

(Time: 2^{1/2} hours)

G11510ODB

Total Marks: 75

- (1) All questions are compulsory.
- (2) Make suitable assumptions wherever necessary and state the assumptions made.
- (3) Answers to the same question must be written together.
- (4) Numbers to the right indicate marks.
- (5) Draw neat labeled diagrams wherever necessary.
- (6) Use of Non-programmable calculators is allowed.

Q.1. Answer Any three the following

(15)

1. Explain Data and Information
2. Explain different components of DBMS
3. Explain different DBMS Users
4. Explain 2- Tier, 3-Tier Architecture of DBMS
5. What are different database languages(DDL, DML, DCL, DQL)
6. Explain features of DBMS

Q.2. Answer Any three the following

(15)

1. Explain functional dependency with an example.
2. Explain Transitive dependency in normalization.
3. Explain different Anomalies in RDBMS
4. Describe redundancy
5. What is normalization of data? Explain with an example.
6. Explain various operators in Relational Algebra

Q.3. Answer Any three the following

(15)

- a. Explain different Entity and define Entity set.
- b. What is Attribute, state different types of Attributes
- c. Draw different E-R symbols and their use
- d. What is constraint and what are different types of constraints.
- e. Explain different types of Relations
- f. Explain various data definition statements in SQL

Q.4. Answer Any three the following

(15)

- a. Explain Advantages of Concurrent Execution of Transaction
- b. Explain Transaction Definition in SQL
- c. Explain Serializability
- d. What is a Transaction in DBMS?
- e. Explain Transaction Definition in SQL
- f. Explain Recovery

Q.5. Answer Any three the following

(15)

- a. Difference between SQL and PL/SQL
- b. Explain Scalar types
- c. Explain Variable Declaration Example
- d. Explain different string Functions in RDBMS
- e. Explain Type of Triggers
- f. Explain Subquery and its rules.

XXXXXXXXXXXXXXXXXXXXXXXXXX