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Subject

CCN

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Date

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- 1) Ring topology has unidirectional movement of traffic.
- 2) Set of rules that governs communication is called Protocol.
- 3) Reliability of a network is the frequency of failure and network recovery time after a failure is measured.
- 4) ASK, PSK, FSK and QAM are all examples of Digital modulation.
- 5) Data synchronization is a function related with Physical layer.
- 6) The Physical layer change bits into electromagnet signals.
- 7) The information to be communicated in a network is called the Message.
- 8) Mesh Topology requires the maximum number of I/O ports.
- 9) A signal that repeats itself is a Periodic signal.
- 10) A 56K modem can download at a rate of 56.6 kbps and upload at a rate of 33.6 kbps.

- 11) In Mesh Topology, if there are five nodes then there will be 10 links.
- 12) When data is transmitted from device A to device B using internet model the header from A's layer 4 is read B's Transport layer.
- 13) A ADC device will convert an analog signal to a digital signal.
- 14) Frequency Spectrum is the collection of all the components frequencies.

Q No
2 (a)

(1) How are frames different from packets? Explain with examples.

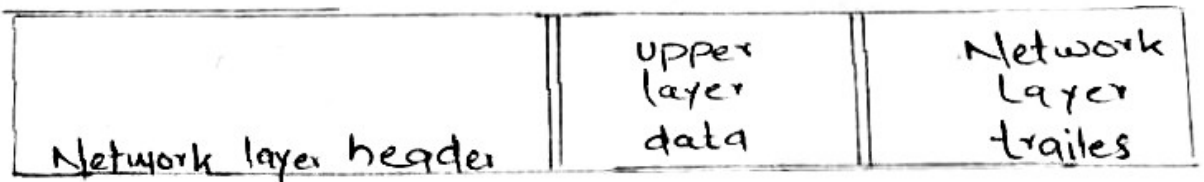
Ans:

Frame:-

(*) An information unit whose source and destination are data link layer entities.

(*) Composed of the data link layer header (trailer) and upper layer data.

Frame:



Packet :-

(*) An information unit whose source and destination are network layer entities.

(*) Composed of the network layer header (trailer) and upper-layer data.

Packet :-



Example

Framing includes the source and destination MAC addresses and in packets includes the source and destination IP addresses.

(2) A phone line being analog can we send digital data on phone lines? Support your answer with example.

Ans

Yes we can send digital data on phone lines because phone lines always carry digital data by converting analog into digital data through medium.

(3) Give some details about fault tolerance which network topologies have fault tolerance capabilities?

Ans

Fault tolerance is the property that enables a system to continue operating properly in

The event of the failure of some of its components if its operating quality decrease at all. The decrease is proportional to the security of all failure as compare to naïvely designed system in which even a small failure can cause total breakdown.

A Mesh topology have

fault tolerance capability:

Even if one of the component fails there is always an

alternative present so data transfer does not get effected.

(4)

How is logical addressing different from physical addressing support your answer with example?

Ans

The basic difference between logical addressing and physical addressing is that logical address is generated by CPU and used as a reference to locate whenever we execute the programme and physical address is location that exists in the memory it allows accessing a particular storage cell in the memory it is used in both hardware and software for accessing data.

5) A local telephone company wants to connect the LANs in all its offices throughout a city for the case which network category would be used?

Ans:

We can connect the LANs in all its offices throughout a city through WAN (wide area network) because WAN connects different smaller networks, including local area networks (LANs) and metro area networks (MANs).

This ensures that computers and users in one location can communicate with computers and user in other locations. WAN implementation can be done with either with the help of the public transmission system or private network.

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Q.3
(a)

Consider the following network how many hops will require for data to reach from node A to node J.

Ans

There are three nodes will require for data to reach from A to J. node.

Q.3 (b)

A Sin wave has a frequency of 135 Hz. What is its period?

Ans

Solution:-

We know that

$$T = \frac{1}{f} \Rightarrow \frac{1}{135} \Rightarrow 7.40 \text{ms}$$

So the Period is

$$T = 7.40 \text{ms}$$