Addressing

Four level of addresses are used in an internet employing the TCP/IP protocol:
physical (link) addresses
logical (IP) addresses
port addresses
specific addresses

① Physical Addresses → It is included in the frame used by the data link layer
② It is the lowest layer address.
③ The physical address have authority over the network (LAN or WAN)
④ The size and format depend on the network

② Logical (IP) addresses → necessary for universal communication that are independent of underlying physical networks.
A Logical address in the internet is currently a 32 bit address that can uniquely define a host connected to the internet.
no two publicly addressed and visible hosts on the internet can have the same IP address

③ Port address
The IP address and the physical address are necessary for a quantity of data to travel from source to destination host.
However arrival at the destination host is not the final objective of the data communication on the internet
The end objective of internet communication is a process communicating with another process

example

computer A can communicate with computer C by using Telnet. At the same time computer A communicate with computer B by using the file Transfer protocol (FTP).

For these process to receive data simultaneously we need a method to label the different process. In other words they need addresses. On the TCP/IP architecture the label assigned to a process is called a port address. A port address in TCP/IP is 16 bits in length.

④ specific Addresses

Some applications have user friendly addresses that are designed for the specific address example include the e-mail address (for example sacet@ac.in) and the universal resource locator (URL) (for example, www.sacet.ac.in)