

Sub Code: R2021121

R20

Set No. 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY- GURAJADA VIZIANAGARAM
II B. Tech I Semester Supplementary Examinations, November – 2024
DATABASE MANAGEMENT SYSTEMS
(IT, CSE(AIML), AI, DS, CSE(AIDS), AIDS, AIML)

Time: 3 hours

Max. Marks: 70

Answer any FIVE Questions
ONE Question from Each unit
All Questions Carry Equal Marks

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|----|----|--|------|
| 1 | a) | Explain various data models in DBMS | [7M] |
| | b) | Differentiate between DBMS and File system in terms of its characteristics | [7M] |
| | | (OR) | |
| 2 | a) | Describe the three-tier architecture of data independence. | [7M] |
| | b) | Describe client server architecture for the database | [7M] |
| 3 | a) | What is DML? Explain DML operations with examples. | [7M] |
| | b) | Explain about key constraints and Integrity Constraints? | [7M] |
| | | (OR) | |
| 4 | a) | Illustrate the usage of SQL GROUP BY, ORDER BY and HAVING clauses with examples. | [7M] |
| | b) | Illustrate Entity, Attribute and Relationship with examples | [7M] |
| 5 | a) | Draw and explain E-R diagram of an Airline reservation system | [7M] |
| | b) | Describe basic SQL functions related to date, time and strings | [7M] |
| | | (OR) | |
| 6 | a) | Differentiate between aggregation and Inheritance. | [7M] |
| | b) | Explain different types of join operations with an example. | [7M] |
| 7 | a) | What is the need for normalization? Explain 1NF, 2NF and 3 NF with example. | [7M] |
| | b) | Explain about Dependency Preserving Decomposition with example | [7M] |
| | | (OR) | |
| 8 | a) | Explain about problems caused by redundancy. | [7M] |
| | b) | What is Functional dependency? Explain the properties of functional dependency | [7M] |
| 9 | a) | Explain ACID properties of transaction with example | [7M] |
| | b) | Illustrate insertion and deletion operations on B+ trees | [7M] |
| | | (OR) | |
| 10 | a) | Describe view serializability and conflict serializability with example | [7M] |
| | b) | Compare various file organization techniques | [7M] |
