DIFFERENCES BETWEEN TCP/IP MODEL AND OSI MODEL

a)The OSI model consists of seven distinct layers whereas the TCP/IP model is simpler and combines some of the OSI layers i.e four layers

b)IN the OSI model each layer has a unique name and well-defined functions while in the TCP/IP model the layers are often referred to by their general functions and are closely aligned with the practical implementation of the internet.

c)The OSI model was developed by the international organization for standardization as a conceptual framework for standardizing network protocols while the TCP/IP model is based on the actual protocols that were used in the early development of the ARPANET and was later adapted as a model.

d)The OSI model is more of an academic or theoretical reference model while the TCP/IP model is the foundation of the modern internet and is widely used for designing and troubleshooting real-world networks.

SIMILARITIES BETWEEN TCP/IP MODEL AND OSI MODEL

a)Both models are based on a layered approach to network communication. They break down complex process of data into a series of well-defined layers with each layer responsible for specific functions.

b)Both models involve the concept of data encapsulation where data is wrapped with additional information in each layer.

c)Both models are used to understand and describe network protocols. They framework for organizing and categorizing various protocols used in networking, including how these protocols interact and interoperate.

d)The TCP/IP model was developed with a strong influence from the practical implementation of the internet. It aligns closely with the OSI model in several layers, allowing for a level of interoperability between networks that use these different models.

e)Both models serve educational purposes. They help in teaching fundamental networking concepts and understanding how network protocols work. The OSI model in particular has been used for academic and theoretical discussions about networking.