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D Y PATIL UNIVERSITY

End Term Examinations (April/May 2019)

School: School of Engineering

Program: B.TECH(ITDS)

Course: Data Analysis Using SQL

Course Code: CSC238

Semester: IV

Max Marks: 30

Duration (mins): 60 mins

Note- 1.Figures to the right indicates full marks.

2. Attempt any three questions.

Q1)

- a) Define OLAP and OLTP. (2)
- b) Explain with appropriate diagram Client-Server Architecture. [Long Answer] (8)

Q2)

- a) List and describe any 5 data types supported by SQL. (5)
- b) Explain the concepts of Primary key and Foreign key. Also, give an example of SQL (5) statement for primary and foreign key.

Q3)

- a) Explain cross-reference table. (2)
- b) Write the basic SQL syntax for ALTER, UPDATE and CREATE INDEX statements. (3)
- c) Write the SQL statements for the given queries considering the table below. (5)

SAILORS TABLE

sid	sname	rating	Age
22	Rahul	10	25.0
29	Anand	9	26.0
31	Niket	7	45.0
32	Neha	5	56.6
58	Bijay	4	23.5
64	Thomas	8	35.0
71	Rusty	8	29.5
74	Venky	6	63.5
85	Alfred	1	42.5
95	Vikky	9	24.5

1. Create the table for the sailor with attributes sid: integer, sname: string, rating: integer, age: real.
2. Find the names of sailors who have rating above 5 and age less than 30.
3. To insert the new entry with sid=33, sname=Reyan, rating= 10 and age=27.

4. To add the attribute address to the table Sailors.
5. To change the sname from Rusty to Ruskin.

Q4)

- a) Write the output for the following SQL statements considering the table **AV1** below. (4)

Name	Salary	Company	Designation
Saurav	1000	AV1	Junior Data Scientist
Ankit	800	AV1	Data Scientist
Sunil	1200	AV2	Senior Manager
Kunal	1400	AV2	CEO
Deepak	1100	AV3	Data Entry Operator
Swati	1200	AV3	BDE
Faizan	900	AV1	Deep learning Expert

- (1) Select name from AV1 where name like '%a%'
- (2) Select Name, Salary from AV1 where Salary between 500 and 1000.

- (b) Define and write the syntax for the following functions: (6)

1. Ceiling()
2. Trim()
3. ABS()
4. RAND()
5. Floor()
6. SUBSTRING()

- (5) (a) List and explain the four types of SQL joins with suitable diagram. (5)

- (b) Consider the below table and write the SQL commands for the given queries: (5)

LOAN TABLE

Loan Number	Branch Name	Amount
L-11	Round Hill	900
L-14	Downtown	1500
L-15	Perryridge	1500
L-16	Perryridge	1300
L-17	Downtown	1000
L-23	Redwood	2000
L-93	Mianus	500

- (1) To list all the fields after applying arithmetic operations on column amount (amount+700).
- (2) Find all loan numbers for loans made at the Perryridge branch with loan amounts greater than Rs1200.
- (3) To count the number of loans in Downtown branch.
- (4) To display the maximum loan amount of Perryridge branch.
- (5) To list the entire loan info in descending order of amount.
