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Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 10296

M.C.A. DEGREE EXAMINATIONS, APRIL/MAY 2023.

Elective

(Bridge Course)

BX 4004 – DATABASE MANAGEMENT SYSTEMS

(Regulations – 2021)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write the difference between DBMS and File system.
2. What is entity-relationship model (ERM)?
3. Mention the importance of cursor in SQL.
4. Define view.
5. What do you meant by normalization?
6. Define Super key.
7. What is a transaction? Write the syntax of a grant command.
8. Write the properties of transaction.
9. What is indexing?
10. Define Hashing.

PART B — (5 × 13 = 65 marks)

11. (a) Describe the advantages and disadvantages of using of DBMS.

Or

(b) Draw and explain the three level architecture of the database system.

12. (a) Discuss the types of integrity constraints that must be checked for the update operations, Insert and Delete. Give examples.

Or

(b) How will you create, update and delete views. Give Example.

13. (a) Explain the three normal forms with example.

Or

(b) Discuss about the types of functional dependencies.

14. (a) Write in detail about backup and recovery.

Or

(b) Elaborate Two-Phase Locking.

15. (a) Describe the static hash file with buckets and chaining and show how insertion, deletion and modification of a record can be performed.

Or

(b) What is the difference between a primary index and a secondary index? What are the advantages and disadvantages of using an index?

PART C — (1 × 15 = 15 marks)

16. (a) What is join? Explain natural join and self join with an example.

Or

(b) Information about a bank customers and their account. Customer has a name, address which consists of house number, area and city, and one or more phone numbers. Account has number, type and balance. You need to record customers who own an account. Account can be held individually or jointly. An account cannot exist without a customer.

Draw an E-R diagram. Explain attributes, keys, the cardinality ratios and participation constraints.