1.The differences between TCP and OSI model are:

TCP/ IP model	OSI model
It has 4 layers.	It has 7 layers.
It is horizontally approached.	It is vertically approached.
Delivery of the package is not guaranteed in the TCP/IP Model.	Delivery of the package is guaranteed in OSI Model.
The protocols were created first and then built the TCP/IP model.	The OSI model was developed first, and then protocols were created to fit the network architecture's needs.
It does not mention the services, interfaces, and protocols.	The OSI model represents, defines administration, interfaces and conventions. It describes clearly which layer provides services.
The smallest size of the TCP/IP header is 20 bytes.	The smallest size of the OSI header is 5 bytes.
In TCP/IP, returning protocol is not difficult.	Protocols are unknown in the OSI model and are returned while the technology modifies.
TCP/IP model depends on standard protocols about which the computer network has been created. It is a connection protocol that assigns the network of hosts over the internet.	OSI is a generic, protocol independent standard. It is acting as an interaction gateway between the network and the final-user.

2.The differences between client server and peer to peer network are:

Client Server network	Peer to Peer network
In Client-Server Network, Clients and servers are differentiated, Specific server and clients are present.	In Peer-to-Peer Network, Clients and servers are not differentiated.
n Client-Server Network, Centralized server is used to store the data.	While in Peer-to-Peer Network, Each peer has its own data.

Client-Server Network is costlier than Peer-to-Peer Network.	Peer-to-Peer Networks are less costlier than Client-Server Network.
Client-Server Networks are more stable than Peer-to-Peer Network.	Peer-to-Peer networks are less stable if the number of peers is increased.
In the Client-Server Network, Server responds to the services which are requested by Client.	While in Peer-to-Peer Network, Each and every node can do both request and respond for the services.
Client-Server Network focuses on information sharing.	While Peer-to-Peer Network focuses on connectivity.

3. 7 Layers of the OSI Model are mentioned below:

Open Systems Interconnection model is a conceptual framework used to understand and implement standardized communication between diverse systems.It divides communication process into seven distinct layers,each with specific functions.The seven layers of OSI model are as follows:

Physical Layer: This layer deals with physical connection between devices which means they are responsible for the transmission and reception of raw bitstreams over a physical medium. Eg:cables,switches

Its key functions are: bit by bit data transmission,signal encoding and decoding.

Data Link Layer: This layer provides node to node data transfer i.e. a link between two directly connected nodes.The data link layer divides the stream of bits received from the network layer into manageable data units called frames. MAC (Media Access Control) addressing is used to identify devices within a local network segment.

Network Layer: The network layer is responsible for the source-to-destination delivery of a packet,possibly across multiple networks (links).Also its key function is logical addressing,packet forwarding and internetworking.

Transport Layer: This ensures complete data transfer and reliability,manages end-to-end communication between devices and provides error checking and data flow control.

Session Layer: The Session layer establishes, maintains, and synchronizes the interaction among communicating systems. The session layer allows a process to add checkpoints,synchronization points, to a stream of data.

Presentation Layer: This layer translates data between the application layer and network format,ensures that data is in a usable format and is correctly encrypted/decrypted if necessary and handles data compression and decompression.

Application Layer: It provides user interfaces and support for services such as electronic mail, remote file access and transfer, shared database management, and other types of distributed information services.

4. The OSI model is based on the following principle :

-A layer should be created where a different abstraction is needed.

- Each layer should perform a well-defined function.

- The function of each layer should be chosen with an eye toward defining internationally standardized protocols.

-The layer boundaries should be chosen to minimize the information flow across the interfaces.

-The number of layers should be large enough that distinct functions need not be thrown together in the same layer out of necessity and small enough that the architecture does not become unwieldy.