**A 300 WORD WRITE UP ON THE DIFFERENCES AND SIMILARITIES OF THE TCP/IP AND OSI MODELS**

The OSI and TCP/IP models are two fundamental frameworks that define the principles of computer networking. There exists several key differences and similarities between them.

The OSI and TCP/IP models share a key characteristic, they both adopt a layered methodology towards networking. By dividing the intricate process of communication into multiple layers, each with its own designated functions, these frameworks facilitate modularity as well as flexibility in network protocols’ design and implementation.

Both models share a resemblance in the presence of equivalent layers. Correspondingly, there are dedicated segments for physical transmission (Physical Layer), error detection and correction (Data Link Layer), addressing protocols (Network Layer), flow control implementation (Transport Layer) and application specific tasks related to various domains of operation inside both models. This shared division facilitates comparisons between these two frameworks as functionalities can be contrasted with one another based on this parallel structure.

Although there are similarities, the OSI and TCP/IP models have noticeable distinctions. A significant contrast pertains to their layer count; while the OSI model has seven layer that offer an intricate explanation of network functionality, the TCP/IP model merges some functions from three lower levels of OSI into a single layer named Network Interface Layer.

One major contrast between the OSI and TCP/IP is that in the former, each layer adheres strictly to its designated function while in the latter there is no rigid separation. Certain layers in TCP/IP overlap with others creating an efficient environment for implementation.

Furthermore, another contrasting factor between these two models is their genesis. The International Organization for Standardization (ISO) designed the OSI while TCP/IP was invented by scientists at APARNET.

To sum up, even though the OSI and TCP/IP models vary in certain aspects, they offer significant frameworks to comprehend and execute network protocols.