** TOP DBMS Interview Questions ** ①

Ques-1 What do you mean by data and information?

Ans-1 Data is an unit that contains raw material which do not carry any specific meaning.
Information is a group of data that carries a logical meaning.

Note:- Data doesn't depend on information while Information depends on data.

Ques-2 What is DBMS?

Ans-2 DBMS is collection of program that facilitates user to create and maintain a database. ✔
DBMS provides us a tool for performing operation such as insertion, deletion and updation.

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Ques-3 What is DataBase?

Ans-3 A Database is a logical, organized collection of data that it can easily be accessed, managed and updated.

Ques-4 List out some advantages of DBMS? M.Imp

Ans-4
- Redundancy control ✓
- Provides multiple user interfaces ✓
- Provides backup and Recovery ✓
- Data consistency ✓

Ques-5 What do you meany transparent DBMS? IMP

Ans-5 The transparent DBMS is a type of DBMS which keeps its physical structure hidden from users.

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Ques-6 What is RDBMS?

Ans-6 RDMS stands for Relational DataBase Management system. It is used to maintain the data records in table is known as RDBMS.

Ques-7 How many types of Database language are? M.M.IMP

Ans-7 ⊙ Data Definition Language:- CREATE, ALTER, DROP, TRUNCATE, RENAME etc.

⊙ Data Manipulation Language:- UPDATE, INSERT, DELETE etc.

⊙ Data Control language:- GRANT, REVOKE

⊙ Transaction Control language:-

COMMIT, ROLLBACK and SAVEPOINT

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Ques-8 What do you understand Data Model ? IMP (4)

Ans-8 Data Model is specified as a collection of conceptual tools for describing data, data relationship. The model are used to describe relationship between entities and attributes.
→ Network Model
→ Relational Model
→ Hierarchical Model
→ Entity -Relationship Model .

Ques-9 What are disadvantage of file processing system ?
N.IMP
DBMS → why?

Ans-9 ⊙ Data Redundancy ✓
      ⊙ Not Secure ✓
      ⊙ Inconsistent ✓
      ⊙ Data Integrity
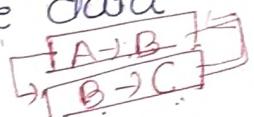
Ques-10 What is meant by ACID properties in DBMS? M.M.IMP (5)

Ans-10 Atomicity :- All changes to the data must be performed successful or not.

Consistent :- Data must be in consistent state before and after the transaction.

Isolated :- No other process can change the data While transaction is running. $[A \rightarrow B]$ $[B \rightarrow C]$

Durable :- The changes made by a transaction must persist.

Ques-11 What is Data abstraction in DBMS? IMP

Ans-11 Data Abstraction :- It is process of hiding irrelevant details from users is known as Data Abstraction in DBMS.

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Ques-12 What is a degree of Relation?

Ans-12 The degree of Relation is a number of attribute of its relation schema is known as <u>Degree</u> of Relation.

Ques-13 What is Relational Algebra? IMP

Ans-13 Relational Algebra is Procedural <u>Query Language</u> which contains a set of operations that take one or two relations as input and produce a new relationship. There are operations of Relational algebra:

- ⊙ select ✓
- ⊙ project ✓
- ⊙ set difference ✓
- ⊙ union

Ques-14 What is meant by Data Warehousing -Imp

Ans-14 The process of collecting, extracting, transforming and loading data from multiple sources and storing them into one database is known as Data Warehousing.

Ques-15 What is meant by Normalization? V.V.M.IMP

Ans-15 Normalization :- It is process of minimize redundancy and used to avoid data redundancy, insertion anomaly, updation anomaly, deletion anomaly.

Most commonly used normal forms :-

(i) First Normal Form (1NF)

(ii) Second Normal Form (2NF)

(iii) Third Normal Form (3NF)

(IV) Boyce and Codd Normal Form (BCNF)

Ques-16   What is Denormalization?

Ans-16 It is the process of adding Redundant data as per the requirement which is used to avoid the use of complex and costly joins. This process is known as the Denormalization.

Ques-17   What is functional Dependency? Imp

Ans-17 Functional Dependency is the defines as the relationship which occurs when one attribute in a relation uniquely determines another attribute.

$$A \rightarrow B$$

⇒ B is functionally dependent on A

Ques-18   What is the Entity- Relationship Model?
M·Imp

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Ans-18 ER model is short name for Entity-Relationship Model. It contains Entities and relationship among these objects. It is known as E-R Model.

Ques-19 What is on Entity ? *imp*

Ans-19 Entity is a set of attribute in database. Entity can be a real-world object which physically exists in this world.

Ex:- Employee, Person, Teacher, student etc.] M.imp

Ques-20 What are the three levels of data Abstraction?

Ans-20 Physical level:- How data are stored.

Logical level:- What data are stored.

view Level:- Highest level, It describes only part of entire database.

Ques-21 What are the types of keys in DBMS?   (10)

Ans-21 There are following type of keys:- M.Imp

Primary Key:- Primary Key is an attribute in a table
that can uniquely identify each record
in a table.

candidate Key:- The minimal super key or minimal set of
attribute that can uniquely identify a
tuple is known as candidate key.

super key:- The super key is set of attribute which
can uniquely identify a tuple.

Foriegn key:- Foreign Key is a primary key from
one table which has a relationship
with another table.

Ques-22 Describe types of Normal Form in DBMS ?

Ans-22 First Normal Form (1NF):- <u>M Imp</u>

⇒ A relation will be 1NF if it contains on <u>atomic</u> value. It cannot hold multiple values.

Second Normal Form (2NF):-

⇒ All non-key attributes are <u>fully functional dependent</u> on the primary key.

Third Normal Form (3NF):-

$A \rightarrow B$
$B \rightarrow C$ $\boxed{A \rightarrow C}$ होता
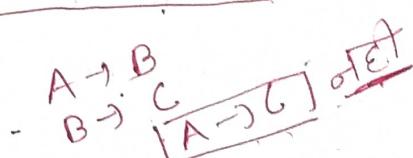
⇒ There is no transitive dependency then the relation must be in third normal form.

It holds at least one of following conditions:-

⇒ X is Super key.

⇒ Y is prime attribute.

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BCNF :- (Boyce Codd Normal Form)

⇒ It is the advance version of 3NF. ✓

⇒ $X \rightarrow Y$, X is super key of table. ✓

Fourth Normal Form (4NF) :-

⇒ It is in BCNF and has no multi-valued dependency.

Fifth Normal Form (5NF) :-

⇒ A relation is in 5NF if it is 4NF and not contains any join dependency and joining should be looseless.

Ques-23 What is the difference between intension and extension in database.

Ans-23 Intension:- It is used to define the description of database.

Extension:- It is used to measure of the number of tuples present in the database at any given point in time.

Ques-24 Explain the difference between 2-tier and 3-tier architecture in DBMS. Imp

Ans-24 2-tier Architecture:-

It refers to the client-server architecture in which applications at the client end directly

communicate with database at server end. without any middleware.

3-tier Architecture :-

It contains middleware layer between client and server to provide GUI to the users and make the system more secure and accessible.

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