

IV Semester B.C.A 5 Degree Examination, September/October - 2022

DATABASE MANAGEMENT SYSTEM

(Regular)

Time : 3 Hours

Maximum Marks : 80

Instruction to Candidates:

- 1) All Sections are Compulsory.
- 2) Draw diagrams wherever necessary.

SECTION - A

Answer any TEN of the following questions.

(10×2=20)

1. a) Define database Give example.
- b) What do you mean by Schema and instance?
- c) Define the term entity Give Example.
- d) Write the difference between strong entity type and weak entity type.
- e) Define the terms domain and atomic in relational data model terminology.
- f) What is Relational Algebra?
- g) What is Normalization?
- h) Write the use of primary key in SQL.
- i) List the datatypes available in SQL.
- j) What is the use of CREATE TABLE command in SQL? Write its syntax.
- k) List different aggregate functions used in SQL.
- l) Define cursor.

SECTION - B

Answer any FOUR of the following questions.

(4×5=20)

2. What are the responsibilities of DBA?
3. Describe Three schema architecture with neat diagram.

[P.T.O.]



4. Explain role names and recursive relationships with suitable example.
5. Explain Entity Integrity and Referential Integrity constraints.
6. Define functional Dependency Fully Functional Dependency and Partial Functional Dependency with example.
7. Write PL/SQL program to find sum and average of 3 numbers.

SECTION - C

Answer any FOUR of the following questions.

(4×10=40)

8. Explain in detail about database system environment with neat diagram. (10)
 9. a) Define data mode
b) Discuss the different types of attributes with example (2+8)
 10. a) Explain SELECT, PROJECT and RENAME Operations in Relational Algebra.
b) Explain the characteristics of DBMS. (5+5)
 11. a) Explain the informal design guidelines of Relational Schemas.
b) Explain first Normal Form (1NF) with suitable example. (5+5)
 12. a) Write a short note on views in SQL.
b) Write a PL/SQL Program to find greatest among 3 numbers. (5+5)
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