

**BACHELOR OF COMPUTER APPLICATIONS
(BCA) (Pre-Revised)**

Term-End Examination

00681

June, 2017

CS-06 : DATABASE MANAGEMENT SYSTEMS

Time : 3 hours

Maximum Marks : 75

Note : *Question number 1 is compulsory and carries 30 marks. Answer any three questions from the rest.*

1. (a) A book publishing company publishes books in the area of Computer Science and Engineering. The publisher appoints editors for editing the books to be published. A book is written by one or more authors. Also, one author may write more than one book. The publisher sells books with the help of a chain of distributors and book-sellers. Draw an ER-Diagram for this system by properly identifying the entities of the system. In the ERD show proper relationship and cardinality.

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- (b) Explain the "View Updating Rule" and "Physical Independence Rule". 5
- (c) What is Knowledge ? How is it different from data ? Explain the difference between DBMS and Knowledge Based System. 5
- (d) What is Distributed Database Management System ? Explain the structure of Distributed Database. Explain three issues related to data replication in Distributed Database. 10
2. (a) Explain the following w.r.t. the Network Model of Database : 10
- (i) DBTG Set
- (ii) Implementation of the Network Data Model
- (b) Explain how Object Oriented Database Management System (OODBMS) is better than Relational Database Management System (RDBMS). 5
3. (a) What are the different types of keys in RDBMS ? Explain their significance with the help of an example of each. 10
- (b) What is multivalued dependency ? Explain Fourth Normal Form (4NF) with the help of an example. 5

4. (a) What is Index Sequential File Organization ? Explain Primary, Clustering and Multilevel Indexing schemes with the help of examples. 10
- (b) What is Data Fragmentation ? Explain Vertical Fragmentation with the help of an example. 5
5. Write short notes on the following : 3×5=15
- (a) Structured Query Language (SQL)
- (b) Knowledge Representation Schemes
- (c) Three Level Architecture of DBMS
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