

# Certificate in Computer Application (CCA)

## Assessment-02

### CCA102-Data Communications

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#### **Data Communications (DC) Mean?**

Data communications (DC) is the process of using computing and communication technologies to transfer data from one place to another, or between participating parties.

DC enables the movement of electronic or digital data between two or more network nodes, regardless of geographical location, technological medium or data contents.

#### **Explains Data Communications (DC)**

Data communications incorporate several techniques and technologies to enable any form of electronic communication. It's a very broad way to refer to all of this networked technology on any platform or in any digital environment.

**Some common types of data communications technologies include telecommunications, computer networking and radio/satellite communication. Data communication usually requires the existence of a transportation or communication medium between the nodes wanting to communicate with each other, such as copper wire, fiber optic cables, or wireless signals.**

For example, a common example of data communications is a computer connected to the Internet via a Wi-Fi connection, which uses a wireless medium to send and receive data from one or more remote servers. Some devices/technologies used in data communications are known as data communication equipment (DCE) and data terminal equipment (DTE). DCE is used at the sending node, and DTE is used at the receiving node.

**Another way to talk about different types of data communications is to refer to the functionality that is available for a sender and a receiver to use. In terms of communications function, you have simplex communications, which are only one-way data communications, and you have half-duplex and full-duplex data communications models, as well as serial data communications.**

With half-duplex communications, information can go both ways, but not at the same time. Full-duplex models accommodate simultaneous two-way communication of data.

That last form, serial data communications, is widely understood in networking. It means that the data is packaged into units, and then sent serially to the receiver by the sender. This typically takes the form of creating data packets with their headers and other bits of information, and then sending them consecutively to the destination, typically through platforms using the seven-layer OSI model that demonstrates the natures of different paths between nodes.

**Data communication also relies on various types of protocols, depending on the environment in which the messages sent. Internet protocols like FTP, HTTP and HTTPS were developed in order to optimize data communications over the Internet.**