

CDOE
BACHELOR OF COMPUTER APPLICATIONS (CBCS-2019 COURSE)
B.C.A. SEM - II : WINTER :- 2021
SUBJECT: DBMS-I

Day : Tuesday
Date 8/2/2022

W-21858-2021

Time : 10:00 AM-01:00 PM
Max. Marks: 60

N.B.:

- 1) Q 4 from Section I is COMPULSORY.
 - 2) Answer ANY TWO questions from Q 1, 2, 3 in Section I.
 - 3) Answer ANY TWO questions from Q 5, 6, 7 in Section II.
 - 4) All question CARRY EQUAL marks.
 - 5) Answers to Both the sections should be written in SAME answer book.
 - 6) Draw a labeled diagram WHEREVER necessary.
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SECTION - I

Q.1) Answer the following: (6 Marks X 2 = 12)

- a) What is data abstraction? Why abstraction is needed? How is it achieved in RDBMS?
- b) Explain conceptual data modelling with example.

Q.2) Answer the following: (6 Marks X 2 = 12)

- a) What do you mean by functional dependency? Describe the use of functional dependency in normalization.
- b) Differentiate static and dynamic hashing

Q.3) Explain the following: (6 Marks X 2 = 12)

- a) Elaborate the concept of transaction. Discuss different states of transaction.
- b) Discuss Shadow Paging technique.

Q.4) Write short notes on the following: Attempt ANY THREE (4 Marks X 3 = 12)

- a) Data independence
- b) Weak Entity
- c) Candidate key
- d) Role of DBA
- e) Multi-processing
- f) Check points

SECTION - II

Q.5) Answer the following: (6 Marks X 2 = 12)

- a) Differentiate between database oriented approach and file oriented approach.
- b) Create an ER Diagram for Bus Reservation System.

Q.6) Answer the following: (6 Marks X 2 = 12)

- a) Write steps to convert an un-normalized table to 3NF with help of example.
- b) Discuss physical storage media available for data storage.

Q.7) Explain the following: (6 Marks X 2 = 12)

- a) What are different types of locks in DBMS?
- b) Discuss log based recovery technique.
