Database Management System (DBMS)

1. Define Data and information.

The unprocessed raw facts and figure which may or may not give any significant meaning is called data. It can be numbers, letters, words or any symbols. For example John, 10, 5 have no significant meaning.

The collection of organized related processed data which has significant meaning is called information. For example "John is a student and he studies in grade 5 and 10 years old", have significant meaning.

2. What is database? Give some examples.

The collection of organized interrelated data/information to any subject or purpose is known as database. It is used to store, organize and extract data. Database can be computerized and non-computerized(manual). Telephone directory, dictionary, mark ledger etc. are some examples of database.

3. Define database management system (DBMS). Name some DBMS software.

Database Management system software is a software that stores a huge amount of data, process them and provide information in an organized manner. It also allows the user to create, modify, update, organize and retrieve information from a database. Some examples of DBMS software are:

dBase III/IV, FoxPro, Oracle, SQL, MS-ACCESS, Sybase etc.

4. Write some advantages of database management system.

The advantages of DBMS are:

- It provides huge storage or space for data or large volume of data can be stored.
- It provides high data security.
- Data can be stored easily on the basis of key field.
- It allows easy access to the data for the users.
- It reduce data redundancy i.e. duplication of data.
- It allows of sharing of existing database among multiple users and programs.
- It reduces data inconsistency.

5. Define RDBMS. Name some RDBMS software.

A relational database management system (RDBMS) is most widely software or program that stores database in multiple tables on the basis of a key field. It allows a user to view or retrieve records from the multiple linked table continuously at a time. MS-ACCESS, My SQL, Oracle etc. are the examples of RDBMS.

6. Write the advantages of computerized database over manual database.

The advantages of computerized database over manual database are:

❖ Easy for sharing data.

❖ High data security.

❖ Easy to check and control Data redundancy.

❖ Easy to store and update large volume to data.

❖ Easy to retrieve variety of information.

❖ Easy to maintain the data integrity.

7. What is MS- ACCESS? List the objects of MS-ACCESS.

MS-ACCESS is a Relational Database management System developed by Microsoft Corporation. It is sued to store and manipulate large volume of data in the form of tables. It allows the user to create database and store data in multiple tables.

The objects of MS-ACCESS are:

a) Table   b) Query   c) Form   d) Report   e) Pages   f) Macro

  g) Modules

8. Write some features of MS-ACCESS.

Some features of MS-ACCESS are:

a. It allows to store records using tables.
b. It allows adding, editing, deleting and displaying the related data.

c. It allows viewing, changing and analyzing the records using queries.

d. It allows viewing and entering the records using forms.

e. It allows to create and view records in more specific format using reports.

9. Define field and record.

A column of a table which stores only one type of data is known as field. It is the smallest unit of database. It is also known as attribute. For example a table contains Name and address of students where only names are store under "Name" field and addresses are stored under "address" field.

The collection of multiple related fields in a row is known as record. It gives complete information about a person or thing. It is also known as tuple. For example, Rollno, Name, address and class of a student is called a record.

Fields

RollNo	Name	Address	Class
101	John	Dhapasi	5
102	Methew	Baluwatar	8
103	Kaira	Gangabu	9
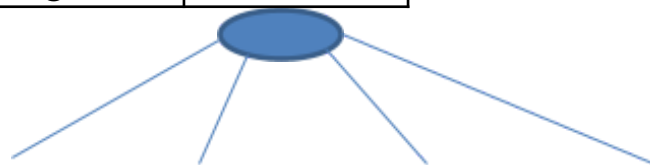
Record1

Record 2

Record3

10. What is a table? Write the different ways of creating a table in MS-ACCESS.

Table is primary object or building block of database that stores large volume of data in the form of rows and columns. A single table is used to store data of a

specific purpose or subject. The different ways to create a table in MS-ACCESS are:

   a) Create table in design view

   b) Create table by using wizard

   c) Create table by entering data

11. What is primary key? Write its importance.

Primary key is a special field or group of fields in the table that uniquely identifies each record from the database. The primary key does not accept duplicate value for a field and it does not allow a user to leave the field blank or null. The importance of primary key are:

   a) It identifies each record of a table uniquely within very short time.

   b) It reduces and control duplication of the record in a table.

   c) It creates a link among tables.

12. What is a data type? List the different types of data type of MS-ACCESS.

A data type is an attribute of a field that determines what type of data it can store in the field. Each field can store data relating of only a single data type. The different types of data type are:

Data type	Description	Max data/ space
Text	Used for text	0- 255 characters
Memo	Used for lengthy text	0- 65,535 characters
Number	Used for numerical data	1,2,4 or 8 bytes
Date/time	Used for date and times	8 bytes
Currency	Used for currency value	8 bytes
Auto number	Used for unique sequential (increment by 1)	4 bytes
Yes/No	Used for data type that can be only two possible values(yes/No, true/false, 0 or 1)	1 Bit (0 or 1)

OLE	Used for OLE objects(like sound, pictures, graphics, video etc.)	Up to 1 GB
Hyperlink	Used for hyperlinks	Upto 64,000 characters
Lookup Wizard	Used to create a field that allows us to choose a value from another table.	4 Bytes

13. Define validation rule and validation text field property.

Validation rule is a field property that allows a user to limit and specify the values that can be entered into the field. It checks and control data that to be entered in the field according to the set criteria.

Validation text is also a field property that specifies the message to be displayed to the user when the data enter in the field is not matched with the validation rule.

14. What do you mean by sorting and filtering?

The process of arranging all the records in a table either in ascending or descending order based on field/fields is known as sorting. The process of viewing required records of a table that matches the given criteria is known as filtering.

15. What is query? List its types.

Query is an object of database that is used to view, retrieve, change and analyze records from a table or multiple linked tables based on a given criteria. A query can also be used as a source of records for form and report. The types of query are: a) Select Query   b) Action Query

a) Select Query: A select query is the most common type of query. It retrieves data from one or more tables and display the result in a new datasheet based on a given criteria. We can also use a select query to group records and calculate sums, counts, average and other types of totals.

b) Action Query: An action query is a query that makes a global change in the table or update records in a table just in one operation. There are four types of action queries:

i) Update Query   ii) Delete Query   iii) Append Query   iv) Make- Table Query

16. Differentiate between select query and update query.

Select Query	Update Query
1. A select query is a type of query that displays the results in a datasheet which meets the given criteria.	1. An update query is a type of query that makes global changes to a group of records in a table.
2. It does not make any change in the data in a table.	2. Its makes a permanent change in the data of table.
3. It creates a new datasheet to display the result.	3. It does not create new datasheet to display the result.

17. Define form and report.

Form is a type of database object that is primarily used to create an interface for entering data in a table. It is often use for entering, editing, deleting and displaying data from tables and queries.

Report is a type of database object that presents data in effective way in a printed format. It allows a user to print documents according to user specifications of the summarize information through tables or queries.

18. Differentiate between Form and Report.

Form	Report
1. It is used to edit, enter and view information.	1. It is used only to view information.
2. It is usually displayed on the screen.	2. It can be previewed on the screen but it is usually printed.
3. It provides a detail view of records.	3. It provides a summarized view of records.
4. It is for the people who actually work with the database.	4. It is often for the people who use its information for other business purposes.

The end