Reg. No.															

B.Tech. DEGREE EXAMINATION, NOVEMBER 2023

Sixth Semester

18ECE472T – DATABASE MANAGEMENT SYSTEMS

(For the candidates admitted from the academic year 2020-2021 to 2021-2022)

Note:

(i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.

(ii) **Part - B & Part - C** should be answered in answer booklet.

Time: 3 hours | Max. Marks: 100

PART – A (20 × 1 = 20 Marks)

Answer **ALL** Questions

	Marks	BL	CO	PO
1. The oldest database model is _____ (A) Network (B) Physical (C) Hierarchical (D) Relational	1	1	1	1
2. Arrange in order the 3 levels in the schema architecture of DBMS (Lowest to Highest) (A) View level, Physical level, Logical level (B) Physical level, Logical level, View level (C) Logical level, View level, Physical level (D) View level, Logical level, Physical level	1	1	1	1
3. What is DBMS? (A) It is a collection of queries (B) It is a high level Language (C) It is a Programming Language (D) It stores, modifies and retrieves data	1	1	1	1
4. Which command is used to remove a relation from an SQL? (A) Drop Table (B) Delete (C) Purge (D) Remove	1	1	1	5
5. The rectangle divided into two parts in a ER diagram represents. (A) Entity set (B) Relationship set (C) Attributes of a relationship set (D) Primary key	1	1	2	3
6. Which of the following indicates the maximum number of entities that can be involved in a relationship (A) Minimum Cardinality (B) Maximum Cardinality (C) Maximum Entity Counts (D) Greater Entity Counts	1	1	2	1
7. Key to represent relationship between table is called _____ (A) Primary Key (B) Secondary Key (C) Foreign Key (D) Simple Key	1	1	2	1

8. The relational model is based on the concept that data is organized and stored in two dimensional tables called _____ 1 1 2 1
   (A) Fields (B) Records
   (C) Relation (D) Keys

9. Select * from employer what type of statement is this? 1 1 3 1
   (A) DML (B) DDL
   (C) View (D) Integrity constraint

10. The user defined data type can be created using 1 1 3 1
   (A) Create data type (B) Create Data
   (C) Define Type (D) Create Type

11. All aggregate function except _____ ignore null values in their input collections 1 1 3 1
   (A) Count (attribute) (B) Count (*)
   (C) Avg (D) Sum

12. A query that is part of another is called 1 1 3 1
   (A) Sub Query (B) Netted Query
   (C) Partial Query (D) Super Query

13. Relational algebra is a ____ query language that takes to relations as input and produces another relation as an output. 1 1 4 1
   (A) Relational (B) Structural
   (C) Procedural (D) Fundamental

14. In the _____ normal form a composite attribute is converted in to individual attributes 1 1 4 1
   (A) First (B) Second
   (C) Third (D) Fourth

15. Which one of the following is a procedural language? 1 1 4 1
   (A) Domain Relational Language (B) Tuple Relational Language
   (C) Query Language (D) Relational Algebra

16. The _____ operation performs a set union of two similarly structured tables. 1 1 4 1
   (A) Union (B) Join
   (C) Product (D) Intersect

17. Transaction processing is associated with everything below except 1 1 5 1
   (A) Producing detail summary (B) Recording a business activity
   (C) Confirming an action or triggering a response (D) Monitoring a data

18. A lock that allows concurrent transactions to access different rows of the same table is called 1 1 5 1
   (A) Database Level Lock (B) Table Level Lock
   (C) Page Level Lock (D) Row Level Lock

19. If a transaction does not modify the database until it has committed it is said to use the _____ technique. 1 1 5 1

(A) Deferred – modification (B) Late modification
(C) Immediate modification (D) Undo

20. The actions which are played in the order while recording is called _____ history. 1 1 5 1

(A) Repeating (B) Redo
(C) Replay (D) Return

PART – B (5 × 4 = 20 Marks)

Answer **ANY FIVE** Questions

	Marks	BL	CO	PO
21. List out the major advantages and disadvantages of DBMS.	4	2	1	1
22. Briefly explain any four DML commands.	4	2	1	1
23. Explain the distinction among the terms Primary key, Candidate Key and Super Key.	4	2	2	1
24. Define: The concept of aggregation in ER model with an example.	4	2	3	1
25. Explain third normal form with an example.	4	2	4	2
26. Brief about serializability. What is its objective?	4	2	5	2
27. Discuss the solutions for concurrency related problems.	4	3	5	4

PART – C (5 × 12 = 60 Marks)

Answer **ALL** Questions

	Marks	BL	CO	PO
28. a. With neat sketch explain in detail about two tier and three tier architecture of database.	12	2	1	1
(OR)				
b. Explain the different evolution models and discuss the advantages and limitations of each.	12	3	1	1
29. a. Explain in detail about the conversion of ER to relational table with an example	12	2	2	4
(OR)				
b. Write detailed notes on		2	2	4
i. Mapping Cardinalities	6			
ii. Design process of Entity Relation model	6			
30. a. What is Trigger? Discuss trigger in SQL in detail with examples. When should not triggers be used?	12	3	3	1
(OR)				
b. With suitable syntax explain in detail about various types of integrity constraints in SQL and aggregation function.	12	3	3	4

31. a. i.	Explain about inference rules for functional dependencies.	6	2	4	1
ii.	Briefly explain First Normal Form and its significance.	6	2	4	1
	(OR)				
b.	Explain the fundamental Operations and Queries of Relational Algebra.	12	2	4	1
32. a.	Explain concurrent scheduling algorithm to transfer amount from one account to another.	12	2	5	1
	(OR)				
b.	Discuss the various dead lock Prevention Schemes.	12	2	5	1

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