

B.C.A. IIIrd Semester Examination,

February-2022

INTRODUCTION TO DATABASE SYSTEM

(BCA-203)

Time allowed : 3 hours]

[Maximum marks : 80]

Before answering the question, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after examination.

Note: *Attempt five questions in all, by selecting one question from each unit. Question No. - 1 is compulsory. All questions shall carry equal marks.*

- I. (i) What is the difference between data and information?
- (ii) Name different type of database user.
- (iii) Define Schema and sub schema.
- (iv) What is instance ?
- (v) Define Domain.
- (vi) Define Foreign key.
- (vii) What is functional dependency ?
- (viii) How to update data in table ?

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Unit - I

2. (i) What is database ? What are the advantages database over traditional file-based system ?
(ii) Explain the role of DBA.
3. (i) Differentiate DDL, DML and DCL.
(ii) How DBMS works ? Explain.

Unit - II

4. Define the term data model. Describe record based data model with example.
5. (i) Explain the three-level architecture of DBMS.
(ii) What is data independence ? Differentiate logical and physical data independence ?

Unit - III

6. (i) Explain integrity rule. Describe their importance.
(ii) What is E-R Diagram ? Explain various component of E-R diagram ?

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Unit - IV

7. (i) Differentiate Hierarchical and Network data model.
(ii) Differentiate Primary, Candidate and Unique key.
8. Explain by giving examples, the conditions that are necessary for a relation to be in 1NF, 2NF, 3NF, 4NF and 5NF.
9. (i) What are the various set operations in relational algebra ? Explain with example.
(ii) What is query optimization ? Explain.

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