

(a). Type the document as below in a word processor and save it as A: \Fiber. (38 Marks)

Fiber-Optic Cable

Another type of physical transmission media is fiber-optic cable. The core of a fiber-optic cable consists of dozens or-hundreds of thin strands of glass or plastic that use light to transmit signals. Each strand, called an optical fiber, is as thin as a human hair. Inside the fiber-optic cable, an insulating glass cladding and a protective coating surround each optical fiber (Figure 6-4).

Fiber-optic cables have several advantages over cables that use wire, such as twisted-pair and coaxial cables. These advantages include the following.

<ul style="list-style-type: none"> • Capability of carrying significantly more signals than wire cables
<ul style="list-style-type: none"> • Faster data transmission security for signals during transmission
<ul style="list-style-type: none"> • Less susceptible to noise (interference) from other devices such as a copy machine !
<ul style="list-style-type: none"> • Better because they are less susceptible to noise
<ul style="list-style-type: none"> • Smaller size (much thinner and lighter weight)

Disadvantages of fiber-optic cable are that it costs more than twisted-pair or coaxial cable and can be difficult to install and

modify. Despite these limitations, much local and long – distance telephone companies and cable.

TV operators are replacing existing telephone and coaxial cables with fiber-optic cables.

Many companies also are using fiber-optic cables in high-traffic networks or as the main cable in a network.

WIRELESS TRANSMISSION MEDIA

Wireless transmission media used in communications include broadcast radio, cellular radio, microwaves, communications satellites, and infrared. Wireless transmission media are used when it is impractical or impossible to install cables. Many wireless devices that access the Internet now use the WAP (Wireless Application protocol), which a standard is set of communications specifications that help to ensure successful communications. *The following sections discuss several types of wireless transmission media*

Broadcast Radio
 Broadcast radio is a wireless transmission medium that distributes radio signals through the air over long distances such as between cities, regions, and countries. For radio transmissions, you need a transmitter to send the broadcast radio signal and a receiver to accept it. To receive the broadcast radio signal, the receiver has an antenna that is located in the range of the signal. Some networks use a transceiver, which both sends and receives signals from wireless devices.

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- (b) . Convert the table shown above to text and *change* the position of the text entitled **wireless transmission media** and **broadcast radio** to upright position and save it as A:\Fiber 1 . (10 marks)
- (d). print A: \Fiber and A: \Fiber 1 (2 marks)

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