

CLASS XI GUESS PAPER COMPUTER SCIENCE(Python)

Syllabus: Number System, Database Concepts, SQL, NoSQL, List

MM: 50 Mks

Duration: _____

Question 1 SQL

[15]

i) Create a table name EMP with following structure

[3]

Column Name
Data Type

EmpID	EmpName	Designation	DOJ	sal	comm	DeptID
integer	Varchar (30)	Char(10)	Date	integer	integer	integer

Constraint

Primary Key on EmpID
not null on EmpName
sal on Check > 1000

ii) Create a table named scholar with the following specification:

[3]

Column Name	Datatype	Constraints	Description
ScholarNo	Int of size 3	Primary key	To store scholar number
schName	Char of size 10	Not null	To store the scholar's name
Gender	Char of size 1	Not null	
P_age	Int of size 3	Check that no value should be more than 99	To store the percentage

iii) How can we can change the structure of a table ie. add, remove or change its column(s)? [1]

- iv) Define DISTINCT keyword. [1]
- v) Which operator selects values that match any value in the given list of values. [1]
- vi) Define "null". [1]
- vii) How to select all columns of a table? [1]
- viii) How would you display all those rows from a table named "Friends" where the value of the column "Hobbies" is "SWIMMING" [1]
- ix) How do you select all the rows from a table named "Student" where the value of the column "FName" starts with "G"? [1]
- x) Which SQL keyword(s) is/are used to sort the rows in the output? [1]
- xi) Which statement is appropriate to change the first name "Madhur" to "Mridul" in the "FName" column in the 'Student' table? [1]

Question 2 SQL

[5+5=10]

a)

Accno	BName	CName	LAmount	Instalments	Irate	IsDate
1	SBI	Rajesh Singh	750000	142	12.00	2011-07-19
2	PNB	Divya Bharti	1580000	252	10.00	2010-03-22
3	UCO	Ramesh Sahu	530000	140	NULL	2012-03-08
4	ICICI	K P Mathur	1700000	154	12.50	2009-06-05
5	HDFC	J N Mittal	1500000	190	NULL	2010-03-05

With reference to the above table named 'loan', write SQL queries for the following: [5]

1. Display the detail of all the loans whose rate of interest is NULL
2. Display the name of banks whose bname is either sbi or icici from the table LOAN
3. Increase the interest rate by 0.2 for all the loans for which the interest rate is not null
4. Display Accno, BName and LAmount in ascending order of Irate for which the second letter of name is 'a'
5. Display the detail of all loans where LAmount is in the range of 1580000 and 1700000 (both are inclusive)

b)

[5]

1. What is join?
2. What is the function of having clause?
3. What is column alias?
4. What is the use of Union operation?

5. Differentiate in between the two clause “in” and “between”.

Question 3 NOSQL

[5]

1. Define MongoDB.
2. Describe the use of Document Oriented Database.
3. What is NoSQL
4. Define table constraint used with reference to MongoDB.
5. Give two differences in between RDBMS and MongoDB.

Question 4 Number System

[10x1=10]

1	Give one's complement of: 14	6	Give two's complement of: 25
2	Give the decimal number of the following octal no.: 235	7	Convert into its binary: 25.25
3	Convert the following hexa decimal number into decimal: 2BC2	8	Give hexa decimal value of decimal number: 1200
4	Convert the following binary number into octal: 10111011	9	Give binary of the following hexa-decimal: FACE
5	Convert the following binary number into Hexa Decimal: 1100110011	10	What do you understand by Computer Codes?

Question 5 Database concepts and List

[5+5=10]

a)

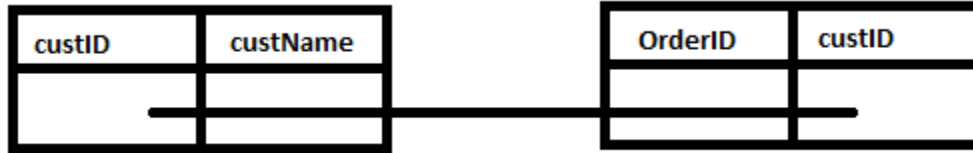
[5]

1. What is the cartesian product? How it is calculated?
2. What is the degree and cardinality of a table?
3. Define the term foreign key.
4. Observe the table and name the column which is most appropriate column for primary key and for the candidate key.

Stationery

Code	Item	Qty	Price
101	Pen	45	6
102	Pencil	40	3
105	Stapler	35	8

5. Look at the figure given below:



Name the relationship from left to right and from right to left

b)

[3+1+1]

1. Write a program to create a list with the following numbers
5,7,3,8,2,9,2,3,1
Now accept a value from the user and check how many times that value comes in a list.
If a user enters 2 then the output should be:
value comes 2 times
2. Write a statement to show sum of all odd numbers in a list [1,2,3,...100] with one line code
3. Give example of the use of append method in the list.
