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Student Name : Maram Sulaiman alkahlan ------------------------------------------------- Id : 430002978 Section : I4 ------------------------------------------------- Homework Chapter 1 Review Questions : 3- What Are Three Criteria Necessary For An Effective And Efficient Network? \* Performance \* Reliability \* Security 4-what are the advantages of a multipoint connection over a point-to-point connection? Point-to-point connection is limited to two devices, where else more than two devices share a single link in multipoint connection. Multipoint connection can be used for fail-over and reliability. 5 - what are the two type of line configuration? There are two possible types of line configurations or connections. These connections are. 1. Point-to-point connection 2. Multipoint connection 6- categorize the four basic topologies in terms of line configuration ? Point to point- mesh and star. Multi point- bus and ring. 7- what is the difference between half-duplex and full-duplex transmission modes? Full duplex allows transmitting and receiving at the same time. Half duplex allows transmitting and receiving, but not at the same time. 8- name the four basic network topologies and cite an advantage of each type? \* Mesh Topology : Privacy or security . eliminating the traffic problems . A mesh is robust . Fault identification and fault isolation easy . \* Star topology : Easy to install and reconfigure and less expensive . Robustness . identification and fault isolation . \* Bus topology : Ease of insulation . \* Ring Topology : Easy to install and reconfigure . Fault isolation is simplified . Unidirectional traffic . 11- what is a internet ? what is the Internet ? Internet : a collaboration of more than 100 of 1000 interconnected network. Exercises : 16- assume six devices are arranged in a mesh topology. how many cables are needed ? how many ports are needed for each device ? Devices- 6 W= n(n-1)/2 solution : W= 6(6-1)/2 = 6(5)/2 = 3(5) = 15 15 cables And you will need 5 ports on each of the devices. 18- You have two computers connected by an Ethernet hub at home. Is this a LAN, a MAN, or a WAN? Explain your reason . These Small sizes networks are categorized to LAN. Ethernet is a LAN. All small sized office networks and in-house networks are LANs. MAN owned by single company, it's averagely large network. 21- Draw a hybrid topology with a star backbone and three ring networks ? 22- Draw a hybrid topology with a ring backbone and two bus networks ? 23- performance is inversely related to delay. when you use the internet which of the following app are more sensitive to delay ? a. Sending an Email : E-mail is not an interactive application. Even if it is delivered immediately, it may stay in the mail-box of the receiver for a while. It is not sensitive to delay. b. copying a file : We normally do not expect a file to be copied immediately. It is not very sensitive to delay. c. surfing the Internet : Surfing the Internet is the an application very sensitive to delay. We except to get access to the site we are searching. 24- when a party makes a local telephone call to another party , is this point to point or multipoint ? Explain . In this case, the communication is only between a caller and the called . A dedicated line is established between them. The connection is point-to-point.