

## UNIT-1 :- Topics:-

- Network hardware & Software
- OSI Reference model
- TCP/IP Reference model
- ARPANET, Internet
- Guided Transmission media:-

twisted pairs

Coaxial cable

fibre optics

Wireless transmission.

PART -1

PART-2

# Network Hardware

• The basic Hardware Components in a Network

→ Network cables :- Network cables are the transmission media to transfer data from one device to another

→ Routers :- Router is a connecting device which transfers Data packets between different Computer Networks.

→ Repeaters :- A repeater receives signal and regenerates it before re-transmitting so that it can travel longer

→ Hubs :- A Hub is a multi-port repeater

→ Bridge :- A Bridge connects two separate Ethernet network

→ Gateways :- A gateway connects entirely different networks that work upon completely different protocols.

# Network Software

- Network Software comprises a broad range of software used for design, implementation, operation and monitoring of Computer Networks.

OSI:- • OSI stands for Open Standard Interconnection

- The OSI model does not specify the communication standard or protocols to be used to perform networking tasks
- It defines point of interconnection for the exchange of information between system.
- It has 7 interconnected layers
- The 7 layer are:- Application layer  
Presentation layer  
Session layer  
Transport layer

→ Network layer  
Data link layer  
Physical layer.

## OSI Reference Model



