

CBCS SCHEME

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20MCA21

Second Semester MCA Degree Examination, July/August 2022 Database Management System

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is Database Management System? Explain Actors on the scene and Workers behind the scene. (10 Marks)
b. Describe the three – Schema architecture of DBMS with a diagram. (10 Marks)

OR

- 2 a. Explain Database system environment with a diagram. (10 Marks)
b. Explain centralized and client–server architectures with a diagram. (10 Marks)

Module-2

- 3 a. What is schema? Explain Database schema with an example. (10 Marks)
b. Explain Primary key and Foreign key with an example. (10 Marks)

OR

- 4 a. What is the Entity? Explain the entity type and Entity sets with a examples. (10 Marks)
b. What is the need for normalization? Explain 1NF, 2NF with an example. (10 Marks)

Module-3

- 5 a. What is Datatype? Explain different datatypes in SQL. (10 Marks)
b. Explain constraints in SQL with an example. (10 Marks)

OR

- 6 a. Explain aggregate functions in SQL with an example. (10 Marks)
b. Explain Group by and having clauses with an example. (10 Marks)

Module-4

- 7 a. What is Trigger? Explain with example. (10 Marks)
b. Define views in SQL. Explain with example. (10 Marks)

OR

- 8 a. Describe the stored procedure with an example. (10 Marks)
b. Explain functions with an example. (10 Marks)

Module-5

- 9 a. Define Transaction. Explain ACID properties with examples. (10 Marks)
b. Explain two–phase locking techniques with an example. (10 Marks)

OR

- 10 a. Explain concurrency control based on timestamp ordering with example. (10 Marks)
b. What is recovery? Explain recovery in multidatabase systems. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.