Reg. No: SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR (AUTONOMOUS) **B.Tech II Year II Semester Supplementary Examinations February-2022 DATABASE MANAGEMENT SYSTEMS** (Common to CSE & CSIT) Time: 3 hours Max. Marks: 60 (Answer all Five Units $5 \times 12 = 60$ Marks) UNIT-I a Draw ER diagram for Ternary Relationship set with suitable example. 7M**b** Discuss about key constraints for Ternary Relationships. **5M** a What is Data Abstraction? Explain about different views of data. **6M b** Define Instance and Schema. List different data models and explain. **6M** UNIT-II What is a join operator? Explain about conditional join and natural join with syntax 12M and example. OR a Explain in detail about nested queries. **6M b** Explain about aggregate operators. **6M** UNIT-III a Prove that a relation which is in 4NF must be in BCNF. **6M b** Define and explain 4NF with suitable example. **6M** OR a Discuss about super key and candidate key in functional dependency with suitable **5M** example. **b** What is meant by multivalued dependency? Explain with example. 7MUNIT-IV Explain Lock based concurrency control protocols. 12M What is database Recovery? Explain Shadow paging in detail. 12M **UNIT-V** a Illustrate Tree indexes. 9 **6M b** Explain about ISAM. **6M** OR Explain about RAID levels in detail with neat sketch. 12M

Q.P. Code: 16CS511

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