

Total No. of Questions : ۸ [1] Total No. of Printed Pages : ۲

Roll No.....

CS-۵۰۰۳-CBGS

B. E. V Semester

Examination, December 2020

Choice Based Grading System (CBGS)

Data Base Management System

Time : Three Hours

Maximum Marks : ۷۰

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Define Database Management System (DBMS). What are the major component of this system? Explain each component.
b) What are the different Modules present? Explain in detail.
2. a) Explain the three level architecture of DBMS.
b) What is an attribute? Explain the following attributes types:
 - i) Simple and composite
 - ii) Single valued and multi valued
 - iii) Null attribute
 - iv) Derived attribute
3. a) Explain Various Key constraints with example.
b) What is data dictionary? What it stores? How can this information be useful in DBMS.
4. a) What is two-phase locking and how does it guarantee serializability?
b) Discuss the concurrency control mechanism in detail using suitable example.

[2]

- 5.a) How does Tuple-oriented relational calculus differ from domain-oriented relational calculus?
- b) Explain dangling Tuple? Is BCNF is a stronger normal form than 3NF? Mention reason.
- 6.a) What is a deadlock? Discuss strategies for preventing deadlock.
- b) What do you mean by transaction processing? Explain ACID properties of transaction.
- What is distributed database and data dictionary?
- 7.a) Explain triggers and cursor.
- b)
- 8. Write a short notes on :
 - i) Normalization
 - ii) Multimedia
 - iii) SQL
