

13002

M.C.A. DEGREE EXAMINATION, DECEMBER 2019.

FIRST SEMESTER

Paper II –DATABASE MANAGEMENT SYSTEMS

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

1. Give an overview on database systems.
2. What are data models? Describe.
3. What is the basic structure of SQL?
4. What is relational database design.
5. What is query processing.
6. How to evaluate expression? Describe.
7. What is transaction management.
8. What is concurrency control.

PART B — (4 × 15 = 60 marks)

Answer ALL questions

Each question carries 15 marks

9. What is entity relationship model? Explain with a diagram the Network, Hierarchical and Relational Data Models.

Or

10. Differentiate and explain database system and file system with advantages and disadvantages.

11. What is normalization? Discuss the 1st, 2<sup>nd</sup>, 3rd and BCNF and 4<sup>th</sup> normal forms with examples.

Or

12. What is embedded SQL and dynamic SQL? Write a short note on DML, DDL and DCL commands with examples.

13. What is indexing and hashing? Explain the concept of B -Tree and B+Trees with an illustration.

Or

14. What is RAID? Explain the RAID levels with an illustration.

15. What is deadlock? how to handle deadlocks? explain.

Or

16. Write on the following

- (a) Shadow paging
- (b) Buffer management
- (c) Oracle and Microsoft server

