

MASTER OF COMPUTER APPLICATIONS (CBCS - 2020 COURSE)
M.C.A. Sem-I : WINTER : 2021
SUBJECT: APPLIED DATABASE MANAGEMENT SYSTEMS

Day : Monday
Date : 17-01-2022

W-22721-2021

Time : 02:00 PM-05:00 PM
Max. Marks: 60

N.B.

- 1) Q.No. 4 is **COMPULSORY**.
 - 2) Attempt any two questions from Q.No. 1 to Q.No. 3 in Section – I
 - 3) Attempt any two questions from Q.No. 5 to Q.No. 7 in Section – II
 - 4) Answer to both the sections should be written in **SAME** answerbook.
 - 5) Draw labeled diagrams wherever necessary.
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SECTION – I

- Q.1** Answer the following : **(6 Marks x 2 = 12)**
- a) Explain the database architecture.
 - b) Describe Entity Relationship Model.
- Q.2** Answer the following : **(6 Marks x 2 = 12)**
- a) Explain Functional Dependencies with example.
 - b) Explain Data Dictionary with example.
- Q.3** Answer the following : **(6 Marks x 2 = 12)**
- a) Explain ACID property of transaction.
 - b) Explain role and responsibilities of DBA.
- Q.4** Write short notes on **ANY THREE** of the following : **(4 Marks x 3 = 12)**
- a) Data Independence
 - b) Types of Attributes
 - c) Primary Key
 - d) Magnetic Disk
 - e) Indexing
 - f) NoSQL
 - g) Table space

SECTION – II

- Q.5** Answer the following : **(6 Marks x 2 = 12)**
- a) Explain different database languages.
 - b) Explain Extended Entity Relationship (EER) model.
- Q.6** Answer the following : **(6 Marks x 2 = 12)**
- a) Explain SELECT operation in Relational Algebra with example.
 - b) Describe Hashing techniques.
- Q.7** Answer the following : **(6 Marks x 2 = 12)**
- a) Explain Serializability concept.
 - b) Explain any two user privileges with example.
