INTRODUCTION TO MYSQL
Chapter - 13
Type A: Very Short Answer Questions

1	**What is MYSQL? By which company was MYSQL developed?**
Ans.	MYSQL is a free, open-source Relational Database Management System. MySQL was developed by MySQL AB a company based in Sweden.
2	**What are the various key features of MYSQL?**
Ans.	✓ Speed ✓ Ease of use ✓ Query language supported ✓ Portability ✓ Security
3	**What is MYSQL server?**
Ans.	**MySQL server** listens for client requests coming in over the network and accesses database contents according to those requests and provides that to the clients.
4	**What is MYSQL client?**
Ans.	**MySQL clients** are programs that connect to the MySQL server and issue queries in a pre-specified format. MySQL is compatible with the standards based SQL. The client program may contact the server programmatically or manually.
5	**Which company created MYSQL?**
Ans.	MySQL is created and supported by MySQL AB, a company based in Sweden.
6	**Which open source enterprise environment is MYSQL part of?**
Ans.	MySQL is a part LINUX operating system is open source environment.
7	**What is LAMP?**
Ans.	LAMP is an open source Web development platform that uses Linux as the operating system, Apache as the Web server, and MySQL as the relational database management system and PHP as the object-oriented scripting language. (Sometimes Perl or Python is used instead of PHP.)
8	**What is SQL? What are the different categories of SQL commands?**
Ans.	**SQL** is the set of commands that is recognized by nearly all RDBMSs. SQL commands can be divided into following categories: 1. Data definition Language (DDL) commands. 2. Data Manipulation Language (DML) Commands. 3. Transaction Control Language (TCL) Commands. 4. Session Control Commands. 5. System Control Commands.
9	**What types of commands are used in the following categories?** **(i) DDL** **(ii) DML** **(iii) TCL** **(iv) Session Control Commands** **(v) System Control Commands.**
Ans.	(i) DDL –CREATE, ALTER, DROP (ii) DML – SELECT,DELETE,INSERT INTO,UPDATE (iii) TCL –COMMIT,ROLLBACK, SAVEPOINT, SET TRANSACTION (iv) Session Control Commands – ALTER SESSION and SET ROLE (v) System Control Command - ALTER SYSTEM
10	**What does the Data Dictionary consists of?**
Ans.	Data Dictionary consists of metadata i.e., data about data.

Type B: Short Answer Questions

1	**What is MYSQL? What are its functions and features?**
Ans.	MYSQL is a free, open-source Relational Database Management System. The basic function of MySQL is to manage and maintain relational database with other added functionalities for example Centralized Database Management Following are the features of the MYSQL ✓ **Speed:** If the server hardware is optimal, MySQL runs very fast. It supports clustered servers for demanding applications. ✓ **Query Language Support:** MySQL understands standards based SQL (Structured Query Language). ✓ **Portability:** MySQL provides portability as it has been tested with a broad range of different compilers and can work on many different platforms. It is fully multithreaded using kernel threads. It can easily use multiple CPUs if they are available. ✓ **Localization:** The server can provide error messages to clients in many languages. ✓ **Connectivity:** Clients can connect to MySQL Server using several protocols.
2	**What is the role of database server in database management system? Give the key feature of MYSQL.**
Ans	Server listens for client requests coming in over the network and access database contents according to those requests and provides that to the clients. following are the key feature of MYSQL **Some of the features of MySQL are :** ✓ Fast speed ✓ Ease of use ✓ Query Language Support ✓ Portability ✓ Connectivity ✓ Localization
3	**What is the use of SQL in MySQL?**
Ans.	✓ SQL is a language that enables you to create and operate on relational databases, which are sets of related information stored in tables. ✓ It allows user to learn one set of commands and use it to create, retrieve, alter, and transfer information regardless of whether they are working on a PC, a workstation, a mini, or a mainframe.
4	**How are SQL commands classified?**
Ans.	SQL provides many different types of commands used for different purpose. SQL commands can be mainly divided into following categories: **1. Data Definition Language (DDL) –** commands that allow you to perform tasks related to data definition e.g., ✓ Creating, altering and dropping. ✓ Granting and revoking privileges and roles. ✓ Maintenance commands **2. Data Manipulation Language (DML) –** commands that allow you to perform data manipulation e. g., ✓ Retrieval, insertion, deletion and modification of data stored in a database. **3. Transaction Control Language (TCL) –** commands that allow you to manage and control the transactions e.g., ✓ Making changes to database permanent ✓ Undoing changes to database, permanent ✓ Creating savepoints ✓ Setting properties for current transactions.
5	**What functions should be performed by ideal DDL?**
Ans.	✓ It should identify the types of data division such as data item, segment, record, and data-base file. ✓ It should specify the proper data types. ✓ It should specify how the record types are related to make structures. ✓ It may define the length of the data items. ✓ It may specify means of checking for errors in the data. ✓ It may specify privacy locks for preventing unauthorized reading or modification of the data.

6	**Differentiate between DDL and DML commands.**
Ans.	The **Data Definition Language (DDL)** commands, as the name suggests, allow you to perform tasks related to data definition. That is, through these commands, you can perform tasks like, create, alter and drop schema objects, grant and revoke privileges etc. The **Data Manipulation Language (DML) commands**, as the name suggests, are used to manipulate data. That is, DML commands query and manipulate data in existing schema objects.
7	**Name some commands used to assign/revoke privileges from data base users.**
Ans.	GRANT - GRANT privileges (column_list) ON [object_type] privilege_level TO account [IDENTIFIED BY 'password'] WITH with_options REVOKE - REVOKE privilege_type [(column_list)] [, priv_type [(column_list)]]... ON [object_type] privilege_level FROM user [, user]..
8	**Name some table maintenance commands.**
Ans.	CREATE - CREATE TABLE table_name (column_name column_type); ALTER - ALTER TABLE testalter_tbl DROP column_name; UPDATE - UPDATE table_name SET field1=new-value1, field2=new-value2 [WHERE Clause]; SELECT - SELECT field1, field2,...fieldN table_name1, table_name2.. [WHERE Clause]; DELETE - DELETE FROM table_name [WHERE Clause]; DROP - DROP TABLE table_name ; INSERT - INSERT INTO table_name (field1, field2,...fieldN) VALUES (value1, value2,...valueN);

Type C: Long Answer Questions

1	**What do you understand by client server architecture of MySQL?**
Ans.	MySQL Database System is a combination of a MySQL server instance and a MySQL database. MySQL database system operates using client/server architecture, in which the server runs on the machine containing the databases and clients connect to the server over a network. SQL Server and Clients:- **MySQL Server** – ✓ Listens for client request coming in over the network ✓ Accesses database contents according to those requests ✓ Provides contents to the clients **MySQL Clients** – ✓ Programs that connect to the database server and issue queries in a pre-specified format
2	**Discuss the different categories of commands of SQL.**
Ans	SQL provides many different types of commands used for different purpose. SQL commands can be mainly divided into following categories: **1. Data Definition Language (DDL) –** commands that allow you to perform tasks related to data definition e.g., ✓ Creating, altering and dropping. ✓ Granting and revoking privileges and roles. ✓ Maintenance commands **2. Data Manipulation Language (DML) –** commands that allow you to perform data manipulation e. g., ✓ Retrieval, insertion, deletion and modification of data stored in a database. **3.Transaction Control Language (TCL) –** commands that allow you to manage and control the transactions e.g., ✓ Making changes to database permanent ✓ Undoing changes to database, permanent ✓ Creating savepoints ✓ Setting properties for current transactions.