

This question paper contains 2 printed pages.

Roll No.

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

Data. Mana. Sys.

204/234

B.C.A. (Part - II) EXAMINATION, 2021

(Faculty of Science)

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

DATABASE MANAGEMENT SYSTEM

Time Allowed : Three Hours

Maximum Marks : 100

No supplementary answer-book will be given to any candidate. Hence the candidates should write their answers precisely in the main answer-book only.

All the parts of one question 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 start writing answers of questions.

Question paper consists of **three** parts. **All three** parts are **compulsory**.

PART - A : (Very short answer) consists of **10** questions of **two** marks each. Maximum limit for each question is upto **40** words.

PART - B : (Short answer) consists of **5** questions of **four** marks each. Maximum limit for each question is upto **80** words.

PART - C : (Long answer) consists of **5** questions of **twelve** marks each with an internal choice.

PART - A

1. ~~(a)~~ Define database. 10x2=20
(b) What is mean by data independance ?
(c) Define attributes and entities.
(d) What is mean by aggregation ?
~~(e)~~ What is mean by data recovery ?
~~(f)~~ Define transactions.
~~(g)~~ What is SQL ?
(h) Define views.
~~(i)~~ Define distributed database.
~~(j)~~ What is mean by object database ?

PART - B

2. ~~(a)~~ Discuss the Database system v/s File system. 5x4=20
~~(b)~~ Discuss the various types of keys.
(c) Explain Boyce Codd Normal Form with examples.
(d) Discuss the Aggregate functions with examples.
(e) What is mean by concurrency control ? Discuss the concurrency control in distributed databases.

PART - C

3. ~~(a)~~ Discuss the architecture of DBMS. 6+6
~~(b)~~ Discuss the role of database administrator.
OR
(a) Explain the advantages and disadvantages of DBMS. 10+2
(b) What is mean by data independance ?

4. (a) Discuss the fundamental operations of relational algebra. 8+4
(b) Discuss the generalization and aggregation.

OR

Write short notes on :

4+8

- (a) Mapping constraints
(b) E-R Model

5. Discuss the functional dependencies, access control, backup, recovery and maintenance. 12

OR

Discuss the various Normal Forms with examples.

12

6. (a) Explain SQL Data types. 5+7

- (b) Discuss the insert, update and delete operations with examples.

OR

Write short notes on :

4+4+4

- (a) Characteristics of SQL
(b) Types of SQL commands
(c) Join, Union and Intersection in SQL

7. (a) Explain object oriented databases. 6+6

- (b) Discuss Distributed Query Processing.

OR

Write short notes on :

6+3+3

- (a) Object Oriented data model
(b) Object Relational databases
(c) Distributed Transactions

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