

الاجوبة النموذجية**Q: Answer the following**

1. State two (2) items of hardware that could be needed for a **personal computer** to connect to the Internet.

Answer:

1. **Network Interface Card (NIC)**
2. **Router**

2. Explain the use of **repeater**.

Answer:

((A repeater is a network device used to regenerate a signal between two cable segments or wireless access points. Repeaters regenerate analog or digital signals that are distorted by transmission loss due to attenuation.))

3. Assume six (6) devices are arranged in **mesh, star** topology. For each topology:
 - A. How many cables are needed?

Answer:

Mesh: (30) cables Star: (6) cables

- B. How many ports are needed for each device?

Answer:

Mesh: (5) ports Star: (2) ports

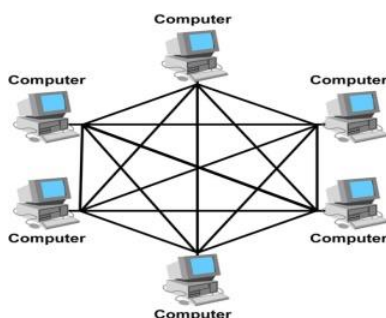
- C. How many ports are there in the entire network?

Answer:

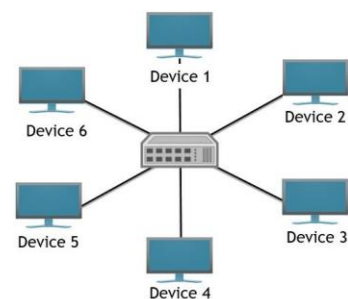
Mesh: (15) ports Star: (12) ports

- D. Draw the design of the topology.

E. Mesh: (6) devices



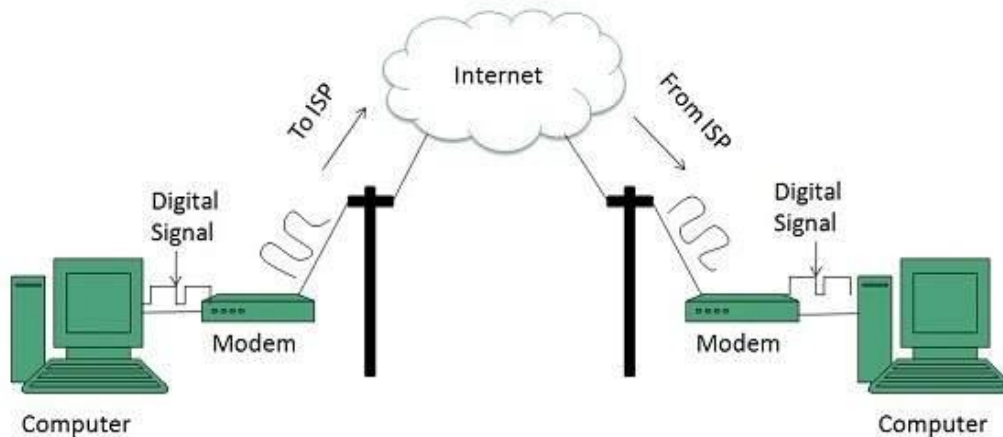
Star: (6) devices



4. What is **dial-up**? How does it used to connect to the Internet? Support your answer using suitable figure.

Answer:

Dial-up connection uses telephone line to connect PC to the internet. It requires a modem to setup dial-up connection. This modem works as an interface between PC and the telephone line.



5. Identify the **type of network** based on the **network's size** from the following:

A. Network will extend a short distance and connects printers, mice, and keyboards to an individual host?

Answer:

PAN (Personal Area Network)

B. Computer Network covers areas within a range of about 1 to 5 km.

Answer:

CAN (Campus Area Network)

C. Computer network within a building in an area spanning round 1 km?

Answer:

LAN (Local Area Network)

6. Outline the only one **advantage** and **disadvantage** of each type of network in the table below:

Answer:

Topology	Advantages	Disadvantages
Star	<p>1. Robustness, if one link fails; only that link is affected. All other links remain active.</p> <p style="text-align: center;">or</p> <p>1. Easy to install and reconfigure.</p>	<p>1. Requires more cabling than ring or bus.</p> <p style="text-align: center;">or</p> <p>1. Failure of central node brings down the whole network.</p>
Mesh	<p>1. The use of dedicated links guarantees that each connection can carry its data load.</p> <p style="text-align: center;">or</p> <p>1. Provide more Privacy and Security.</p>	<p>1. A large amount of cabling and I/O ports required.</p> <p style="text-align: center;">or</p> <p>1. Installation and reconfiguration are difficult.</p>

7. Name the following devices and then identify the type of cable (straight through or crossover) that used to connect them.

