**Important Question for Mid-2**

Explain deletion and insertion operation in B+ trees.

What is transaction? Explain the properties of transaction

Define Serializability. Explain conflict Serializability and view Serializability in detail.

When is decomposition said to be dependency preserving? Why this property Useful? Explain.

Explain the TimeStamp – Based Concurrency Control protocol.

Distinguish between primary, secondary and cluster indexes

Explain in detail about multivalued dependency and 4NF ?

Explain about log based recovery method

Explain BCNF , 3NF and 2NF

Explain IASM

Explain Hash Indexing Method

**Quiz**

1. Test for conflict serializability is done using [ ]

A)precedence graph B) Normal form C) Blind writes D) 5NF

1. In which normal form , Transitive dependency and partial dependency is eliminated

A) First B) Second C) Third D) Fourth [ ]

3. We can use the following three rules to find logically implied functional dependencies. This collection of rules is called [ ]

A) Axioms B) Armstrong’s axioms

C) Armstrong D) Closure

4. Fourth normal form eliminates ? [ ]

A) Functional dependencies B) Partial dependencies

C) Transitive dependencies D) Multi valued dependencies

5. functional dependencies A🡪B, B🡪C,from this we can get [ ]

A) A🡪C B) A🡪B C) B🡪C D) none of the mentioned

6. Which normal form is considered adequate for normal relational database design?

[ ]  
A) 2NF B) 5NF C) 4NF D) 3NF

7. Identify the characteristics of transactions [ ]  
A) Atomicity B) Durability C) Isolation D) All of the mentioned

8. Which of the following has “all-or-none” property? [ ]  
A) Atomicity B Durability

C) Isolation D) All of the mention

9. What are the different events in Triggers? [ ]

A) Define, Create B) Drop, Comment

C) Insert, Update, Delete D) Select, Commit

10. Validation protocols uses \_\_\_\_\_\_\_ timestamps [ ]  
A) Start B) Validation C) Finish D) All

11.  \_\_\_\_\_\_\_\_\_ locks cannot be shared

12. Database accept \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ schedules

13. \_\_\_\_\_\_\_\_\_\_\_\_ is a special type of stored procedure that is automatically invoked whenever the data in the table is modified which invokes it..

14. A transaction is in partial committed state when it executes \_\_\_\_\_\_\_\_\_ instruction

15. The write without its correspondence read is called as\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

16 . In the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ scheme, a transaction that wants to update the database first creates a complete copy of the database.

17. Storing the same information several times in a database is known as\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

18. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ protocol requires that each transaction issue lock & unlock requests in 2 phases.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

19. The \_\_\_\_\_\_\_\_\_\_\_\_ component of a database system implements the support for atomicity & durability.

20. In rigorous two phase locking protocol all shared and exclusive locks are retained till the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

21. The SQL statement that is used to change the definition of a table is [ ]

A) Alter B) Update C) Select D) Create

22. Which of the following operation is used for retrieving certain columns of a table?

A) JOIN B) SELECTION C) PROJECTION D) UNION [ ]

23. DBA stands for [ ]

A) Database administrator B) Database analyst

C) Database application D) Database architecture

24. Data about data is normally termed as [ ]

A) directory B) data bank C) meta data D) none of the above

25. Full form of DDL is [ ]

A) Data definition language B) Data difference language C) Data demand language D)All the mentioned

26. Which of the following creates a virtual relation for storing the query?[ ]

A) Function B) View C) Procedure D) None of the mentioned

27. A relational database consists of a collection of [ ]

A) Tables B) Fields C) Records D) Keys

28. Course (course\_id,sec\_id,semester), Here the course\_id,sec\_id and semester are \_\_\_\_\_\_\_\_\_\_ and course is a \_\_\_\_\_ [ ]

A) Relations, Attribute B) Attributes, Relation

C) Tuple, Relation D) Tuple, Attributes

29. The tuples of the relations can be of \_\_\_\_\_\_\_\_ order. [ ]

1. Any B) Same C) Sorted D) Constant

30. \_\_\_\_\_\_ is a special type of integrity constraint that relates two relations & maintains consistency across the relations. [ ]

A) Entity Integrity Constraints B) Referential Integrity Constraints C) Domain Integrity Constraints D) Domain Constraints

31. The ellipse represents in E-R model is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

32. A relationship with an entity and relationship can be made using \_\_\_\_\_\_\_\_\_\_\_\_\_\_

33. An entity set that does not have sufficient attributes to form a primary key is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ entity set.

34. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_key is used to represent relationship between tables.

35. A minimal set of attributes that is used to uniquely identify a tuple in relation is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ key.

36. The arity of the relation is also called as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

37. A primary key cannot contain \_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_

38. The operator that is used for pattern matching in SQL is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

39. Relational Algebra is aone of the two formal query language that takes two relations as a input and produces another \_\_\_\_\_\_\_\_\_\_ as an output of the query.

40. An entity in A is associated with at most one entity in B, and an entity in B is associated with at most one entity in A.This is called as\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

41. The rectangle represents in E-R model is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

42. A relationship with in only one entity is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

43. The degree of the relation is also called as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

44. . In relational algebra cross product is also called as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

45. What is the full form of DBMS?

46. Which type of data can be stored in the database?

47. In which of the following formats data is stored in the database management system?

48. Which of the following is not a type of database?

a) Hierarchical b) Network c) Distributed d) Decentralized

49. Which of the following is not an example of DBMS?

a) MySQL b) Microsoft Acess c) IBM DB2 d) Google

50. Which of the following is not a function of the database?

a) Managing stored data b) Manipulating data c) Security for stored data d) Analysing code

41. Which of the following is a function of the DBMS?

a) Storing data b) Providing multi-users access control c) Data Integrity d) All of the above

42. Which of the following is a component of the DBMS? a) Data b) Data Languages c) Data Manager d) All of the above

43. Which of the following is known as a set of entities of the same type that share same properties, or attributes?

a) Relation set b) Tuples c) Entity set d) Entity Relation model

44. What is information about data called?

a) Hyper data b) Tera data c) Meta data d) Relations

45. . The values appearing in given attributes of any tuple in the referencing relation must likewise occur in specified attributes of at least one tuple in the referenced relation, according to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ integrity constraint. a) Referential b) Primary c) Referencing(foreign key) d) Specific

46. \_\_\_\_\_\_\_\_\_\_\_\_\_ is a hardware component that is most important for the operation of a database management system.

a) Microphone b) High speed, large capacity disk to store data c) High-resolution video display d) Printer

47. The DBMS acts as an interface between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an enterprise-class system.

a) Data and the DBMS b) Application and SQL c) Database application and the database d) The user and the software

48. The ability to query data, as well as insert, delete, and alter tuples, is offered by \_\_\_\_\_\_\_\_\_\_\_\_

a) TCL (Transaction Control Language) b) DCL (Data Control Language) c) DDL (Data Definition Langauge) d) DML (Data Manipulation Langauge)

49. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a set of one or more attributes taken collectively to uniquely identify a record.

a) Primary Key b) Foreign key c) Super key d) Candidate key

50. Which command is used to remove a relation from an SQL?

a) Drop table b) Delete c) Purge d) Remove

51. Which of the following command is correct to delete the values in the relation teaches? a) Delete from teaches; b) Delete from teaches where Id =’Null’;

c) Remove table teaches; d) Drop table teaches;

52. What do you mean by one to many relationships?

a. One class may have many teachers

b. One teacher can have many classes

c. Many classes may have many teachers

d. Many teachers may have many classes

53. Which of the following command is a type of Data Definition language command?

a. Create

b. Update

c. Delete

d. Merge

54. In which one of the following, the multiple lower entities are grouped (or combined) together to form a single higher-level entity?

a. Specialization

b. Generalization

c. Aggregation

d. None of the above

55. In a relation database, every tuples divided into the fields are known as the\_\_\_\_\_\_.

a. Queries

b. Domains

c. Relations

d. All of the above

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