Question Bank (Descriptive) UNIT–I:

Introduction to Database Systems

1. Define Database and DBMS. Explain the importance of database design 12M

2. What are the problems in file system data management? Explain in detail with relevant example. 12M

3. A. Define Data Model. Explain the importance of data models. 7M B. Write briefly about business rules while data modeling. 5M

4. A. What are the different types of data model? Explain each briefly. 6M

B. Briefly explain basic building blocks of data modeling. 6M

5. Explain the Three Schema Architecture of a database with neat diagram 12M

6. What are the various components of a DBMS? Explain with neat diagram 12M

7. Define E/R Model. Explain the following: 3M

a. Entities and Relationships 4M

b. Attributes and different types of attributes in details 5M

8. Write about the following: a. Query Processor 4M b. Data Manipulation Language Processor 4M c. Data Dictionary 4M

9. Write about the following: a. Simple Attribute 3M b. Derived Attribute 3M c. Multi-Valued Attribute 3M d. Composite Attribute 3M

10. Write about various notations of E/R diagram 12M

UNIT–II:

Relational Data Model

1. A. Explain Relational Data model and its concepts 5M B.

Briefly explain different types of keys in Relational data model 7M

2. Describe about various keys in relational model. Explain in detail. 12M

3. What are the different types of Relation Algebra Operators? Explain in detail 12M

5. Draw an ER diagram for the relations Employee and Department with relevant relationships. 12M

6. Explain the following terms:

a. Required and optional attribute 3M

b. Identifiers 3M

c. Composite identifier 3M

d. Simple and Composite attribute 3M

7. Explain the following briefly:

a. Entity integrity 6M

b. Referential Integrity 6M

8. Explain the differences between the following:

a. Super key 3M

b. Candidate key 3M

c. Primary key 3M

d. Secondary key 3M

9. Explain about integrity rules in detail. 12M

10. Discuss about Codd’s relational database rules in brief. 12M

Dependencies and Normalforms

1. What are the problems caused by Redundancy? Explain about Normalization and need for normalization. 12M

2. A. Define Functional Dependencies. 3M

B. Discuss about different functional dependencies 9M

3. Define Normalization. 3M Explain about 1NF, 2NF with relevant examples. 9M

4. Explain about 3NF and BCNF with relevant table structure. 12M

5. Discuss about higher level normal forms with suitable table. 12M 2016

6. Explain the following terms:

a. Fully functional Dependencies 6M

b. Transitive Dependencies 6M

7. Discuss about schema refinement in database design. 12M

8. Explain the following: Multi-valued dependencies and fourth normal forms. 12M

9. Explain the steps to improving the design. 12M

10. Discuss about renormalization in detail. 12M