

Maharaja Agrasen Model School

Sample Paper

Subject: Informatics Practices

Time: 3Hours

Maximum Marks:70

Q-1 Answer the following questions:

- 1.1 Which protocol is used for transfer of hyper text documents on the internet? 1
- 1.2 The Great Britain Organization is planning to link its head office situated in Delhi with the offices at Srinagar. Suggest an economic way to connect it; the company is ready to compromise on the speed of connectivity. 1
- 1.3 Give the two major reasons to have a network security 1
- 1.4 Navneet is using software, which has been downloaded from internet and is available for one month. After one month he has to pay license fee for further use. What software Navneet is using? 1
- 1.5 Name two encoding techniques used for Indian scripts. 1
- 1.6 Which of the following unit measures the speed with which data can be transmitted from one node o another node of a network? Also give the expansion of the suggested unit?
(i) Mbps (ii) kmph (ii) Mgps 1
- 1.7 Identify Domain name and URL from the following : 1
<http://www.helpingeachother.in/home/aboutus.htm>
- 1.8 Expand: (i) BOSS (ii) FLOSS 1
- 1.8 What are the following software used for? 2
a) Apache
b) Tomcat
c) PHP
d) Python

Q2. Answer the following questions:

- 2.1 Ms. Ruhani has developed a Java application through which the students of her school can view their marks by entering their admission number. The marks are displayed in various text fields. What should she do so that the students are able to view but not change their marks in text fields? 1
- 2.2 A List box contains several data in column wise. When you click on one data, it automatically displays in a TextBox control. Which method helps to extract value? 1

- 2.3 What is the purpose of using START attribute in list? Give an example. 2
- 2.4 Write a function in Java that takes principal, rate and time as parameter and returns Simple Interest. 2
- 2.5 What is inheritance? Name any two types of inheritance. 2
- 2.6 What do you mean by JDBC? Explain the following line:
 JOptionPane.showMessageDialog(this, e.getMessage()); 2

Q – 3 Answer the following questions:

- 3.1 Write MySQL command to display the list of existing databases. 1
- 3.2 Table Employee has 4 records and Table Dept has 3 records in it. Mr. Jain wants to display all information stored in both of these related tables. He forgot to specify equi-join condition in the query. How many rows will get displayed on execution of this query? 1
- 3.3 Sanju is not able to change a value in a column to NULL. What constraint did she specify when she created the table. 1
- 3.4 Mr. William wants to remove all the rows from Inventory table to release the storage space, but he does not want to remove the structure of the table. What MySQL statement should he use? 1
- 3.5 In a Database School there are two tables Employee and Dept as shown below:2

Table : Employee

EmpID	Name	Sal	Deptno
T001	Vishakha	34000	10
T002	Mridual	32000	50
T003	Manish	45000	20

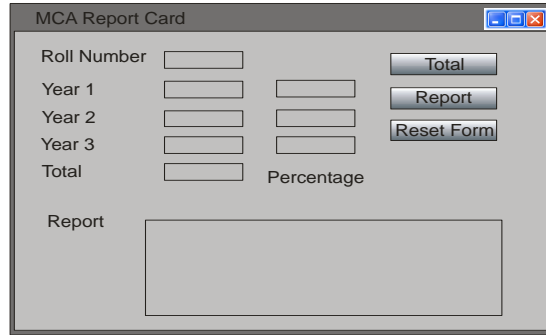
Table : Dept

Deptno	DName	LocationID
10	Finance	HH02
20	HR	FF02
30	Sales	AB01

- a) Identify the foreign key in the table Employee.
- b) What output, you will get, when an equi-join query is executed to get the NAME from Employee table and corresponding DNAME from Dept table ?
- 3.6 Explain the fundamental rules of UNION clause in Select Query. 2
- 3.7 What is the purpose of ALTER TABLE command in MySQL? How is it different from UPDATE command? 2

Section - B

- 4.1 An institute offers MCA course of duration 3 years. The interface given below is designed to capture the marks secured by student in the semester exams. Your help is sought to enhance the interface so that it is able to :



The specification of this application are as under :

Object Type	Object Name	Description
Text Field	rollnoTF sm1TF, sm2TF sm3TF, sm4 TF sm5TF, sm6TF totTF perTF	To get rollno To get marks of year1's semesters To get makes of year2's semesters To get marks of year3's semesters To show total marks To show percentage marks
Labels	rnoWidLbl repLbl	Lable net to rollnoTF, showing maximum allowed width of rollno To show report
Button	totalBTN reportBTN resetBTN	To calculate total and percentage To display report To reset the form

- When user clicks the button Total, the total marks and the percentage of marks secured by the student should be displayed in text totTF and perTF respectively. (Assume that the marks in each semester are out of 600) 2
- When the user clicks on the button Report, the final report should be displayed in the repLbl in the following format : 2
Total marks = ... and percentage = ... %
- Upon clicking the Reset Form button, the form should get cleared. 2

4.2 Rewrite the following code using a for loop :

2

```
int i=1, sum=0;
while (i<10)
{
    sum+=i;
    i+=2;
}
```

4.3 What will be the contents of jTextField1 and jTextField2 after executing the following code:

2

```
String s="Information Technology"
jTextField1.setText(s.Length()+" "+s.substring(s,3,5));
jTextField2.setText(Math.pow(2,3)+" "+Math.ceil(89.23));
```

4.4 What is the output of the following code, if the value of variable k is 10? 1

```
int result = ++k + k++ + k ;
System.out.println ( result ) ;
```

4.5 Write a program in JAVA to input a number in jTextField1 and calculate its factorial.

2

4.6 Write the HTML code for the following :

2

a) Heading with font size=12 and colour=Red

b) $z = x^3 + y^2$

Section C

Q – 5 Study the following tables Doctor and Salary and write SQL Commands [1x5=5]

Table : DOCTOR

ID	NAME	DEPT	SEX	EXPERIENCE
101	John	ENT	M	12
104	Smith	ORRHPEdic	M	5
107	George	CARDIOLOGY	M	10
114	Lara	SKIN	F	3
109	K George	MEDICINE	F	9
105	Johnson	ORRHPEdic	M	10
117	Lucy	ENT	F	3
111	Bill	MEDICINE	F	12
130	Morphy	ORRHPEdic	M	15

Table : SALARY

ID	BASIC	ALLOWANCE	CONSULTATION
101	12000	1000	300
104	23000	2300	500
107	32000	4000	500
114	12000	5200	100
109	42000	1700	200

105	18900	1690	300
130	21700	2600	300

(a). Display NAME of all doctors who are in “MEDICINE” having more than 10 years experience and basic more than 10000.

(b). Display the average of all doctors working in “ENT” department using the DOCTOR and where salary=basic + allowance.

(c). Display the minimum ALLOWANCE of female doctors.

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

(e) SELECT DOC.DEPT, SUM(SAL.BASIC) FROM DOCTOR DOC , SALARY SAL WHERE DOC.ID=SAL.ID;

Q6. Write the resulting output of the following :

[0.5 X 6 = 3]

(a) Select SUBSTR('NetBeans IDE Programmer', 10,3);

(b) Select INSTR(TRIM(' ABS Public School '),5);

(c) Select 200 + SQRT(144);

(d) Select MOD (ROUND (125.60,1) , 5);

(e) Select LEFT('RAUNAK SHARMA', 5);

(f) Select ROUND(1045.439 , 2) + MOD (12.12 , 3)

Q7. Create table “Employee” as per following table Instance Chart.

2

Column Name	EmpID	EmpName	EmpAddress	EmpPhone	EmpSal	DeptID
Key Type	Primary					Foreign
Nulls/Unique		NOT NULL				
Fk Table						Department
Fk Column						Dept_ID
Data Type	NUMBER	VARCHAR	VARCHAR	VARCHAR	DECIMAL	VARCHAR
Length	6	20	30	10	9,2	2

Q – 8 Consider the table LAB given below. Write commands in SQL for (i) to (vi) and output for (vii)

[1x10=10]

No	ItemName	CostPerItem	Quantity	DateOfPurchase	Warranty	Operational
1	Computer	60000	9	2010-05-21	2	7
2	Printer	15000	3	2009-05-21	4	2
3	Scanner	18000	1	2007-08-29	3	1
4	Camera	21000	2	2011-06-13	1	2
5	Hub	NULL	1	2009-04-13	2	1
6	UPS	5000	5	2010-05-21	1	4
7	Plotter	25000	2	2011-01-11	2	2

i. To select the ItemName purchased after 31-Oct-2010.

ii. To list the ItemName, which are within the warranty period till present date.

- iii. To list the ItemName in ascending order of the date of purchase where quantity is more than 3.
- iv. To display ItemName, CostPerItem, and Quantity whose warranty is over.
- v. To count the number of Items whose cost is more than 10000.
- vi. To increase the quantity of computer, printer and UPS with 5.
- vii. Give the output of following SQL commands:
 - a. SELECT AVG(CostPerItem) FROM Lab;
 - b. SELECT * FROM LAB WHERE ItemName like '%r';
 - c. SELECT COUNT(*) FROM LAB WHERE CostPerItem > 15000;
 - d. SELECT DateOfPurchase, SUM(Quantity) FROM LAB GROUP BY DateOfPurchase;

Q – 9.1 How is e-learning beneficial to students ? Give the name of some major e-learning portals. 2

9.2 List of features of a good programming interface. 2

9.3 Prikshit 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. 1

S.No	Control used to	Control
1	Enter Admission Number	
2	Select Stream	