

(2 Hours)

(Total Marks: 60)

N.B:

1. All questions are compulsory.
2. Figures to the right indicate marks.
3. Illustration, in-depth answers, and diagrams will be appreciated.
4. Mixing of sub-questions is not allowed.
5. Each question carries 6 marks.

- 1 **Attempt any Two** 12
 - a Explain Data Fragmentation Procedure
 - b Write and explain problem areas of distributed data base system.
 - c What is Distributed Database Management System Architecture? Explain
 - d Explain Peer- to-Peer Architecture for Distributed DBMS.
- 2 **Attempt any Two** 12
 - a Explain ACID properties.
 - b Explain timestamp ordering algorithm.
 - c Explain features of object oriented database with an example
 - d Describe in detail temporal databases.
- 3 **Attempt any Two** 12
 - a Explain conceptual and logical data model for spatial databases.
 - b Explain ODMG model.
 - c Explain Active Database with an example.
 - d Explain difference between structured, semi-structured and unstructured data in XML database.
- 4 **Attempt any Two** 12
 - a Explain data log notation
 - b Write a short note on Multimedia database system.
 - c Write advantages and disadvantages of DDBMS.
 - d Write a short note on: Location Transparency
- 5 **Attempt any Two** 12
 - a Explain reasons for advancement of DDBMS.
 - b Explain different architectural model for DDBMS
 - c Write a note on design strategies.
 - d Explain Query Processing. Differentiate Global Queries into Local Queries.