NIELIT Gorakhpur

Course Name: A Level (2nd Sem)   Subject: DCN

Topic: Assignment   Date: 27-05-20

Assignment 1:

Write difference between LAN and WAN on the basis of following points:

 Full form, Definition, Ownership, Design and Maintenance, Speed, fault tolerance, traffic.

Assignment 2:

What do you understand by network topologies? Name the types of topologies. Also write the differences between Star and Ring Topology under the following points:

Architecture, Data traversal, Installation and Reconfiguration, Fault isolation, Cost, Complexity, Point of failure, diagram.

Assignment 3:

What do you understand by transmission media? Name all its types and subtypes.

Define guided media and also write the differences between Twisted Pair Cable, Coaxial Cable and Fiber Optic Cable (with diagram) on the basis of following points:

> Definition, Sub types, Maximum segment length, Bandwidth supported, Installation (easy/difficult/moderate), interference (low/ high/ moderate) and cost.

Define unguided media and also explain Radio wave, microwave and Infrared with suitable diagram.

Assignment 4:

a) Explain why collision is an issue in a random access protocol but not in controlled access or channelizing protocols.
b) Do we need a multiple access protocol when we use the 1ocalloop of the telephone
c) company to access the Internet? Why?

Assignment 5:

a) What is the purpose of an NIC? Define MAC address.
b) What is the difference between a unicast, multicast, and broadcast address?
c) Why is there no need for *CSMAICD* on a full-duplex Ethernet LAN (suppose star topology is used)?