

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)
B.C.A. Sem-II : WINTER : 2021
SUBJECT: DBMS-I

Day : Tuesday
Date : 18-01-2022

W-18760-2021

Time : 02:00 PM-05:00 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.

SECTION - I

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

- a) Discuss different types of database system.
- b) Discuss Hierarchical model with its advantages and disadvantages.

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

- a) Explain the purpose of decomposition in DBMS. Elaborate the concept of loss less decomposition.
- b) Discuss roles and responsibility of DBA

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

- a) What do understand by deadlock? Explain deadlock prevention techniques.
- b) What is transaction failure? Explain failure types in detail.

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

- a) DBMS interfaces
- b) Strong entity
- c) Composite key
- d) RAID
- e) ACID properties
- f) Shadow paging

SECTION - II

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

- a) What is data independence? Why it is desirable?
- b) Differentiate strong and weak entity.

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

- a) Explain various types of keys used in relation model.
- b) What is file organization? Explain any two types of file organization.

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

- a) Describe the different recovery techniques used in DBMS. (Min. 2)
- b) Discuss problems of concurrency control
