GIET UNIVERSITY, GUNUPUR – 765022

23BCSPC23001– Database Management System

ASSIGNMENTS

UNIT-I **Answer Any Four Questions**		CO#	Blooms Level
1.	Provide a brief details on different database users and their role in using database system.	1	2
2.	Design the Three Tier Architecture of Database system concepts and explain each tier.	2	3
3.	What are the advantages of using the DBMS Approach.	1	1
4.	What are the different DBMS Languages and Interfaces?	1	2
5.	Explain briefly different mapping cardinalities with neat diagrams.	2	3

UNIT-II **Answer Any Four Questions**		CO#	Blooms Level
1.	Design an ER Model by identifying entities, relationships, attributes for a GROCERY MART Database System.	2	3
2.	Explain ER Model briefly by defining Entity, different types of attributes and possible relationships among them.	1	2
3.	Define terms: Schema, Sub-Schema, Instance, Conceptual Schema, Query Optimizer, Domain, Tuple, Derived Attribute, Composite Attribute, 1:M Mapping	2	1
4	hat is tuple relational calculus? Give one example query.	2	3
5	Write relational algebra expressions for: A)Students who scored more than 70 in DBMS. Employees who work in “HR” department.	2	1

UNIT-III **Answer Any Four Questions**		CO#	Blooms Level
1.	Briefly explain the importance of 3NF, BCNF and 4NF with a suitable example.	3	3
2.	Describe what are the types of Functional Dependency. Why we use Normalization?	3	2
3.	Explain how normalization minimizes data redundancy and anomalies with suitable examples.	2	1
4	Elaborate multivalued dependency and 4NF	3	3
5	What is Query processing and Query Optimization ?	2	1

UNIT-IV **Answer Any Four Questions**		CO#	Blooms Level
1.	Whate are the ACID properties of transactions.	4	3
2.	Explain concurrency control with lock based protocols	4	2
3.	Explain about Deadlock handling mechanism in DBMS.	3	3
4	Given multiple transactions, identify which are in active, partially committed, and failed states.	3	3
5	Briefly explain how to detect dead lock and how to avoid dead lock.	4	1

UNIT-V **Answer Any Four Questions**		CO#	Blooms Level
1.	List the advantages and disadvantages of indexed sequential file	5	3
2.	How a magnetic disk works, define the seek time, latency time and access time.	4	2
3.	List different RAID levels and mention their advantages.	5	2
4	Simulate how hashing works with modulo-based hash function h(K) = K mod 10 for inserting 5 records.	4	3
5	Explain current page table and shadow page table.	5	2