DataBase quiz

1. Which layer of database deals with the physical storage and organization of data on disk?

- Physical layer
- Management layer
- Both a and b
- None of the above

2. Which layer of databases is responsible for enforcing data integrity and security?

- Physical layer
- Management layer
- Both a and b
- None of the above

3. What are the three main components of the ER model?

- Entities, attributes, and queries
- Tables, columns, and keys
- Entities, attributes, and relationships
- Schemas, indexes, and constraints

4. In a company database, what is an example of an entity?

- Employee
- Salary
- Sales report
- All of the above

5. What is the hierarchical model?

- A model based on a parent-child relationship, where each record has a single parent and zero or more children
- A model based on a many-to-many relationship, where each child can have multiple parents and each parent can have multiple children
- A model based on a one-to-one relationship, where each record has only one parent and one child
- A model based on a one-to-many relationship, where each record has only one parent and multiple children

6. What is the network model?

- A more complex form of the hierarchical model, where each child can have multiple parents and each parent can have multiple children
- A less complex form of the hierarchical model, where each child can have only one parent and each parent can have multiple children
- A model based on a one-to-one relationship, where each record has only one parent and one child
- A model based on a one-to-many relationship, where each record has only one parent but multiple children

7. What is the physical data model concerned with?

- How data is logically organized
- How data is physically stored on a computer system
- How data is accessed and retrieved
- All of the above

8. Why is the physical data model important for database design?

- It defines the logical structure of the data
- It defines the high-level details of the data
- It defines the low-level details of how data is stored and accessed
- It defines the relationships between data entities

9. Which data model stores data in tables with rows and columns and establishes relationships between tables ?

- Relational data model
- Hierarchical data model
- Network data model
- Object-oriented data model

10. Which data model stores data in a tree-like structure with parent-child relationships between nodes?

- Relational data model
- Hierarchical data model
- Network data model
- Object-oriented data model

11. Which data model stores data in objects and allows access through methods?

- Relational data model
- Hierarchical data model
- Network data model
- Object-oriented data model

12. Which type of DBMS is designed to be used by only one user at a time?

- Multi-user DBMS
- Single-user DBMS
- Hierarchical DBMS
- Object-oriented DBMS

13. Which type of DBMS is commonly used in enterprise-level applications where many users need to access the database simultaneously?

- Hierarchical DBMS
- Object-oriented DBMS
- Multi-user DBMS
- Relational DBMS

14. Which system is an example of a highly scalable and secure multi-user DBMS?

- Windows Registry
- MySQL
- Aadhaar card database in India
- IBM's Information Management System

15. What is a Centralized DBMS?

- A type of DBMS where the database is distributed across multiple computers or servers.
- A type of DBMS where the entire database is stored and managed in a single location.
- A type of DBMS where the data is structured in a tree-like structure.
- A type of DBMS where data is stored in tables with rows and columns.

16. What is a Distributed DBMS?

- A type of DBMS where the entire database is stored and managed in a single location.
- A type of DBMS where data is stored in tables with rows and columns.
- A type of DBMS where the database is distributed across multiple locations connected over a network.
- A type of DBMS where data is stored in a tree-like structure.

17. What is the difference between a database and a DBMS?

- A database is a software tool used to manage and process data, while a DBMS is a collection of data.
- A database is a collection of data, while a DBMS is a software tool used to manage and process data.
- A database is a single file that contains all the data, while a DBMS is a collection of multiple databases.
- A database and a DBMS are the same thing.

18. What does DBMS stand for?

- Data Backup Management System
- Database Management System
- Data Backup and Management System
- Database Backup and Management System

19. Which of the following is a limitation of the traditional file system approach compared to a DBMS?

- Data redundancy
- Optimized data access and retrieval
- Unlimited data sharing
- Unrestricted data modification

20. What is a consequence of data inconsistency in a file system?

- Efficient storage space
- Difficulty in maintaining data consistency
- Increased data security
- Easy access to data

21. Which of the following is an advantage of using a DBMS over a file system?

- Data redundancy
- Limited data sharing
- Data inconsistency
- Improved data security

22. What is one advantage of a DBMS over a file system when it comes to data redundancy?

- DBMS allows for more data redundancy than a file system.
- DBMS eliminates data redundancy altogether.
- DBMS can manage data redundancy and ensure data consistency.
- File systems have better redundancy management than a DBMS.

23. What is the advantage of using a simpler language like SQL in DBMS?

- It makes it easier for non-technical users to manipulate the database
- It provides more security for the database
- It reduces the amount of storage space required for the database
- None of the above

24. What is the advantage of using DBMS over a file system approach?

- DBMS is less secure than a file system.
- DBMS uses more storage space than a file system.
- DBMS reduces data redundancy and inconsistency.
- DBMS limits accessibility of data to select few users.

25. What is a database ?

- A collection of files that store data in a structured format and helps in computation
- A folder structure format to store data
- A set of rules that govern the relationships between tables in a database
- A collection of data that is stored in a file on a computer

26. Which of the following best describes the primary use of a database?

- To store and manage data in an unstructured format
- To store and manage data in a structured format
- To perform complex calculations and analysis on data
- To create and edit documents and presentations

27. Which of the following best explains why we need databases?

- To store data in an unstructured format for easy access
- To perform complex calculations and analysis on data
- To manage and organize data in a structured format for efficient storage and retrieval
- To create and edit documents and presentations

28. What is a schema ?

- A collection of tables that store data
- A set of rules that govern the relationships between tables in a database
- A diagram that shows the structure of a database and the relationships between its tables
- A blueprint of the structure of a database, including attributes, the types of data that can be stored and the relationships between tables

29. What is a database instance ?

- Stored data in a structured format
- A copy of a database that is used for testing or backup purposes
- A running copy of a database system that is accessed by users or applications at a given time t
- A set of rules that govern the relationships between tables in a database

30. Which of them is not a part of three schema architecture ?

- Internal Schema
- Conceptual Schema
- Structural schema
- External Schema

31. Which of the following is a feature of three schema architecture ;

- It provides customized data for end users
- Provides physical data independence
- Provides logical data independence
- All of the above

32. Which of the following is NOT a function of the external schema in a three-schema architecture?

- To provide a view of the database for a specific user or group of users
- To define the logical structure of the database
- To define the operations that can be performed on the database
- To insulate the user from changes to the internal schema

33. Which of the following best describes the function of the physical schema in a three-schema architecture?

- To provide a view of the database for a specific user or group of users
- To define the logical structure of the database
- To specify how data is stored and accessed on the physical storage devices
- To insulate the user from changes to the external schema

34. Which of the following best describes the function of the conceptual schema in a three-schema architecture?

- To provide a view of the database for a specific user or group of users
- To define the physical structure of the database
- To define the operations that can be performed on the database
- To define an abstract representation of the entire database

35. What is file based storage system ?

- A system for storing data in a structured format, typically in tables
- A system for storing data in a file on a computer, without any specific structure
- A system for backing up data from a database
- A system for managing the relationships between tables in a database

36. Which of the following is not an advantage of file-based system

- It is easy to use
- Could be easily stored and moved at multiple locations
- Does not require in-depth knowledge of programming
- It is very secured

37. What is redundancy?

- The use of keys to establish relationships between tables
- The storage of data in multiple locations

- The process eliminating duplicate data
- The duplication of data in multiple locations in a database
- The use of indexes to speed up queries in a database

38. What are the anomalies of file based system ?

- Read anomaly
- Write anomaly
- Update anomaly
- All of the above

39. Which of the following is a disadvantage of a file-based storage system?

- It is easy to implement and requires minimal technical expertise
- It allows for efficient indexing and querying of data
- It is prone to data redundancy and inconsistency
- It provides advanced security features for protecting data

40. Which of the following best explains why redundancy occurs in a file-based storage system?

- It is an intentional design choice to improve data accuracy
- It is a side effect of using primary and foreign keys to establish relationships between tables
- It is a consequence of storing data in multiple files for efficiency
- It is a natural result of storing data in an unstructured format