Reg. No: ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
M.Tech I Year I Semester (R16) Regular Examinations January 2017
ADVANCES IN DATABASES
(Computer Science Engineering)
(For Students admitted in 2016 only)

Time: **3 hours**   Max. Marks: **60**

(Answer all Five Units **5 X 12 =60** Marks)

UNIT-I

| Q.1 | a. | Describe the evolution of distributed DBMS from the centralized DBMS. | 6M |
| | b. | What are the main reasons for and potential advantages of distributed databases? | 6M |

OR

| Q.2 | a. | In what way do the generalized definitions of 2NF and 3NF extend the definitions beyond primary keys? | 7M |
| | b. | Show an example of a violation of the integrity constraint in each of the three types of update operations. | 5M |

UNIT-II

| Q.3 | a. | Explain the operations of a two-tier Client/Server architectures. | 6M |
| | b. | What are the strategic objectives for the definition and allocation of fragments? | 6M |

OR

| Q.4 | a. | Explain the transparency features of a DDBMS and different types of distribution transparency. | 6M |
| | b. | Define mixed fragmentation? Give an Example. | 6M |

UNIT-III

| Q.5 | a. | Explain the phases of query processing in distributed database. | 7M |
| | b. | Explain decomposition methods | 5M |

OR

| Q.6 | a. | What are the issues for query processing in a heterogeneous database? | 6M |
| | b. | Write localization of distributed data. | 6M |

UNIT-IV

| Q.7 | a. | Draw and explain query optimization process. | 7M |
| | b. | Discuss the sort-merge algorithm and illustrate its working with an | 5M |

OR

| Q.8 | a. | What is meant by semantic query optimization? How does it differ from other query optimization techniques? | 7M |
| | b. | Mention the different steps followed during query optimization. | 5M |

UNIT-V

Q.9 a. Discuss the optimistic concurrency control technique. Name its phases. How is minimum overhead reached?   6M

   b. Discuss the atomicity, durability, isolation and consistency preservation properties of a database transaction?   6M

OR

Q.10 a. Explain the Management of distributed transaction?   7M

   b. Compare Distributed Deadlock prevention to Distributed Deadlock Avoidance.   5M

*** END ***