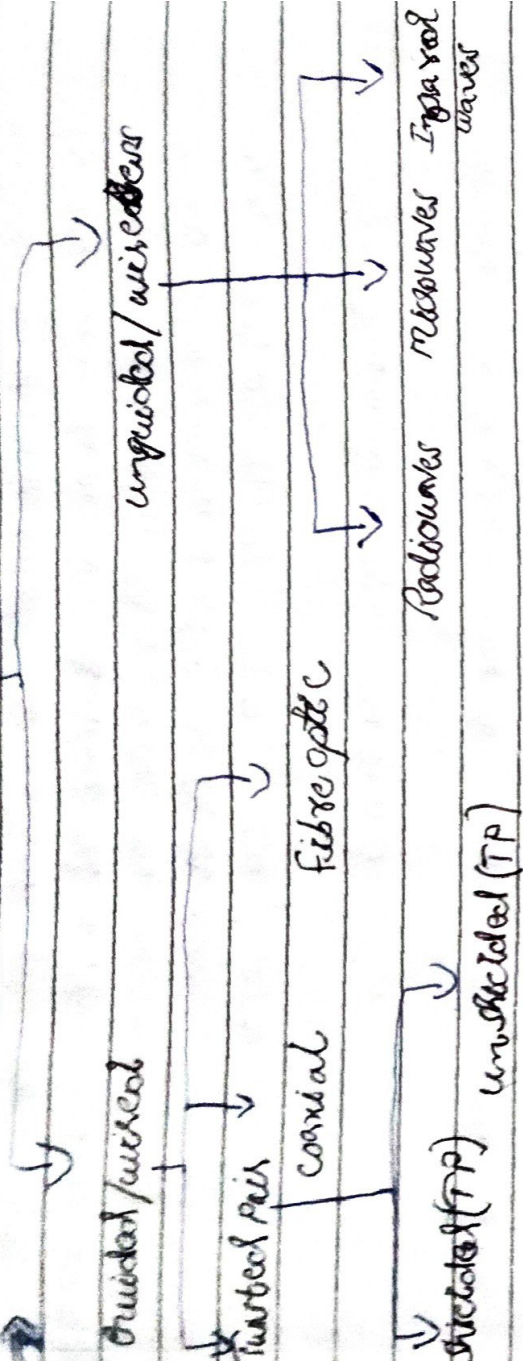


Transmission Media

Transmission Medium



→ Transmission media: - It can be defined as any thing that can carry information from source to destination.

→ Guided media: - Are those which provide a connection from one device to another.

(i) Twisted pair cable: - consists of ~~4~~ ² conductors (copper) pair of insulated copper wire twisted together to reduce interference.

eg:- use in telephone lines, LANs.

(ii) Coaxial Cable: - consist of a central copper conductor, insulating layer, metallic shield, and outer insulation.

eg:- use in cable tv & internet.

(iii) Fibre optic: - made of glass or plastic and transmit signal in the form of light, using the principle of total internal reflection.

eg:- use in internet backbone connections, telecommunication, and medical imaging etc.

Date

→ unguided media :- Unguided media are transmission mediums that convey data through electromagnetic waves without use of physical conduits, such as air or space.

(i) Radio waves :- Its wavelength ranging from millimeters to thousands of kilometers used for transmitting data over long distances.
e.g.:- use in radio, television, & wireless networks.

(ii) microwaves :- Its wavelength ranging from one millimeter to one meter, used for high frequency data transmission & communication.
e.g.:- use in satellite communication, radar & microwave ovens.

(iii) Infrared waves :- Its wavelength ranging from 700 nanometers to one millimeter, positioned b/w visible light & microwaves in the spectrum.
e.g.:- use in remote control, thermal imaging, and short-range data transfer.