

Difference Between TCP/IP and OSI Model

The difference between TCP/IP and OSI Model seems to be minor but by composition, features, functions and purpose, the two are extremely different. The difference between the two terms is also important from the [IAS Exam](#) perspective.

The TCP/IP or the Transmission Control Protocol/ Internet Protocol is a communication protocols suite using which network devices can be connected to the Internet. On the other hand, the Open Systems Interconnection or [OSI Model](#) is a conceptual framework, using which the functioning of a network can be described.

In this article, we bring to you a tabulated difference between the TCP/IP model and the OSI model. This will help candidates prepare themselves and upgrade their [Computer Knowledge](#) for the upcoming competitive exams.

Candidates can also visit the links given below and learn more about the other important computer-related terms and applications for UPSC exam:

Fundamentals of Computer	Computer Abbreviations
Input and Output Devices	Microsoft Windows
Types of Computer	Computer Networks

TCP/IP vs OSI Model - Comparative Analysis

Given below is a tabulated comparison between the two models of networking, the TCP/IP and OSI model. Candidates must carefully go through the following key points of difference between the two.

Difference between TCP/IP and OSI Model	
TCP/IP	OSI Model
The full form of TCP/IP is Transmission Control Protocol/ Internet Protocol	The full form of OSI is Open Systems Interconnection
It is a communication protocol which is based on standard protocols and allows the connection of hosts over a network	It is a structured model which deals with the functioning of a network
In 1982, the TCP/IP model became the standard language of ARPANET	In 1984, the OSI model was introduced by the International Organisation of Standardization (ISO)
It comprises of four layers:	It comprises of seven layers:

<ul style="list-style-type: none"> • Network Interface • Internet • Transport • Application 	<ul style="list-style-type: none"> • Physical • Data Link • Network • Transport • Session • Presentation • Application
It follows a horizontal approach	It follows a vertical approach
The TCP/IP is the implementation of the OSI Model	An OSI Model is a reference model, based on which a network is created
It is protocol dependent	It is protocol independent

The above points of comparison display the difference between the TCP/IP and OSI models efficiently.

However, there are few similarities between the two. Both the models are based upon layered structuring and are mainly used to convert raw data into packets and help them reach their destination node.

It must also be known that the computer-based questions are asked in the Science and Technology part of the IAS syllabus. So, aspirants can also solve some sample [Science and Technology MCQ for UPSC](#) at the linked article.

Apart from the difference between TCP/IP and the OSI model, there are various other difference between article which will enhance the Computer Awareness of the candidates. Given below are links to a few such articles:

- [Difference Between Search Engine and Web Browser](#)
- [Difference Between RAM and ROM](#)
- [Difference Between Hardware and Software](#)
- [Difference Between IPV4 and IPV 6](#)
- [Difference Between Firewall and Antivirus](#)
- [Difference Between WWW and Internet](#)
- [Difference Between Virus and Malware](#)
- [Difference Between Worm and Virus](#)

To learn more and to get [100+ difference between articles](#) from various subjects and fields included in the UPSC syllabus, candidates can visit the linked article.