

SAMPLE PAPER-2015
CLASS-XII
Subject: Informatics Practices

Time: 3 hours

Max. Marks: 70

- Notes: (i) All questions are compulsory.
(ii) Answer the questions after carefully reading the text.

- Q.1
- a. Write examples of one proprietary and one Open Source Software? 1
 - b. ABC Public School is planning to connect all computers spread over distance within 65 meters. Suggest an cable having high speed data transfer, which can be used to connect these computers. 1
 - c. Expand the following terns to Networking: 1
(i) POP (ii) MAC
 - d. name any two most popularly used internet browsers? 1
 - e. Define any two threats to network security. 2
 - f. Differentiate between IP address and Domain name. 2
 - g. Mr. Atul Rastogi, Manager Rastogi Logistics recently founded that communication between her account office and HR office is extremely slow and signals drop quite frequently. The distance between both offices are 150 meters away from each other and connected by an Ethernet cable. 2
(i) Suggest him a device, which can be installed in between the offices for smooth communications.
(ii) Identify the network among: LAN, MAN and WAN

- Q.2
- a. While working a Form in NetBeans, Mr. Munish Jha wants to display a list of tourist places to allow the users to select their own tourist place. Suggest him to choose most appropriate control unit out of ListBox and ComboBox. 1
 - b. What is the purpose of *default* keyword while using SWITCH statement? 1
 - c. What is XML? 1
 - d. How <P> is different from
 tag? 1
 - e. What will be values of *a* and *b* after execution of the following code: 2
int a=1, b=0;
for(a=2;a<=4;++a)
{
 b=a++;

```
        --b;  
    }
```

f. Which of the following units measures the speed with which data can be transmitted from one node to another node of a network? 2

- i. Kmph ii. Kmpl iii. Mbps

g. Write JAVA code that takes value for a number in TextField1 and square it and display the output in message dialog box. 2

Q.3

a. Write MySQL command to create a new database? 1

b. Pankaj create a table with some columns in MySQL. Later on he realized that there should have increased size for a column in the table. Which command should he use to increase size for a column in the table. 1

c. Give one difference between CREATE and DELETE commands used in MySQL. 1

d. Can a table have multiple primary keys? Can it have multiple foreign keys? 2

e. Distinguish between Primary key and Candidate key with the help of a suitable example. 2

f. A table "Stock" in a database has 5 columns and 17 rows. What are the degree and cardinality of this table? 2

g. The contents of Item_no and Cost columns of a table "ITEMS" are given below: 1

Item_no	Cost
101	5000
102	6000
103	NULL
104	NULL
105	6000

Based on this information, find the output of the following queries:

(i) SELECT AVG(Cost) FROM ITEMS;

(ii) SELECT COST+100 FROM ITEMS WHERE Item_no>103;

Q.4 a. Write the purpose of the following statement: 1

```
textField1.setText(Integer.toString(Num+5));
```

b. Define function. 1

c. Rewrite the following program code using a FOR loop: 2

```
int i=1, s=0;  
while(i<10)  
{
```

```

s+=i;
i+=2;
}

```

d. What will be the contents of F1 and F2 after the following code is executed? 2

```

string F1="Happy", F2="Winter";
F1=F1.concat(F2);

```

e. Glamour Garments has developed a GUI application for their company as shown below:

Name of Customer	<input type="text"/>	<input type="button" value="Clear"/>
Bill Amount	<input type="text"/>	<input type="button" value="Stop"/>
Mode of payment	<input type="text" value="Cash"/> <input type="button" value="v"/>	<input type="button" value="Calculate"/>
Discount	<input type="text"/>	
Net Amount	<input type="text"/>	

The company accepts payment in 3 modes – cheque, cash and credit cards. The discount is given as per mode of payment as follows:

Mode of Payment	Discount
Cash	8%
Cheque	5%
Credit Card	Nil

If the Bill amount is more than 15000 then the customer gets an additional discount of 10% on bill amount.

(i) Write code to make the text fields for Discount and Net Amount un-editable. 2

(ii) Write code to calculate the Net Amount and Discount when Calculate is clicked. 3

(iii) Write code to Clear button and make blank all text fields. 2

(iv) Write code to Stop button. 2

Q.5 a. Explain the purpose of DML commands used in SQL. Also give one example. 2

b. Write the output of the following SQL queries: 2

```

(i) SELECT ROUND(7.777,2);
(ii) SELECT MID('Year 2012',3,3);

```

c. Consider the table TEACHER given below. Write the commands in SQL for (i) to (iv) and output for (v) to (viii)

TEACHER

ID	Name	Department	Hire Date	Category	Gender	Salary
1	Tarun Nanda	Hindi	17-03-94	TGT	M	25000
2	Sanajy Sharma	English	12-02-90	PRT	M	20000
3	Nikhil Arora	Arts	16-05-80	PGT	M	30000
4	James Kaur	Science	16-10-89	TGT	M	25000
5	Jaspreet Sehgal	Science	01-08-90	PGT	F	22000
6	Siddhart Kapoor	English	10-02-80	PRT	M	21000
7	Sonali Khanna	Arts	02-09-94	TGT	F	27000
8	Mukul Roy	Computer	14-11-80	TGT	M	30000

- (i) To display all information about teachers of PGT category. 1
- (ii) To list the names of female teachers of Hindi department. 1
- (iii) To list names, departments, and hiring dates of all the teachers in ascending order of hiring date. 1
- (iv) To count the number of teachers in English department. 1
- (v) SELECT MAX(HireDate) FROM TEACHER; 1
- (vi) SELECT DISTINCT(Category) FROM TEACHER; 0.5
- (vii) SELECT COUNT(*) FROM TEACHER WHERE Category='PGT'; 0.5
- (viii) SELECT AVG(Salary) FROM TEACHER GROUP BY Gender; 0.5

Q.6

- a. Write an SQL query to create the table "Item" with the following structure. 2

Field	Type	Constraint
Item_Code	VARCHAR(5)	PRIMARY KEY
Item_Name	VARCHAR(20)	
Category	VARCHAR(25)	
Price	DECIMAL(5,2)	

- b. In a database there are two tables "Customer" and "Bill" as shown below:

Customer

Cust_ID	Cust_Name	Cust_Add	Cust_Phone
1	Akhilesh Yada	C4, Janak Ouri, Delhi	7811018989
	Lalu Prasad Yadav	B1, Ashok Vihar, Delhi	6677667778
	Mulyam Singh Yadav	33, South Ext., Delhi	6767655412

Bill

Bill_No	Cust_ID	Bill_Amt
1	2	12000
2	1	13200
3	2	15000
4	2	13000
5	3	14000

(i) How many rows and how many columns will be there in the Cartesian product of these two tables?

1

(ii) Which column in the "Bill" table is the foreign key?

1

c. Consider the tables DOCTORS and PATIENTS given below:

DOCTORS

Doc_ID	Doc_Name	Department	OPD_Days
101	M. Pandey	ENT	TTS
102	G. Gupta	Paed	MWF
201	C. Sharma	Ortho	MWF

PATIENTS

Pat_No	Pat_Name	Department	Doc_ID
1	Neeraj	ENT	101
2	Mohit	Ortho	201
3	Rahul	ENT	101
4	Arif	Paed	102
5	Vivek	Ortho	201

With reference of these tables, write commands in SQL for (i) and (ii) and output for (iii) below:

(i) Display the Patno, PatName and corresponding DocName for each patient.

2

(ii) Display the list of all patients whose OPD days are MWF.

2

(iii) `SELECT OPD_Days, count(*) FROM DOCTORS D, PATIENTS P WHERE P.Department = D.Department;`

2

Q.7 a. How is e-learning beneficial to students. Write one point.

1

b. List any two features of good interface of an application.

2

c. Vijayan works for the Customer Department. He wishes to create controls on form for the following functions. Choose appropriate controls from TextBox, Label, OptionButton, CheckBox, ComboBox, CommandButton and write in the third column.

S. No.	Control Used to	Control
1	Enter last name	
2	Enter gender	
3	Choose city from a list of cities	
4	Submit form	
5	Enter city	

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