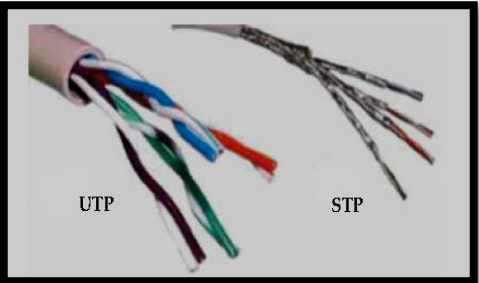


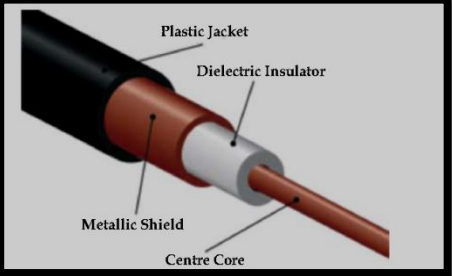
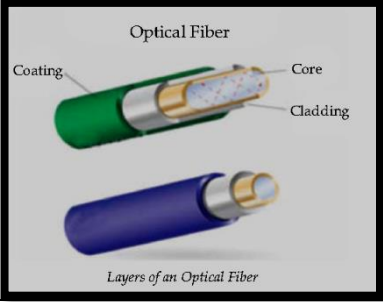
MSD Sanjeevani Public School, Mohan Garden

Subject- Computer Science (with Python)

Class-12th (Non-Med)

Assignment-10 (from ch-10 Computer Network)

Q1	What do you mean by transmission medium?
Ans	<p>A transmission medium is one which carries a signal from one computer to another. It is also known as communication channel. Transmission medium can be of two types:</p> <ol style="list-style-type: none"> 1. Wired or Guided medium: Wired transmission media includes twisted pair cable, Ethernet cable, coaxial cable and optical fibre. 2. Wireless or Unguided Media: wireless transmission media includes microwave, radio wave, satellite, infrared, Bluetooth, WIFI etc.
Q2	Difference between wired and wireless medium?
Ans	<p>In The wired or guided transmission media physically connects the two computers. The data signal physically gets transferred from the transmitting computer to the receiving computer through the wired transmission medium. Wired transmission media includes twisted pair cable, Ethernet cable, coaxial cable and optical fibre.</p> <p>Whereas Wireless or unbounded or unguided media transport electromagnetic waves without using a physical conductor. The signals are broadcasted through air or water and thus are available to anyone that has a device capable of receiving them. Some of the wireless media are: microwave, radio wave, satellite, infrared, Bluetooth, WIFI etc.</p>
Q3	<p>Define following :</p> <p>i) Twisted Pair Cable ii) Coaxial Cable</p>
Ans	<p>i) Twisted Pair Cable: It is a pair of insulated wires that are twisted together to improve electromagnetic capability and reduce noise from outside sources. Twisted Pair Cables are available in various forms such as CAT1, CAT2, CAT3, CAT4, CAT5, CAT6.</p> 

	<p>ii) Coaxial Cable :This type of cable consists of a solid wire core surrounded by one or more foil or wire shields, each separated by some kind of plastic insulator. The most commonly used types of coaxial cables are thicknet and thinnet.</p>	
<p>Q4</p>	<p>Explain Fiber optic cable.</p>	
<p>Ans</p>	<p>Fiber optic cable: A fiber optic cable consists of a bundle of glass threads, each of which is capable of transmitting message modulated onto light waves. Common types of Fiber optic cables are single-node and multi-node.</p>	
<p>Q5</p>	<p>Define Infrared.</p>	
<p>Ans</p>	<p>Infrared is the frequency of light that is not visible to human eye. It has a range of wavelengths These shorter wavelengths are the ones used by your TV remotes. Infrared communication requires a transceiver (a combination of transmitter and receiver) in both devices that communicate. Infrared communication is playing an important role in wireless data communication due to the popularity of laptop computers , personal digital assistants(PDAs) , digital cameras , mobile phones , pagers and other devices. But being a line-of-sight transmission , it is sensitive to fog and other atmospheric conditions.</p>	
<p>Q6</p>	<p>Define Radio waves.</p>	
<p>Ans</p>	<p>In radio wave transmission, certain radio frequencies are allocated to private/government organizations for direct voice communications. Each radio signal uses a different frequency and this differentiates it from others. The transmitter takes some message, encodes it and then transmits it with radio wave. The receiver on the other hand receives the radio waves and decodes it. Both the transmitter and the receiver use antennas to radiate and capture the radio signal. WiFi that has become a common word today also used radio wave to transmit data among connected devices.</p>	