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B.TECH.

THEORY EXAMINATION (SEM–VIII) 2016-17

DBMS, DATA MINING AND WAREHOUSE

Time : 3 Hours ***Max. Marks : 100***

Note : *Be precise in your answer.*

SECTION - A

1. Attempt all the parts: **(10*2=20)**

a) What do you mean by file processing system?
b) Explain important mapping constraints for ER model.
c) Explain concept of super key.
d) Define the three level architecture of DBMS.
e) List the data types that are allowed for SQL attributes.
f) What do you mean by cursors in SQL?
g) What is relational algebra?
h) Define union and intersection using SQL.
i) Explain integrity constraints.
j) Explain Boyce-coded normal forms.

SECTION – B

2. Attempt any five of the following: **(10* 5=50)**

(a) Write down important features of SQL. Explain advantages of SQL for DBMS.

(b) Consider the following relational schemas:
Employee (person_name, street, city)
Works (person_name, company_name, salary)
Company (company_name, city)
Manages (person_name, manager_name)
Give SQL commands to execute the following queries:
(i) Find the name of all employees who live in the same city and on the same street as do their managers.
(ii) Find the name of all employees in this database who do not work for "First Bank Corporation".
(iii) Find the name of all employees who earn more than every of "small bank corporation".
(iv) Give all managers in this database a 10 percent salary raise.

(c) Discuss impact of insertion, deletion and modifications anomalies in database design.

(d) Explain multidimensional model of data warehouse. What are partitioning techniques?

(e) What do you mean by distributed DBMS? Also discuss the distributed DGBMS implementation.

(f) What do you mean by Multi valued dependency and join dependency? Discuss with suitable examples.

(g) Discuss client/server model. Also explain 2-tier and 3-tier architecture in detail.

(h) What are the different parallel server hardware options? List the features, benefits and limitations of any one of these options.

SECTION- C

Attempt any two of the following: **(15*2=30)**

3. Explain how metadata is critical for data warehouse development and administration. Also examine the concept that metadata is like a nerve centre.

4. Write an SQL query, without using 'with' clause to find all branches where the total account deposit is less than the average total account deposit at all branches.

(i) using a nested query in the 'from' clause

(ii) using a nested query in a 'having' clause

5. Discuss the following :

(i) Mapping the data warehouse to a multiprocessor architecture

(ii) DBMS schemes for decision support