Differences:

1). layer Names and Functions:

OSI Model: The OSI model's layers have specific names and clearly defined functions, ranging from managing physical connections to ensuring proper data formatting and presentation.

TCP/IP Model: The TCP/IP model uses more straightforward layer names and combines some of the functionalities of the OSI model's lower layers.

2).Layer Overlap:

OSI Model: The OSI model emphasizes distinct and separate layers with minimal overlap between them. Each layer has a unique set of responsibilities, contributing to a clear and modular design.

TCP/IP Model: This model exhibits some overlap, particularly between the network interface and internet layers. This overlap is a result of the historical development of the Internet and the need to integrate diverse technologies.

3). Real-world Usage:

OSI Model: The OSI model, while an essential educational tool, is not widely used in practical network design and implementation.

TCP/IP Model: This is the foundation of the Internet and is employed extensively in real-world networking. Virtually all modern networks, utilize TCP/IP protocols, making it the standard for practical network architecture.

4). Interoperability:

OSI Model: The OSI model is a general framework and does not correspond directly to any specific set of protocols. Making it less applicable for practical networking.

TCP/IP Model: Its layers correspond closely to well-known protocols, making it a more practical choice for network architects and administrators.

5). The of Number of Layers:

OSI Model: The layers include the physical, data link, network, transport, session, presentation, and application layers.

TCP/IP Model: The TCP/IP model includes the network interface (or link), internet, transport, and application layers.

Similarities:

b). Network Communication:

Both models are used to facilitate network communication and data exchange in a structured manner.

c). Application Layer:

They both deal with end-user applications and services.

d). Transport Layer:

Is responsible for end-to-end communication, error detection and correction, flow control, and segmentation/reassembly of data.

f). Data Link and Physical Layers:

Responsible for the physical transmission of data over the network medium. These layers ensure the data is properly framed and transmitted.

g). Network Layer:

They both deal with routing and forwarding of packets across networks.