**Question**

In 300 words, write a write up on the differences between the 7 layer OSI reference model and the TCP/IP model.

A telecommunications or networking system's functions are standardized into seven different levels using the OSI (Open Systems Interconnection) model.

Physical layer, Data link layer, network layer, transport layer, presentation layer, and application layer are some of them.

Another popular networking framework that serves as the foundation for the modern internet is the TCP/IP paradigm, sometimes referred to as the Internet Protocol Suite. Compared to the OSI model's seven layers, it has four.

They include: Network Interface Layer, Internet Layer, Transport Layer, Application Layer.

Important variations between the two models:

* Number of Layers

Physical, Data Link, Network, Transport, Session, Presentation, and Application are the first seven levels of the OSI model.

TCP/IP Model: The TCP/IP model is divided into four layers: application, network interface, internet, and transport.

* Layered complexity

The OSI model, which breaks down network functions into seven layers, is more thorough and in-depth. This level of detail can be helpful for comprehending particular networking features, but it can also be viewed as more difficult.

TCP/IP Model: With only four layers, the TCP/IP model is more streamlined and straightforward, which is in accordance with the real-world requirements of contemporary networking.

* Evolutionary History

The International Organization for Standardization (ISO) created the OSI model in the 1980s. It is a theoretical model that has not been widely used as a practical networking reference.

TCP/IP Model: The U.S. Department of Defense developed the TCP/IP model, also known as the Internet Protocol Suite, which was used to design and construct the contemporary internet. The architecture and operation of the internet are based on this idea.

* Equivalences of Layers

OSI Model: The Network Interface Layer of the TCP/IP model is broadly analogous to Layers 1 and 2 of the OSI model.

The Internet Layer in TCP/IP and the Network Layer in OSI are equivalent.

In both models, the Transport Layer fulfills the same function.

The Application Layer in the TCP/IP paradigm together represents the OSI's Session, Presentation, and Application Layers.

TCP/IP Model: It is simpler and concentrates on the crucial features for online communication.