**Answer to Homework 01**

1. A **host** (also known as "network host") is a computer or other device that communicates with other hosts on a network. Hosts on a network include clients and servers -- that send or receive data, services or applications.

**Network Device** is a physical equipment or component that are required for communication and interaction between hardware on a computer network.

**A peripheral device** is an external device that is used to connect to and work with a computer to either put information into it and get information out of it.

**Guide Media** is a type of transmission media that are using a physical link such as twist pair cable, coaxial cable and optic fibre cable to transmit data.

**Unguided Media** is another type of transmission media that are using non-physical link such as wireless to transmit data.

1. Calculate propagation delay of the link :

Formula : propagation delay = distance / speed

Distance = =

Speed =

So : Propagation delay =

Calculate Bandwidth delay product :

Formula : Bandwidth delay product = Microwave link capacity = 10 Mbps

So : Bandwidth delay =

Calculate maximum value of x that is denoted the size of photo:

Every minute the satellite takes a digital photo and sends it to the base station

So minimum value of x =

1. **Protocols and standards** make networks work together. Protocols make it possible for the various components of a network to communicate with each other, and standards make it possible for different manufacturers’ network components to work together.
2. Five layer on the internet protocols and its responsibility :
   1. Application : is responsible for providing service to the user.
   2. Transport : is responsible for delivery of an entire message from an application program on the source device to a similar application program on the destination device.
   3. Network : is responsible for delivery of packets across multiple networks.
   4. Data Link : is responsible for the delivery of individual packets from the source host to the destination host.
   5. Physical : is responsible for movements of individual bits from on hop(node) to the next.
3. **Internet Exchange Point (IX)** is the physical infrastructure through which Internet service providers (ISPs) and content delivery networks (CDNs) exchange Internet traffic between their networks.
4. **Wireshark tool** is used to monitor and analysis. And we can captures packets from a network connection, such as from your computer to your home office or the internet.