**All about OSI LAYER**

OSI means “open system interconnection” developed by IOS (international organization for standardization) in the year 1984. It is a 7 layer architecture where each layer has its own specific functionality and these layers are used to transmit data.

**Physical layer**

Physical layer is the 1st and the lowest layer. In this layer the data is converted into bits i.e., 0’s and 1’s and it transfer bits from one node to other. This layer will send the bits to the data link layer. There are 4 functions in the physical layer are Bit synchronization, Bit rate control, Physical topologies and Transmission mode.

**Data link layer**

Data link layer is the 2nd layer and used for delivery of msgs between 2 devices and it is also responsible for control flow and error control/error handling/ error free while transferring data. It takes packets from the network layer and break them to frames and each frame is called NIC (network interface card). It has physical address or MAC address. The receiver MAC address is obtained by placing APR (address resolution protocol). The functions of data link layer are framing physical addressing, error control, flow control, and access control.

**Network layer**

Network layer is the 3rd layer used to transfer data between 2 networks. It breaks up the segments into packets. It routers the packet (selects the shortest path to transmit packet). The ip address of sender and receiver are placed in the header of the layer. The 2 functions are routing and logical addressing.

**Transport layer**

Transport layer is the 4th layer and heart of the OSI model used for end-to-end communication between 2 devices. This layer takes data from session layer and break into chunks. In this layer the selection of protocol happens and it patches up the data. The services provided by this layer are connection oriented and connectionless.

**Session layer**

Session layer is the 5th layer used for opening and closing the communication between 2 devices. It also have the data about when the connection has been opened and closed. The functions of session layer are session establishment maintenance and termination, synchronization and dialog controller.

**Presentation layer**

Presentation layer is the 6th layer and is used to convert data into consumable format from application layer. It is used to translation, encryption, decryption and compression of data. It helps to improve the speed and efficiency of the communication.

**Application layer**

Application layer is the 7th and the top layer of OSI model. In this layer the user will directly interact with the data and the all s/w applications are rely in this layer for communication. The functions of the application layer are network virtual terminal, FTAM-File transfer access and management, mail services and directory services.







