

BCA-09/DCA-103

December - Examination 2016

BCA Pt. II/DCA Examination**Database Management System****Paper - BCA-09/DCA-103****Time : 3 Hours]****[Max. Marks :- 100**

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

Section - A**10 × 2 = 20**

(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) List disadvantages of file system.
- (ii) What do you mean by degree of a relationship?
- (iii) What is entity clustering?
- (iv) Define triggers.
- (v) Give the difference between entity type and entity instance.
- (vi) Write the syntax of SELECT query.
- (vii) Give an example of equi-Join.

- (viii) What do you mean by “ORDER BY” clause?
- (ix) What is index?
- (x) Define Transaction.

Section - B**4 × 10 = 40**

(Short Answer Questions)

Note: Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 10 marks.

- 2) What do you mean by RDBMS? Discuss various models related to it.
- 3) Explain what a candidate key is and how it might be used.
- 4) Write short note on ACID properties of database transaction.
- 5) What is SELECT, PROJECT and RENAME operation? How it is represent? Explain with example.
- 6) Discuss various set operation in SQL with example.
- 7) Compare Heterogeneous and Homogeneous Distributed Databases.
- 8) Describe various symbol used while drawing E-R diagram with its appropriate meaning.
- 9) What is key? How primary key is different from foreign key? Explain.

Section - C**2 × 20 = 40**

(Long Answer Questions)

Note: Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 20 marks.

- 10) Define 3NF. Consider the relation schema $R(A, B, C)$ with functional dependencies $AB \rightarrow C, C \rightarrow A$, show that the schema R is in 3 NF but not in BCNF.
 - 11) What are the advantages of RDBMS? Explain 3-tier architecture of DBMS with neat diagram.
 - 12) What is Transaction? Discuss various states of transactions with neat diagrams.
 - 13) Write short note on the following:
 - (i) View
 - (ii) Serializability
 - (iii) Database integrity
 - (iv) Codd's Rules
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