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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)****M.Tech I Year I Semester Regular & Supplementary Examinations February 2018****ADVANCES IN DATABASES****(CSE)**Time: **3 hours**Max. Marks: **60**(Answer all Five Units **5 X 12 =60** Marks)**UNIT-I**

- 1 a What are the functions that need to be provided by distributed databases in addition to those of a centralized DBMS? 7M
- b List the advantages and disadvantages of DDBMS. 5M

OR

- 2 a Explain the entity integrity and referential integrity constraints. Why is each considered important.. 6M
- b Define Boyce-Codd normal form. How does it differ from 3NF? Why is it considered a stronger form of 3NF? 6M

UNIT-II

- 3 a Explain the three-tier Client/Server architectures. 7M
- b What is meant by fragmentation? Define types of fragmentation. Give an example. 5M

OR

- 4 a Describe the data allocation in distributed database design. 6M
- b Why is replication useful in DDBMS? What typical units of data are replicated ? 6M

UNIT-III

- 5 a Discuss the different stages of processing a query in a DDBMS. 7M
- b Explain SQL queries with suitable examples 5M

OR

- 6 a Describe characterization of query processors 7M
- b Explain DML commands with examples 5M

UNIT-IV

- 7 a Define query optimization and Explain its significance for DBMS. 7M
- b Discuss the rules for transformation of query tree and identify when each rule should be applied during optimization. 5M

OR

- 8 a What is relation algebra query tree? 7M
- b Explain how heuristic query optimization is performed, with an example 5M

UNIT-V

- 9 a What is a phantom record? Discuss the problem that a phantom record can cause for concurrency control 6M
- b Explain the following terms: transaction, granularity, Concurrency, dirty read, serializability, and ACID properties of transactions. 6M

OR

- 10 a Write notes on the following 12M
- i) Distributed dead locks. ii) ODBC iii) Time stamping mechanism.

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