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Total No. of Questions : 9]  
(1049)

[Total No. of Printed Pages : 4

**BCA (CBCS) RUSA IInd Semester  
Examination**

**4389**

**DATABASE MANAGEMENT SYSTEM**

Paper : BCA-0205

**Time : 3 Hours]**

**[Maximum Marks : 70**

*Note :- Attempt five questions in all. Unit-I is compulsory.  
Select one question from each of the Units-II, III,  
IV and V.*

**Unit-I**

**(Compulsory Question)**

**7×2=14**

1. Attempt any seven parts :

Explain the following :

(i) Field and Records

(ii) Data Abstraction

- (iii) Primary key and Foreign key
- (iv) Entity and Attributes
- (v) Direct Files
- (vi) Relation Scheme
- (vii) Master-detail Table
- (viii) Query
- (ix) Dependency preservation
- (x) Tuple

## Unit-II

14 each

2. (a) What is Data-base ? Explain its architecture in detail along with its advantages and disadvantages.
- (b) Define Data-model. Give its classification with examples.
3. (a) What is DBMS ? Explain the structure of DBMS. Also explain its importance and limitations.
- (b) Compare File-based, semantic and Entity-relationship models.

### **Unit-III**

**14 each**

4. (a) Define File. Explain its various operations along with its types.
- (b) Write short note on 'Relational Algebra' and 'Relational Calculus.'
5. (a) What is Indexing ? Explain the various types of indexes in detail.
- (b) What is Relational Model ? How is it implemented ? Explain through example.

### **Unit-IV**

**14 each**

6. (a) What is Normal Form ? Explain third and Boyce Code with suitable examples.
- (b) Define Dependency. Explain functional and Multi-valued dependency in detail.
7. (a) Explain through short notes on the following :
  - (i) Relational Data-base Design
  - (ii) Decomposition
- (b) What is Normalisation ? Define 2NF and 3NF explain their pre-condition through suitable examples.

## **Unit-V**

**14 each**

8. (a) Explain some important features of MS-ACCESS.  
(b) What is Form ? How 'Modal' and 'Modeless' forms are implemented ? Explain.
9. (a) Explain 'Make-table', 'Update' and 'Append' operations through suitable examples.  
(b) What is Report ? Create a simple report from a table of database of your choice.