QUESTION BANK

Subject: DBMS

Class: SYCSE

Revised On: 25.3.2018

Unit I Introduction

2 marks questions:-

1) Define schema
2) Data independence
3) Define: Physical data independence
4) Define: Data model
5) Enlist the advantages of DBMS over file system?
6) What are the disadvantages of File Systems?
7) Give the levels of data abstraction?
8) Define the terms 1) physical schema 2) logical schema.
9) What is database language?
10) Enlist the database users

8 marks Questions:

1) What are the disadvantages of File Processing System.
2) Describe the responsibilities of DBA?
3) Draw and explain overall structure of DBMS
4) Write a short note on Centralized and client server architecture of DBMS
5) Explain Database application architectures.(2 and 3 tier)

UNIT II Data Modeling

2 marks questions:-

1) Define:Data model
2) Define:Domain of attribute
3) Define:Arity or order or degree of relation
4) Define:Cardinality of relation
5) What are the categories of data model?
6) What is an entity relationship model?
7) Define:-entity
8) Entity set
9) Define specialization.
10) Generalization
11) Key attribute
12) How to identify the weak and strong entity sets
13) Identify the Primary key attributes, single values, multivalued, derived, simple and composite attributes from the given ER Diagram.
14) Identify the Weak and string entity types in ER diagram.

7/8 Marks questions

1) Explain the type of attribute
2) Write a short note on ER Model
3) What is Mapping cardinality? Explain in detail.
4) Distinguish super key, primary key and composite key in ER model? Explain with example.
5. Construct the ER Diagram to demonstrate Weak and strong entity sets.
6. Sketch an ER Diagram to illustrate the relationship sets.

UNIT III Relational Database Design

2 marks questions

1) Define normalization and what is the purpose of normalization
2) What is function dependency?
3) Define full functional dependency?
4) What is first normal form?
5) Define Boyce codd normal form
6) What are the desirable properties of decomposition?
7) What is 2NF?
8) What is transitive dependency?

7/8 marks questions

1) Explain normalization and what is the purpose of normalization
2) Explain in details:- a.1NF b.2NF c.3NF
3) Write a short note on multivalued dependency?
4) Explain 4NF?
5) Explain dependency preservation and lossless decomposition properties of decomposition?
6) What is decomposition? Explain with the help of an example.
7) Explain the different normal forms in detail.
8) Compare BCNF and 3NF with suitable example.
9) Explain First Normal form and second normal form with suitable example.

UNIT IV Structures Query Language

2 marks questions:-

1. Define query language
2. What is use of rename operator
3. What is use of union and intersection operation
4. What are aggregate functions? List the aggregate functions supported by SQL.
5. What is the use of Group By clause of user
6. Enlist ddl commands
7. what is DDL
8. What is Dml
9. What is DCL
10. What is having clause
11. How to order tuples in ascending or descending order.
12. What is use of count fuction.
13. What is difference between truncate and drop command
14. Write a query to display loan number, branch name where loan amount is between 500 and 1000 using comparison operators.
31. Find the names of all branches with customers who have an account in the bank And who live in the Harrison city using join.
15. Catagorized all the employess according to their department**.**

7/8 marks questions

1. Explain SQL datatypes in detail
2. Write a short note on DDL
3. Write a short note in DML
4. Write a short note on DCL
5. Explain Views in detail.
6. Explain select Query with example
7. Write a short note on Joins
8. Explain operators in sql.
9. Write a short note on Constraints insql
10. Write a short note on procedures
11. Describe Triggers
12. Discuss set Operators.
13. Illustrate the use of Cursors

UNIT V Transactions, Concurrency Control and Recovery

Two Mark Questions

1. What is transaction?
2. What are the properties of transaction?
3. When is a transaction rolled back?
4. What are the states of transaction?
5. What are the two types of serializability?.
6. What are the types of locking protocols?
7. What are the problems that occur in transaction if they run concurrently?
8. What are the types of failures?
9. When does a transaction reach its commit point?
10. What are the properties of transaction?
11. When is a schedule said to be serial?
12. When is a schedule serializable?

7/8 marks questions

1) What is Transaction? Explain ACID properties?
2) draw and explain Transaction State diagram?
3) Write a short note on Implementation of Automicity and Durability?
4) Explain timestamp-based protocol ?
5) Explain deadlock handling details ?a. deadlock prevention b. deadlock detection and deadlock recovery
6) Write short note on failure classification?

UNIT VI File organization and indexing

1. Distinguish between fixed length records and variable length records?
2. Explain the concept of variable length records.
3. in hash file org
4. Ordered index
5. Indexing field
6. Ordering field
7. Ordered file
8. Key field of file
9. Ordering key of file
10. Clustering index
11. Block anchor
12. Dense index
13. Sparse index
14. Hash function
15. Closed and open hashing
16. Static and dynamic hashing

7/8 marks questions

1. Explain file organization in details.
2. Explain indexing and hashing
3. Explain the concept of Fixed length records
4. Explain Variable length records
5. Explain Byte string representation
6. Explain Slotted page structure