

MCA-13

June - Examination 2016

MCA IInd Year Examination**Advance Database Management System****Paper - MCA-13****Time : 3 Hours]****[Max. Marks :- 80**

Note: The question paper is divided into three sections A, B and C. Write answers as per given instructions.

Section - A**8 × 2 = 16**

(Very Short Answer Questions)

Note: Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

- 1) (i) What do you mean by transaction?
- (ii) List the advantages of DBMS.
- (iii) Give some examples of DBMS software.
- (iv) What is Primary Key?
- (v) Define cardinality ratio in ER model.
- (vi) Name some transaction control commands.
- (vii) What is the use of time stamp data types in SQL?
- (viii) What is a system log used for?

Section - B**4 × 8 = 32**

(Short Answer Questions)

Note: Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 8 marks.

- 2) What do you mean by Data Independence? Compare Logical data independence and Physical data independence.
- 3) What do you mean by Relationship? Discuss various types of Relationship in Database Management System.
- 4) What is SELECT, PROJECT and RENAME operation? How is it represented? Explain with example.
- 5) Write short note on Functional dependencies.
- 6) What is the need of concurrency control? Explain with example.
- 7) Discuss the ACID properties of a database transaction.
- 8) Give an example of an encryption algorithm and explain how it works.
- 9) What is entity and referential integrity constraint?

Section - C**2 × 16 = 32**

(Long Answer Questions)

Note: Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 16 marks.

- 10) What do you mean by SQL joins? Discuss various types of SQL joins with suitable examples.
- 11) What is the use of Triggers? Explain different types of triggers with examples.
- 12) Define 3NF. Consider the relational schema R(ABC) with FDs $AB \rightarrow C$, $C \rightarrow A$. show that the schema R is in 3NF but not in BCNF.
- 13) Write short note on the following:
 - (i) Distributed database system
 - (ii) DBMS Architecture
