

B.C.A. (Pt.-II)

Data. Mana. Sys.

204/234

401193

B.C.A. (Part-II) Examination, 2023

(Faculty of Science)

(Three Year Scheme of 10+2+3 Pattern)

Database Management System

Paper : 204/234

Time Allowed : 3 Hours

Maximum Marks : 100

Answer of all the questions (Short answer as well as are to be given in the main answer-book only. Answers of short answer type questions must be given in sequential order. Similarly all the parts of one question of descriptive part should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book.

Write your roll number on question paper before you start writing answers of questions.

Question paper consists of **Three** parts.

All Three parts are Compulsory

PART-I : (Very short answer) consists of 10 questions of 2 marks each. Maximum limit for each question is up to 40 words.

PART-II :(Short answer) consists of 5 questions of 4 marks each, Maximum limit for each question is up to 80 words.

PART-III : (Long answer) consists of 5 questions of 12 marks each with one question from each unit with internal choices.

PART-I

1. Attempt all questions. Each question carries 2 marks.

10×2=20

- (a) What is Schema?
- (b) What do you mean by data Independent?
- (c) What is Constraints?
- (d) What do you mean by relational Algebra?
- (e) What do you mean by Transaction?
- (f) What is Backup?
- (g) What is Literals?
- (h) What is Views?
- (i) What is Commit Protocol?
- (j) What is Persistence Programming Language?

PART-II

2. Attempt all questions. Each question carries 4 marks.

5×4=20

- (a) What are the disadvantages of DBMS?
- (b) Differentiate between primary and candidate key.
- (c) Write short notes on Transaction State.
- (d) Explain Aggregate functions in SQL.
- (e) What is Concurrency Control? Explain.

PART-III

3. Explain the Architecture of DBMS with diagram.

12

Or

Write short notes on the following :

- (a) Database system v/s File system.
- (b) Role of DBA.

6

6

4. Write short notes on the following :

- (a) Generalization and specialization in Data Modeling.
- (b) Aggregation.

6

6

Or

Explain the fundamental operation of relational Algebra with suitable example.

12

5. What is Normalization? Explain various normal forms in details.

12

Or

Explain the various recovery techniques used in database.

12

6. How many types of SQL Command? Explain DML Commands with suitable example.

12

Or

Write short notes on the following :

- (a) Characteristics and advantages of SQL
- (b) SQL data types

6

6

7. What is the purpose of Object-Oriented Database? Explain Basic Concept of OODB.

12

Or

Write short notes on the following :

- (a) Storage for Object Databases.
- (b) Distributed Database.

6

6
