```

```
 f=f*i;
```

```
 i++;
```

```
 }while(i<=n);
```

```
 jTextField1.setText(""+f);
```

(g) Mr. Pawan works as a programmer in “ABC Marketing Company” where he has designed a Salary generator software to generate the salary of salesman in which Name and Salary are entered by the user. A screenshot of the same is shown below:



The screenshot shows a software window titled "ABC Company". It contains several input fields and buttons. On the left, there are text boxes for "Name" (containing "Amar"), "Salary" (containing "25000"), "Commission" (containing "2000"), "Gross Salary" (containing "27000"), "Facilities Charges" (containing "500"), and "Net Salary" (containing "26500"). Each of these text boxes has a corresponding button to its right: "Commission", "Gross Salary", "Facilities Charges", and "Net Salary". On the right side of the window, there are radio buttons for "Units Sold" with three options: "1 to 20", "21 to 40", and ">40". The ">40" option is selected. Below the radio buttons, there are two checkboxes under the heading "Facilities": "Transport" (checked) and "Mess" (unchecked).

Help him in writing the code to do the following:

(i.) After selecting appropriate Radio Button, when ‘Commission’ button is clicked, commission should be displayed in the respective text field as each Salesman will get a

commission based on the units sold according to the following criteria: (2)

Units Sold	Commission (in Rs.)
1 to 20	500
20 to 40	1000
>40	2000

Ans.(i) Code to calculate and display commission:

```
int com=0;

if(jRadioButton1.isSelected())

com=500;

else if(jRadioButton2.isSelected())

com=1000;

else if(jRadioButton3.isSelected())

com=2000;

jTextField3.setText(""+com);
```

(ii.) When 'Gross Salary' button is clicked, Gross Salary should be calculated and displayed in the respective text field as per the given formula: (1)

Gross Salary= Salary+Commission

Ans. (ii) Code to calculate and display Gross Salary:

```
int sal,comm;

sal=Integer.parseInt(jTextField2.getText

());

comm=Integer.parseInt(jTextField3.get
```

```
Text());
```

```
jTextField4.setText(""+(sal+comm));
```

(iii.) After required selection of Checkbox(es), when 'Facility Charges' button is clicked, Facility charges will be displayed in the respective text field according to the following criteria: (2)

Facility	Charges
Transport	500
Mess	2000

Ans.(iii) Code to calculate and display charges for the facilities:

```
int extra=0;
```

```
if(jCheckBox1.isSelected())
```

```
extra=extra+500;
```

```
if(jCheckBox2.isSelected())
```

```
extra=extra+2000;
```

```
jTextField5.setText(""+extra);
```

(iv.) Money will be deducted from the Gross Salary according to the facilities opted by the employee. When 'Net Salary' button is clicked, Net Salary should be calculated and displayed in the respective text field as per the given formulae: (1)

Net Salary= Gross Salary-Deductions

Ans.(iv) Code to calculate and display the Net Salary

```
int amt,extra;
```

```
amt=Integer.parseInt(jTextField4.getText());
```

```
extra=Integer.parseInt(jTextField5.getText());
```

```
jTextField6.setText(""+(amt-extra));
```

5 (a) Mrs. Sharma is the class teacher of Class 'XII A' She wants to create a table 'Student' to store details of her class. (2)

(i) Which of the following can be the attributes of Student table?

(a) RollNo (b) "Amit" (c) Name (d) 25

(ii) Name the Primary key of the table 'Student'. State reason for choosing it.

Ans.(i) (a) RollNo (b) Name.

(ii) Primary Key: Roll No as it will be unique for each student of the class.

(b) Write the output of the following SQL queries: (2)

(i) SELECT TRUNCATE(8.975,2);

(ii) SELECT MID('HONESTY WINS',3,4);

(iii)SELECTRIGHT(CONCAT('PRACTICES','INFORMATICS'),5);

(iv) SELECT DAYOFMONTH('2015-01-16');

Ans. (i) 8.97

(ii) NEST

(iii) ATICS

(iv) 16

(c) Table "Emp" is shown below. Write commands in SQL for (i) to (iv) and output for (v) and (vi)

ID	NAME	AGE	ADDRESS	SALARY	PHONE
			A-4 Ashok		

1	Siddarth	25	Vihar, Delhi	62000	98110766656
2	Chavi	23	B-21 Model Town, Mumbai	71000	99113423989
3	Karan	26	KC-24, North Avenue, Bhopal	65000	98105393578
4	Raunaq	22	A-152, Gomti Nagar, Lucknow	89000	99101393576
5	Kunal	27	B-5/45, Uday Park, Delhi	80000	97653455654

- (i.) To display list of all employees below 25 years old.
- (ii.) To list names and respective salaries in descending order of salary.
- (iii.) To count the number of employees with names starting with 'K'
- (iv.) To list names and addresses of those persons who have 'Delhi' in their address.
- (v.) SELECT Name, Salary FROM Emp where salary between 50000 and 70000;
- (vi.) SELECT Name, phone from emp where phone like '99%'; (6)

Ans. MySQL Commands:

(i) SELECT * FROM Emp WHERE AGE<25;

(ii) SELECT NAME,SALARY FROM Emp ORDER BY SALARY desc;

(iii) SELECT COUNT(*) FROM Emp WHERE NAME LIKE "K%";

(iv) SELECT NAME,ADDRESS FROM Emp WHERE ADDRESS LIKE"%Delhi%";

(v) Siddharth 62000

Karan 65000

(vi) Chavi 99113423989

Raunaq 99101393576

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

Field	Type	Constraint
Player id	Integer	Primary key
Name	Varchar(50)	
Height	Integer	
Weight	Integer	
Date birth	Date	
Team name	Varchar(50)	

Ans.(a) CREATE TABLE Player (
playerID integer PRIMARY KEY,
name varchar(50),
height integer,
weight integer,
datebirth date,
teamname varchar(50));

(b) Consider the tables given below. (2)

Salesperson

Sales person Id	Name	Age	Salary
1	Ajay	61	140000
2	Sunil	34	44000
5	Chris	34	40000
7	Amaaya	41	52000

Orders

Orders	Salesperson Id	Amount
10	2	54000
20	7	18000
30	1	46000
40	5	24000

(i.) The SalespersonId column in the "Salesperson" table is the _____ KEY. The Sales person Id column in the "Orders" table is a _____ KEY.

(ii.) Can the 'SalespersonId' be set as the primary key in table 'Orders'. Give reason.

Ans.(b) (i) Primary, Foreign

(ii) No as it may be repeated in Orders table.

(c) With reference to the above given tables (in Q6 b), Write commands in SQL for (i) and (ii) and output for (iii) below: (6)

(i.) To display SalespersonID, names, orderids and order amount of all salespersons.

(ii.) To display names ,salespersons

ids and order ids of those sales persons whose names start with 'A' and sales amount is

between 15000 and 20000.

(iii.) SELECT SalespersonId, name, age, amount FROM Salesperson, orders WHERE Salesperson.salespersonId= Orders.salespersonId AND AGE BETWEEN 30 AND 45;

Ans.(c) (i) SELECT S.SalespersonID, Name, OrderID, Amount FROM Salesperson S, Orders O WHERE S.SalespersonID= O.SalespersonID;

(ii) SELECT Name,S.SalespersonID,OrderID FROM Salesperson S, Orders O WHERE S.SalespersonID=O.SalespersonID AND Name LIKE "A%" AND Amount BETWEEN 15000 AND 20000;

(iii) 2 Sunil 34 54000

5 Chris 34 24000

7 Amaaya 41 18000

7 (a) 'Bachpan Toys' is a small company manufacturing toys. They have decided that it would be beneficial to the company to create a website which would allow customers to order toys on-line. State how 'Bachpan Toys' would benefit from the website. (2)

Ans.(a) Through online marketing (e-business) they can reach to many customers of far away places in a cost effective manner. Also there is no need to incur huge cost of setting up a shop/store to sell items.

(b) Which of the following is/are the advantage(s) of e-Governance (1)

(i) technology makes governance speedier

(ii) Computer literacy and basic Internet usage is not required.

(iii) governance is made transparent, that is most of the information is available to public.

Ans.(b) (i) and (iii) .

(c) Lakshmi works for a school. She wishes to create controls on a form for the following functions. Choose appropriate controls from Text field, Label, Radio button,

Check box, List box, Combo box, Button and write in the third column. (2)

S. No	Control Used to	Control
1	Enter admission number	
2	Select Stream	
3	Select Subject	
4	Clear the form	

Ans.(c)

S.No	Control used to	Control
1	Enter admission number	Text field
2	Select Stream	List box/ Combo box/Radio button
3	Select Subject	Check button
4	Clear the form	Button
