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| **OSI Model** | **TCP/IP Model** |
| OSI stands for Open Systems Interconnection | TCP/IP implies Transmission Control Protocol/ Internet Protocol |
| It is a structured model with independent standard and generic protocol that deals with the functioning of a network and establishes a communication gateway between the network and the end-user. | It constitutes standard protocols that drive the development of the internet. It is a communication protocol that implements a connection among the hosts over a network. |
| The OSI model was developed by ISO (International Standard Organization) in 1984. | The TCP/IP model was developed by ARPANET (Advanced Research Project Agency Network) in 1982. |
| It consists of 7 layers: Starting from the bottom they are the Physical, Data Link, Network, Transport, Session, Presentation, and Application layer. | It consists of 4 layers: Starting from the bottom they are the Network Interface, Internet, Transport, and Application layer. |
| The OSI model follows a vertical approach. | The TCP/IP model follows a horizontal approach. |
| The OSI is a reference model, following which a network is designed. | The TCP/IP is an implementation of the OSI Model. |
| In the OSI model, the physical layer and the data link layer are separate layers. | In TCP, physical and data link layers are merged as a single network layer. |
| Session Layer and presentation layers are a component of the OSI model. | There is no distinct session and presentation layer in the TCP model. |
| The OSI model describes the protocols, services, and interfaces as well as provides a precise distinction between them. The OSI model is a protocol-independent model. | The TCP/IP doesn’t have any clear distinguishing amongst the services, protocols, and interfaces. The TCP/IP model is protocol-dependent. |
| The OSI model provides standardization to devices like routers, switches, motherboards, and other hardware devices. | The TCP/IP model does not provide standardization to the devices, however, it gives a connection between different computers. |