

8. (a) What are the various causes of database failures ?
- (b) Discuss, how serializability is used to enforce concurrency control in a database system.

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C-213

B.C.A. EXAMINATION, Dec. 2017

(Third Semester)

(B. Scheme) (Main & Re-appear)

(BCA)

BCA-205-B

FUNDAMENTALS OF DATABASE
MANAGEMENT SYSTEM

Time : 3 Hours]

[Maximum Marks : 75

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

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

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Unit I

1. Discuss various advantages and disadvantages of DBMS. What are various components of DBMS environment ?
2. Write short notes on the following :
 - (a) DBA
 - (b) Relational Databases
 - (c) DBMS users.

Unit II

3. (a) Describe the architecture of database system with the help of diagram.
(b) Explain physical and logical data independence also by giving some suitable example.
4. Discuss different Models i.e. Record-based data model and Object-based data model.

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Unit III

5. What is Normalization ? Explain by giving definition and with examples 1NF, 2NF, 3NF and BCNF.
6. Define the following terms :
 - (a) Entity
 - (b) Entity Set
 - (c) Degree of a relation
 - (d) Key
 - (e) Super Key
 - (f) Primary Key
 - (g) Prime Attribute
 - (h) Database Schema.

Unit IV

7. (a) Discuss the atomicity, durability and consistency preservation properties of a database transaction.
(b) Describe the basic techniques to implement database recovery in a DBMS.

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