

(6 pages)

Reg. No. : .....

Code No. : 8063

Sub. Code : ZCAM 24

M.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2023.

Second Semester

Computer Application – Core

ADVANCED DATABASE MANAGEMENT SYSTEM

(For those who joined in July 2021-2022 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following is database element?  
(a) Data  
(b) Relationships  
(c) Constraints and schema  
(d) All the above

7. A system is in a \_\_\_\_\_ state if there exists a set of transactions such that every transaction in the set is waiting for another transaction in the set.  
(a) Idle (b) Waiting  
(c) Deadlock (d) None
8. Which refers to a property of computer to run several operation simultaneously and possible as computers await response of each other?  
(a) Concurrency (b) Deadlock  
(c) Backup (d) Recovery
9. \_\_\_\_\_ parallelism defines the execution of a single query in parallel on multiple processors and disks.  
(a) Intra-query  
(b) Inter-query  
(c) Both (a) and (b)  
(d) None
10. In \_\_\_\_\_ distributed databases dissimilar sites run under the control of different DBMS.  
(a) Homogeneous  
(b) Heterogeneous  
(c) Both (a) and (b)  
(d) None

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2. A collection of data designed to be used by different people is called \_\_\_\_\_.  
(a) Data base (b) DBMS  
(c) RDBMS (d) None
3. Every relation in BCNF is also in \_\_\_\_\_.  
(a) 1 NF (b) 2 NF  
(c) 3 NF (d) None
4. Rows of a relation are known as \_\_\_\_\_.  
(a) Degree (b) Tuples  
(c) Entity (d) All the above
5. Which of the following is a type of Data manipulation command?  
(a) Create (b) Alter  
(c) Delete (d) None
6. In case of any shut down during transaction before commit which of the following statement is done automatically?  
(a) View (b) Commit  
(c) Flashback (d) Roll back

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What do you mean by Integrity Constraint?  
Or  
(b) Give a brief note on Data models.
12. (a) What is Spatial Data?  
Or  
(b) Define the terms : Entity, Relationship and Attributes.
13. (a) Write down the data types used in SQL.  
Or  
(b) What is Join? Give a brief note on its types.
14. (a) Give a brief note on Buffer Management.  
Or  
(b) What is meant by Serializability?
15. (a) Differentiate : Homogeneous Databases versus Heterogeneous Databases.  
Or  
(b) What do you mean by Distributed Datastorage?

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PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) With neat diagram, explain the structure of Relational Databases.

Or

- (b) Write short note on DBA, Database users and keys.

17. (a) What is Boyce Codd Normal form? Explain it with an example.

Or

- (b) What is E-R model? What are the different E-R diagrams available in DBMS? Explain each one of them.

18. (a) What is the use of Trigger in SQL? How do you implement it?

Or

- (b) With Syntax and example explain DDL and DML commands available in SQL.

19. (a) Explain in detail about lock based protocol in concurrency control.

Or

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- (b) Write short note on failure classification and storage structure in Recovery systems.

20. (a) Discuss in detail about parallel system and distributed system.

Or

- (b) List out and explain the different types of parallelism.

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