54. When only one instance of an entity is associated with the relationship, it is marked as:
    A. 1:1   B. 1:2   C. 1:3   D. 1:N
55. When more than one instance of an entity is associated with a relationship, it is marked as:
    A. 1:1   B. 1:2   C. 1:3   D. 1:N

Answers:

1.	Data	2.	Database
3.	DBMS	4.	DBMS
5.	DBMS	6.	DBMS
7.	DBMS	8.	DBMS
9.	Data inconsistency	10.	DBA
11.	Data model	12.	Hierarchical Database Model
13.	Hierarchical Database Model	14.	Network Database Model
15.	Relational Database Model	16.	Object Relational Database Model
17.	Structured Query Language	18.	Data Definition Language
19.	Data Definition Language	20.	Data Definition Language
21.	Data Definition Language	22.	Data Manipulation Language
23.	Data Manipulation Language	24.	Data Manipulation Language
25.	Data Manipulation Language	26.	Data Manipulation Language
27.	Data Control Language	28.	Data Control Language
29.	Data Control Language	30.	Data Control Language
31.	Database Table	32.	Record
33.	Tuples	34.	Field
35.	Tables/Relations	36.	Character
37.	Integer	38.	Real Numbers
39.	Boolean Data	40.	Primary Key
41.	Candidate or Alternate Key	42.	Secondary Key
43.	Foreign Key	44.	Problem Identification/Definition
45.	Feasibility Study	46.	Requirement Analysis
47.	Conceptual Data Modeling	48.	Enterprise Data Modeling
49.	Logical Data Modeling	50.	Physical Data Modeling
51.	Rectangles	52.	Ellipses
53.	Diamond symbols	54.	1:1
55.	1:N		

Q.2   Give short answers of the following questions.

Q1: Define data.

Ans. Data refers to the facts and figures in raw form i.e. not in organized form. Data is the raw material given as input to the computer for processing.

Q2: Define information.

Ans. Information is the processed or organized form of data. When the computer processes data and it is properly arranged and organized, it is converted to information. It is also called the output of computer and is the meaningful form of data.

Q3: Define File Management System.

Ans. A file (or file based) management system is a collection of programs used for managing data stored in various files. Each program within a file management system is developed independently and it defines and manages its own data.

Q4: Define database.

Ans. A database is a collection of related data.

Q5: What is meant by DBMS?

Ans. A database management system (DBMS) is a set of programs that allow users to create, maintain and manipulate database, and store or retrieve data from those database files. It provides user-friendly access and controls between user and database. Its main purpose is to improve data

sharing, data access, decision making and increase end user productivity.

Q6: Which operations are included in manipulation of data?

Ans. Manipulation of data includes the following operations:

⇨ Adding new data

⇨ Deleting unwanted data.

⇨ Changing existing data

⇨ Select Query

⇨ Update Query

⇨ Delete Query

⇨ Append Query

⇨ Make Table Query

Q7: What are the responsibilities of DBMS?

Ans. The DBMS helps to create an environment in which users have better access to data. DBMS helps to give an integrated view of the organization's operations. The DBMS makes it possible to share the data in the database among multiple applications and users.

Q8: Give some examples of the database systems managed by DBMS.

Ans. Some examples of the database systems managed by DBMS are:

⇨ Customer information system

⇨ Inventory information

⇨ Library management

⇨ Accounting and bookkeeping

Q9: Give some examples of DBMS software.

Ans. Examples of DBMS software include

⇨ Microsoft Access

⇨ Microsoft SQL Server

⇨ Sybase

⇨ Oracle

⇨ MySQL

Q10: Which problems were faced in file management system?

Ans. The following problems were faced in file management system:

⇨ Reduced Data Redundancy

⇨ Data consistency

⇨ Program-Data Dependency

⇨ Lack of Flexibility

⇨ Data not Sharable

⇨ Backup and Recovery

⇨ Data Security

Q11: Who is database administrator?

Ans. Database Administrator (DBA) is the person responsible for supervising the database and the use of DBMS in an organization.

Q12: Write down any four responsibilities of DBA.

Ans. DBA has the following responsibilities.

⇨ Designing the database and enforcing the operational policies and procedures for its usage.

⇨ Planning security measures and backup of database.

⇨ Controlling privileges and permissions of database users.

⇨ Allocating passwords to users.

Q13: What is meant by database model?

Ans. A database model is the theoretical foundation of a database and determines in which manner data can be stored, organized and manipulated. It defines a way of structuring data.

Q14: How many types of database models are there?

Ans. There are five types of database models:

⇨ Hierarchical Database Model

⇨ Network Database Model

⇨ Relational Database Model

⇨ Object-Oriented Database Model

⇨ Object Relational Database Model

Q15: Define members and owners in hierarchical structure.

Ans. Data elements in a subordinate relationship are called members and those having subordinates are called owners. In a hierarchical structure, subordinates can have only a single owner and there is only one data element that has no owner. This structure is very suitable in describing many relationships in the real world

Q16: Give some examples of the hierarchical database model.

Ans. Some examples of hierarchical model are table of contents, departments of an organization and types of memories

Q17: Define relation in a relational database model.

Ans. The "relation" in a relational database refers to the various tables in the database, which are linked with each other.

Q18: Write down the use of relational database model.

Ans. The relational database model is used to make database management systems more independent of any particular application. It is the most popular database model used in business applications.

Q19: What is meant by SQL?

Ans. SQL (Structured Query Language) is a standard language for accessing and manipulating databases.

Q20: How many types of SQL languages are for relational databases?

Ans. There are three types of SQL languages for relational databases. These are:

⇨ Data Definition Language

⇨ Data Manipulation Language

⇨ Data Control Language

Q21: What are the Important tasks of DDL?

Ans. Some important tasks of DDL are:

⇨ To create objects in a database model

⇨ To alter the structure of the database

⇨ To delete objects from the database

Q22: Give some examples of DML tasks.

Ans. Some examples of DML tasks are:

⇨ To retrieve data from a database

⇨ To insert data into a table

⇨ To update existing data within a table

⇨ To delete records from a table

Q23: What are the Important tasks of DCL?

Ans. Some important tasks of DCL are:

⇨ To allow specified users to perform specific tasks

⇨ To disallow specified users from performing specified tasks

⇨ To cancel previously granted or denied permissions

Q24: What is meant by effective DBMS?

Ans. An effective DBMS provides users with timely, accurate and relevant information. This information is stored in computer files, which needs to be suitably organized and properly maintained so that users can easily access the information they need

Q25: Define database table.

Ans. A database table is a file that contains data about a single entity. An entity can be a person, place or event, etc

Q26: State the composition of database table.

Ans. A database table is composed of rows and columns. Rows hold the records and columns hold the fields. Data Item is inserted at each row and column intersection. Tables are also called relations in RDBMS

Q27: How many types of keys are used in database?

Ans. The following are the types of keys used in databases:
⇨ Primary Key
⇨ Candidate or Alternate Key
⇨ Secondary Key
⇨ Foreign Key

Q28: Define candidate key or alternate key.

Ans. A key field that can act as a primary key field in a table to unique identifies each record but it is not chosen, as primary key is known as candidate or alternate key.

Q29: What is meant by foreign key?

Ans. A key field used in a relationship between tables whose value matches a primary key in the other table is known as foreign key.

Q30: Define database planning.

Ans. Database planning is a systematic approach to the development of database that moves from concept to design and development to implementation.

Q31: How a database should be planned?

Ans. Database should be planned in a systematic way to save time, efforts and make it perform the expected tasks. The time and work required to plan a database depends on its complexity.

Q32: Which steps are involved in planning a database?

Ans. The following steps are involved in planning a database:
⇨ Problem Identification/Definition
⇨ Feasibility Study
⇨ Requirement Analysis
⇨ Identify Entities and Attributes
⇨ Assigning Names to Tables and Columns

Q33: Which steps are included in feasibility study?

Ans. Feasibility study includes the following steps:
⇨ Investigate the problem
⇨ Find out all the possible solutions available
⇨ Study all the solutions to determine their feasibility
⇨ List the issues with each solution
⇨ Select the preferred solution for implementation
⇨ Document the results in a feasibility report

Q34: Which diagram is called Entity-Relationship diagram (ERD)?

Ans. Data modeling is the process of designing logical structure of a database with a diagram using text and symbols to represent the way data needs to flow. This diagram is called Entity-Relationship diagram (ERD).

Q35: Write a short note on data models.

Ans. Data models define how data is connected to each other and how they are processed and stored inside the system. Data models are built during the analysis and design phases of a project to ensure that the requirements for a new application are fully understood. A data model can be thought of as a diagram or flowchart that illustrates the relationships between data. Well-documented conceptual, logical and physical data models allow stake-holders to identify errors and make changes before any programming code has been written.

Q36: Define entity.

Ans. An entity is a thing of interest to an organization about which data is to be held.

Q37: Define relationship.

Ans. A relationship is a link or association between entities.

Q38: On which factors, ER model is based on?

Ans. ER Model is based on:

⇒ Entities and their attributes

⇒ Relationships among entities

Q39: Define degree of the relationship.

Ans. The number of participating entities in a relationship is known as the degree of the relationship.

Q40: Define one-to-one relationship.

Ans. When only one instance of an entity is associated with the relationship, it is marked as '1:1' and is called one-to-one relationship.

Q41: Define one-to-many relationship.

Ans. When more than one instance of an entity is associated with a relationship, it is marked as '1:N' and is called one-to-many relationship.

Q42: Define many-to-many relationship.

Ans. When more than one instance of an entity on the left and more than one instance of an entity on the right can be associated with the relationship, it is called many-to-many relationship.

Q43: How to get first normal form?

Ans. To get to first normal form, we break up our data into its related data groups.

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