Duration: 2 Hours   Max Marks: 60

Instructions: 1) Figures to the right indicate Full Marks.
              2) All Questions are compulsory.

Q1. A. Define the following terms in one or two sentences.   (5 X 1 = 05)
   a. Data Definition Language
   b. Knowledge database
   c. Data Warehouse
   d. Normalization
   e. Database Administrator

Q1. B. Define the following terms with an example.   (5 X 1 = 05)
   a. Primary Key
   b. Non Serial Schedule
   c. Mutlivalued Dependency
   d. Role indicator in ERD
   e. Domain Constraint

Q2. Answer the following   (10)
   A. List any four limitations of file processing system.   (02)
   B. Explain three levels of data abstraction in DBMS.   (03)
   C. Explain the States of a Transaction model with the help a diagram.   (05)

Q3. Answer the following   (10)
   A. Define two types of Distributed database system.   (02)
   B. Compare and contrast with three points of differences between Hierarchical,
      network and Relational database model.   (03)
   C. Explain the different types of attributes with the help of an example.   (05)

Q4. Answer the following   (10)
   A. Define the two types of Participation constraints.   (02)
   B. Explain updation anomaly with an example.   (03)
   C. Draw an ERD for Toys Management System with cardinality mappings.   (05)

Q5. Answer the following   (10)
   A. Give two points of differences between Strong and Weak Entity sets.   (02)
   B. State the ACID properties of a transaction.   (03)
   C. Define 3NF. Decompose the following Student relation upto 2NF.   (05)

Rollno	Bookid	StudentName	Bookname
11	226	John	Fiction
12	245	Tom	Comdey
14	304	Jack	Action
17	506	Sonal	Detective, Historical

Key->{Rollno, Bookid}
    {Rollno, Bookid}->Student Name
    {Bookid}->Bookname

Q6. Answer the following   **(10)**
  A. Define any two problems of Concurrency Control.   (02)
  B. Explain with an example, the steps to convert an ERD with cardinality
     mapping one to many.   (03)
  C. Explain Mobile database and Multimedia database in short.   (05)

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