

الاجوبة النموذجية

Q: Answer the following:

1. Who owns the **Internet**?

Answer:

((Either nobody owns the Internet, or everybody owns the Internet. There isn't an owner or an organization that controls the internet and its users.))

2. Explain the use of **bridges**.

Answer:

((Bridge: A hardware device used to create a connection between two separate computer networks or to divide one network into two.))

3. Assume **seven (7) devices** are installed in a **mesh, ring** topology. For each topology

A. How many cables are needed?

Answer:

Mesh: (21) cables Ring: (7) cables

B. How many ports are needed for each device?

Answer:

Mesh: (6) ports Ring: (2) ports

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

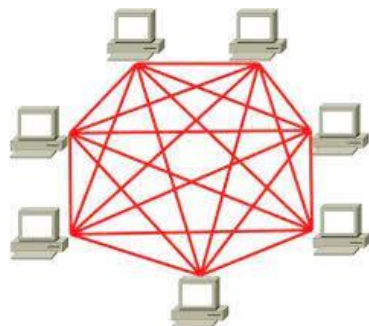
Answer:

Mesh: (42) ports Ring: (14) ports

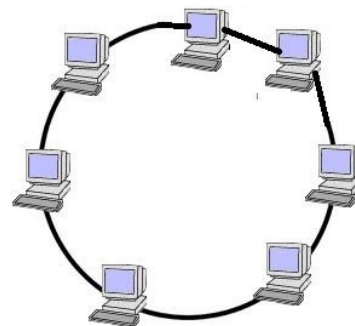
D. Draw the design of the topology.

Answer:

Mesh: (7) devices



Ring: (7) devices



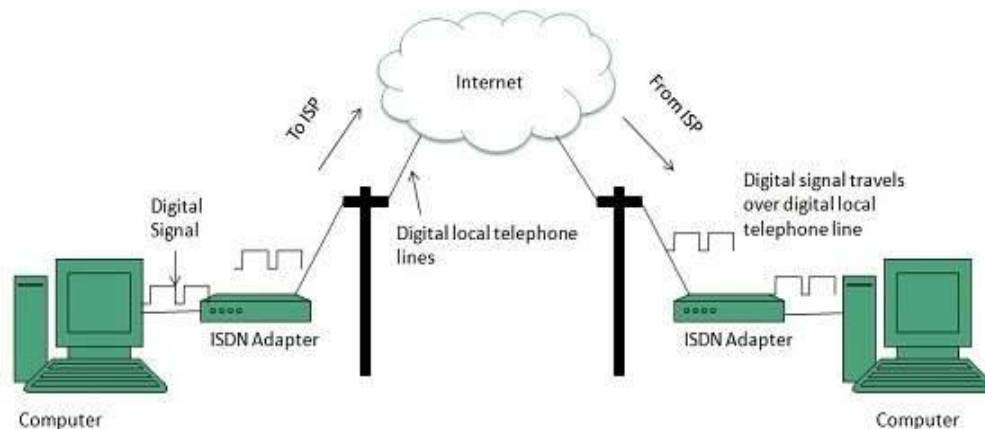
4. What is **ISDN** and its types? How does it used to connect to the Internet? Support your answer using suitable figure.

Answer:

ISDN establishes the connection using the phone lines which carry digital signals instead of analog signals ISDN enables the transmission of both voice and data in same time.

There are two types of ISDN networks:

- A. BRI (Basic Rate Interface) and
B. PRI (Primary Rate Interface).**



5. Identify the **type of network** based on the **network's size** from the following:
- A. Computer network over limited geographical area such as university Campuses.**

Answer:

CAN (Campus Area Network)

- B. A network that is spread across the cities, countries and continents.**

Answer:

WAN (Wide Area Network)

- C. Computer network for a multi-branched company with branches in an area spanning round 30–40 km?**

Answer:

MAN (Metropolitan Area Network)

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

Answer:

Topology	Advantages	Disadvantages
Bus	<p>1. Easy to install and maintain and can be extended easily.</p> <p>or</p> <p>1. Very reliable because of single transmission line.</p>	<p>1. It is possible that more than one station may attempt transmission in the same time (collision).</p> <p>or</p> <p>1. Additional devices slow the network down.</p>
Ring	<p>1. Avoids the collisions that are possible in the bus topology.</p> <p>or</p> <p>1. Ideal for optical fibres as data travels in only one direction.</p>	<p>1. A break in the ring (such as station disabled) can disable the entire network.</p> <p>or</p> <p>1. Difficult to remove one or more nodes while keeping the rest of the network intact.</p>

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

