

## PL3 - Practical No. 1].

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## \* Problem Statement 1].

Study and describe the following concepts in your words.

## 1]. Client. -

A client is a piece of hardware or software that accesses a service made available by a server as part of the client-server model of computer networks.

The server is often (but not always) on another computer system, in which case the client accesses the service by way of a network.

A client is a computer or a program that, as part of its operation, relies on sending a request to another program or a computer hardware.

## 2]. Server. -

A server is a computer program or device that provides a service to another computer program and its user, also known as the client. In a data center, the physical computer that a server program runs on is also frequently referred to as a server. That machine might be a dedicated server or it might be used for other purposes.



### 3]. Communication . -

Communication is the process of expressing or transferring information like ideas, views, etc. by speaking, writing and by the use of some other medium. Due to the development of computer networks, it has become easy to communicate.

The transmission of data from one computer to another, or from one device to another. A communication device, therefore, is any machine that assists data transmission. For example - Modems, Cables, and ports are all communication devices.

### 4]. Protocols . -

A protocol is a standard set of rules that allow electronic devices to communicate with each other. These rules include what type of data may be transmitted, what commands are used to send and receive data, and how data transfers are confirmed.

If two hardware device support the same protocol, they can communicate with each other, regardless of manufacturers or type of device. Protocols may be broken up into four categories.

1]. Link Layer → PPP, DSL, WiFi, etc.

2]. Internet Layer → IPv4, IPv6, etc.

3]. Transport Layer → TCP, UDP, etc.

4]. Application Layer → HTTP, IMAP, FTP, etc.



## 5]. Ports -

In computer networking, a port is a communication endpoint. At the software level, within an operating system, a port is a logical construct that identifies a specific process or a type of network service.

Ports are identified for each protocol and address combination by 16-bit unsigned numbers, commonly known as port number. The most common protocols that use port numbers are the

- i]. Transmission Control Protocol [TCP].
- ii]. User Datagram Protocol [UDP].

## 6]. Network -

A network consists of two or more computers that are linked in order to share resources (such as printers and CDs), exchange files, or allow electronic communication.

The computers on network can be linked through cables, telephone lines, radio waves, satellites, or infrared light beams. Computer Networks help in information sharing, resource sharing, efficient use of storage, timely communication, etc. The different types of computer networks are LAN, MAN, WAN, PAN, CAN.