

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech II Year II Semester Regular & Supplementary Examinations June-2024

DATABASE MANAGEMENT SYSTEMS

(Common to CIC & CCC)

Time: 3 Hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- | | | | | | |
|---|---|--|-----|----|----|
| 1 | a | Define Database. Discuss about applications of Database Systems. | CO1 | L1 | 6M |
| | b | List out the purpose of Database Systems. | CO1 | L1 | 6M |

OR

- | | | | | | |
|---|---|---|-----|----|----|
| 2 | a | Explain the Architecture of Database with a neat diagram. | CO1 | L2 | 6M |
| | b | Differentiate between Database users and administrators. | CO1 | L4 | 6M |

UNIT-II

- | | | | | | |
|---|---|--|-----|----|----|
| 3 | a | Compare Selection and Projection. | CO2 | L5 | 6M |
| | b | Develop the working on union, intersection and minus operations. | CO3 | L6 | 6M |

OR

- | | | | | | |
|---|---|---|-----|----|----|
| 4 | a | Discuss the super key, candidate key, primary key, alternate key, composite key, and Foreign key. | CO2 | L2 | 6M |
| | b | Evaluate Order by, Group by and Having Clauses with example. | CO2 | L5 | 6M |

UNIT-III

- | | | | | | |
|---|---|--|-----|----|----|
| 5 | a | Compare 3NF and BCNF with example. | CO3 | L4 | 6M |
| | b | The relation schema Student_Performance (name, courseNo, rollNo, grade) has the following FDs:
name,courseNo->grade
rollNo,courseNo->grade
name->rollNo
rollNo->name
What is the highest normal form of this relation scheme? | CO3 | L1 | 6M |

OR

- | | | | | | |
|---|---|---|-----|----|----|
| 6 | a | Illustrate redundancy and the problems that it can cause. | CO3 | L3 | 6M |
| | b | Explain about Functional Dependency. | CO3 | L2 | 6M |

UNIT-IV

- | | | | | | |
|---|--|---|-----|----|-----|
| 7 | | Explain ACID properties and illustrate them through examples. | CO5 | L2 | 12M |
|---|--|---|-----|----|-----|

OR

- | | | | | | |
|---|---|---|-----|----|----|
| 8 | a | Compare serializability and non-serializability | CO5 | L5 | 6M |
| | b | List out the types of failures. | CO5 | L4 | 6M |

UNIT-V

- | | | | | | |
|---|---|---|-----|----|----|
| 9 | a | Discuss about Recoverability. | CO6 | L2 | 6M |
| | b | Explain Recovery with concurrent Transaction. | CO6 | L2 | 6M |
- OR
- | | | | | | |
|----|---|---|-----|----|----|
| 10 | a | Classify different types of locks. | CO6 | L4 | 6M |
| | b | Describe the deadlock prevention schemes. | CO6 | L2 | 6M |

*** END ***

165