



UNIVERSITY OF NORTH BENGAL
BCA Honours 4th Semester Examination, 2021

CC10-BACHELOR OF COMPUTER APPLICATION (43)

DATABASE MANAGEMENT SYSTEM

Full Marks: 40

ASSIGNMENT

The figures in the margin indicate full marks.

Answer any two questions

20×2 = 40

1. (a) What are functional dependencies? How is decomposition related to it? 6
(b) Discuss Normalization. Illustrate using examples the Normalization of a database up to 3NF. 10
(c) Define: 4
(i) Primary key (ii) Foreign key.
2. (a) What is meant by Database management System? Discuss the features that give it an edge over traditional file system. 7
(b) Discuss ACID properties. 6
(c) What are the different types of data models? Discuss. 7
3. (a) Explain Hashed File Organisation Technique in detail. 10
(b) Discuss the three-tier architecture of DBMS. 6
(c) Explain Select and Intersection Operations of Relational Algebra with example. 4
4. (a) What is data integrity? 2
(b) What are Views? Why are they significant in DBMS? 6
(c) Differentiate between: 12
(i) Physical and Logical data independence
(ii) Schema and Instance
(iii) Attributes and entities.

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