# SCT212-0575/2022

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ASSIGNMENT

1. Write up of the differences and similarities of the OSI model and the TCP/IP model?

**DIFFERENCES**

**The OSI model has 7 layers in its model which include the physical layer,data link layer ,network layer, transport layer, session layer ,presentation layer and the application layer meanwhile the TCP/IP model consist of the 5 layers which include application layer ,transport layer(TCP/UDP), Network/Internet layer(IP), data link layer(MAC) , physical layer.**

**In the TCP/IP model ,it uses both the session and presentation layer in the application layer itself while the OSI use different session and presentation layer.**

**In TCP/IP model protocol cannot be changed easily while in the OSI model protocols can easily be changed with the advancement in technology.**

**The TCP/IP model follows connectionless horizontal approach while the OSI model follows vertical approach.**

**TCP/IP is based on standard protocols and allows connection of hosts over the internet while OSI model is a structured model which deals with the functioning of network.**

**The OSI model was put put forward by the ISO while the TCP/IP model was developed by the Department of Defence.**

**TCP/IP was designed for the development of the internet while the OSI was developed for all types of network communication**

**SIMILARITIES**

**Both models are based upon layer structuring (one layer on top of the other).**

**Both models are used to convert raw data into packets and help them reach their destination this is basically the hierarchical approach where each layer builds upon the services provided by the lower layers.**

**In both models data encapsulation where data from higher layers is encapsulated with headers .**

**The encapsulation allows data transmitted across the network to be interpreted correctly by the receiving end.**

**Both provide a framework for creating and implementing networking standards and devices ,this includes different softwares and hardware that are used in the implementation.**

**Both models addresses error handling and recovery mechanism ensuring data integrity during transmission.**

**In both models you can determine if the data is not being transferred propery to a hardware device by isolating potential problems in the data link layer or hardware layer.**

**Both models consider the process of routing ensuring data packets find the most efficient path from source to destination.**