Q.1) Discuss the advantages of DBMS approach over the traditional file based approach for database.

=> There are several advantages of DBMS over the traditional file based approach. Few of them are as follows:

* **No redundant data:**

In traditional file processing system, same data is stored in multiple locations. This redundancy creates a number of problems such as data integrity problem. But in DBMS redundancy removed by data normalization. No duplication saves storage and improves access time.

* **Data consistency and integrity:**

The main cause of data inconsistency is data redundancy, since data normalization takes care of as part of it.

* **Data security:**

A DBMS provides a security and authorization system, which the dba uses to create accounts and to specify account restrictions. So that only authorized user is able to access the data. Each user has different set of access thus data is secured from the issues such as identity theft, data leaks and misuses of data.

Q.2) Who is DBA? Explain the roles of DBA.