MIDTERM EXAMINATION
Spring 2010
CS610- Computer Network

Ref No: 1143600
Time: 60 min

Question No: 1 (Marks: 1) - Please choose one

In *Point-to-Point* topology there are two topologies.

► **Star and Tree**

► Tree and Ring

► Star and Ring

► **Star and Tree**

► None of the given

Question No: 2 (Marks: 1) - Please choose one

------ Program sends a message to a remote computer and reports whether the computer responds.

► **Ping**

► Traceroute

► ICMP

► Non of the given

Question No: 3 (Marks: 1) - Please choose one

------ has no way to determine the cause of the problem.

►

► **ICMP**

► Non of the given

► Ping

► Trace route

Question No: 4 (Marks: 1) - Please choose one

The term----- ------- refers to the general concept of a small block of data

- ► **Packet**
- ► Frame
- ► Data
- ► None of the given

Question No: 5 (Marks: 1) - Please choose one

---------- scheme, which is designed to help detect transmissions errors, send one extra bit of information with each character

- ► **Parity**
- ► Checksums
- ► CRC
- ► None of given

Question No: 6 (Marks: 1) - Please choose one

Local Talk is a LAN technology that employs ----------

- ► **Bus topology**
- ► Ring topology
- ► None of the given
- ► Star topology

Question No: 7 (Marks: 1) - Please choose one

Most LANs that employ ring topology use an access mechanism known as-------

► **TOKEN PASSING**

► CSMA/CA

► **TOKEN PASSING**

► None of the given

Question No: 8 (Marks: 1) - Please choose one

Ethernet uses a ------ bit static addressing scheme in which each device is assigned a unique address by the manufacturer.

► **64**

► 48

► 32

► 8

Question No: 9 (Marks: 1) - Please choose one

Formally named _____ informally known as the thick wire Ethernet or Thick net.

► **10 Base T (not sure)**

► 10 Base 2

► 10 Base 5

► **10 Base T**

► None of the given

Question No: 10 (Marks: 1) - Please choose one

Formally named _____ informally known as the twisted pair Ethernet or TP Ethernet.

► **10 Base 2**

► **10 Base 2**

► 10 Base 5

► **10 Base T**

► None of the given

Question No: 11 (Marks: 1) - Please choose one

The maximum size of an Ethernet segment is_____

► **500 meters**

► 250 meters

► **500 meters**

► 700 meters

► None of the given

Question No: 12 (Marks: 1) - Please choose one

A Bridge can _____

► **Do all the above**

► Filter a frame

► Forward a frame

► Extend a LAN

► **Do all the above**

Question No: 13 (Marks: 1) - Please choose one

_____ computes shortest paths in a graph by using weights on edges as a measure of distance.

► **Dijksta's algorithm**

► Greedy algorithm

► Distance vector algorithm

► **Dijksta's algorithm**

► **Non of the given (not sure)**

Question No: 14 (Marks: 1) - Please choose one

_____is used for compressed audio and video where the data rate depends on the level of compression that can be achieved.

► Constant Bit Rate (CBR) service

► **Variable Bit Rate (VBR) service**

► Available Bit Rate (ABR) service

► None of the given

Question No: 15 (Marks: 1) - Please choose one

Basic LAN technologies such as Ethernet, Token Ring, and FDDI use a _____.

► **Connection-oriented service paradigm (not sure)**

► Connectionless service paradigm

► **Connection-oriented service paradigm**

► Both Connectionless and Connection-oriented service paradigm

► None of the given

Question No: 16 (Marks: 1) - Please choose one

The product of delay and throughput measures the _____ of data that can be present on the network.

► **None of the given (not sure)**

► Area

► Volume

► Length

Question No: 17 (Marks: 1) - Please choose one

A network with throughput T and delay D has a total of _____ bit in transit at any time.

► **T x D**

► T / D

► **T x D**

► T + D

► None of the given

Question No: 18 (Marks: 1) - Please choose one

One repeater _____, two repeaters _____ the maximum cable length limitation.

► **doubles, triple**

► square roots, cude roots

► and, triple

► doubles, cancel

Question No: 19 (Marks: 1) - Please choose one

A network uses a ------ if all computers attach to a central point

► **Star Topology**

► Ring Topology

► Bus Topology

► None of the given

Question No: 20 (Marks: 1) - Please choose one

Computers attached to an ethernet use ------ in which a computer waits for the ether to be idle before transmitting a frame.

► **TOKEN PASSING**

► CSMA/CD

► CSMA/CA

► None of the given

Question No: 21 (Marks: 2)

What is the difference between LAN and WAN?

Local area network (LAN)
LAN is small in size covers the area within a room, building or cities.
Wide area network (WAN)
WAN is large in size and covers the area cities, countries and continents.

Question No: 22 (Marks: 2)

Define the term Jitter.

The term Jitter is used for variance in transmission delays. Jitter is significance for voice, video and data. Jitter can occur when a packet is delayed because the network is busy.

Question No: 23 (Marks: 3)

GIve a comparision of wiring Schemes.

Thick Ethernet wiring scheme.
This uses thick coax cable. AUI cable or transceiver or drop cable connects from NIC to transceiver. AUI cable carries digital signal from NIC to transceiver. The transceiver generates analog signal on coax cable. The wires in AUI carry digital signals power and other control signals. Thick Ethernet also requires terminators to avoid signal reflectance.

Thin Ethernet wiring scheme.
Thin Ethernet uses thin coax cable that is cheaper and easier to install than thick Ethernet coax. In thin ethernet wiring scheme transceiver electronics are built into NIC and NIC connect directly to network medium. Coax cable use connector on NIC. Coax runs directly to back of each connected computer by T-connector. The T-connector directly attaches to NIC.

Question No: 24 (Marks: 3)

How can Switched Virtual Network be established?

Most networks offer dynamic connections that last for a relatively short time. ATM can dynamically establish a switched virtual circuit SVC that allows it as long as necessary and then terminate it. The computer sends a connection request to the switch to which it is attached. Software in the switch finds a path to the destination and sends with the connection request. Each pair of switches in the path communicates to choose a VPI/VCI for their tables. Once the connection is established by the destination than a message is given back to the originating computer to indicate the SVC is ready.

Question No: 25 (Marks: 5)

Describe permanent virtual circuits (PVC).

ATM can provide the virtual circuits that look like traditional leased digital circuits. The permanent virtual circuits PVC works as long as the customer pays the periodic fee for its use. The forwarding table enter configured the terms used by Telco Provisioning requires two steps.

To determine a complete path.

To choose appropriate VPI/VCI for each step in the path and configures each adjacent pair of switches.

Question No: 26 (Marks: 5)

What are default routes, draw the table.

Routing table entries can collapse with a default route. If destination doesn't have in explicit routing table entry and then it use a default route. It is shown in the below table.

Destination	Next hop	Destination	Next hop	Destination	Next hop	Destination	Next hop
1	-	2	-	1	3,1	2	4,2
*	1,3	4	2,4	2	3,2	4	-
		*	2,3	3	-	*	4,3
				4	3,4		
Node 1		Node 2		Node 3		Node 4	

MIDTERM EXAMINATION
Spring 2010
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Time: 60 min
Marks: 40

Question No: 1 (Marks: 1) - Please choose one

No error detection scheme is perfect because transmission errors can affect the additional information as well as the data.

► True

► **False**

Question No: 2 (Marks: 1) - Please choose one

------ Program sends a message to a remote computer and reports whether the computer responds.

► **Ping**

Ping

► Traceroute

► ICMP

► Non of the given

Question No: 3 (Marks: 1) - Please choose one

---------- was especially concerned about the lack of high powered computers.

► **ARPA**

► IEEE

► EIA

► Non of the given

Question No: 4 (Marks: 1) - Please choose one

The term -------- is used to denote the definition of a packet used with a specific type of network.

► Packet

► **Frame**

► Data

► None of the given

Question No: 5 (Marks: 1) - Please choose one

Computer networks are often called ---------- because they use packet technology.

► Ethernet

► Switch networks

► **Packet networks**

► None of the given

Question No: 6 (Marks: 1) - Please choose one

---------- have advantages arisen from the size and ease of computation.

► **CRC**

► Parity

► Checksums

► None of given

Question No: 7 (Marks: 1) - Please choose one

Most LANs that employ ring topology use an access mechanism known as-------

► CSMA/CD

► CSMA/CA

► **TOKEN PASSING**

► None of the given

Question No: 8 (Marks: 1) - Please choose one

IEEE LLC/SNAP header is --------, which is used to specify the type of data.

► **8 octets**

► 8 bytes

► 8 bits

► None of the given

Question No: 9 (Marks: 1) - Please choose one

Formally named _____ informally known as the twisted pair Ethernet or TP Ethernet.

- ► 10 Base 2
- ► 10 Base 5
- ► **10 Base T**
- ► None of the given

Question No: 10 (Marks: 1) - Please choose one

An interface for twisted pair Ethernet must have an _____ connector , and must generate signals according to the_____ specification.

- ► **RJ-45, 10 Base T**
- ► RJ-45, 10 Base 5
- ► BNC, 10 Base 2
- ► BNC, 10 Base T

Question No: 11 (Marks: 1) - Please choose one

A bridges function in the _____ layers(s).

- ► Physical (MAC)
- ► **Data link**
- ► Network
- ► Physical (MAC) and Data link

Question No: 12 (Marks: 1) - Please choose one

A Bridge can _____

- ► Filter a frame
- ► Forward a frame
- ► Extend a LAN
- ► **Do all the above**

Question No: 13 (Marks: 1) - Please choose one

A Bridge forwards or filters a frame by comparing the information in its address table to the frame's_____

- ► Layer 2 source address
- ► Source node's physical address
- ► **Layer 2 destination address**
- ► Layer 3 destination address

Question No: 14 (Marks: 1) - Please choose one

_____ computes shortest paths in a graph by using weights on edges as a measure of distance.

- ► Greedy algorithm
- ► Distance vector algorithm
- ► **Dijksta's algorithm**

► Non of the given

Question No: 15 (Marks: 1) - Please choose one

_____ is used for audio and video, since these have predefined maximum data rates

► **Constant Bit Rate (CBR) service**

► Variable Bit Rate (VBR) service

► Available Bit Rate (ABR) service

► None of the given

Question No: 16 (Marks: 1) - Please choose one

Unlike Frame Relay and ATM, SMDS (Switched multi-megabit Data service) offers_____ .

► **Connectionless service paradigm**

► Connection oriented service paradigm

► Both Connectionless and Connection-oriented service paradigm

► None of the given

Question No: 17 (Marks: 1) - Please choose one

A network with throughput T and delay D has a total of _____ bit in transit at any time.

► T / D

► **T x D**

► T + D

► None of the given

Question No: 18 (Marks: 1) - Please choose one

ATM is designed to work on_____.

► Twisted Pair

► Coaxial

► Radio Frequency

► **Fiber**

Question No: 19 (Marks: 1) - Please choose one

Computers attached to an ethernet use ------ in which a computer waits for the ether to be idle before transmitting a frame.

► **CSMA/CD**

► CSMA/CA

► TOKEN PASSING

► None of the given

Question No: 20 (Marks: 1) - Please choose one

FDDI can transmits data at a rate of ----------

► **100 million bits per second**

► 10 million bits per second

► 1000 million bits per second

► None of the given

Question No: 21 (Marks: 2)

What is the difference between the physical and logical topologies?

Every LAN has a topology, or the way that the devices on a network are arranged and how they communicate with each other.

PHYSICL TOPOLOGY:

The way that the workstations are connected to the network through the actual cables that transmit data -- the physical structure of the network -- is called the physical topology. **It depends on the wiring scheme**.

LOGICAL TOPOLOGY:

The logical topology, in contrast, is the way that the signals act on the network media, or the way that the data passes through the network from one device to the next without regard to the physical interconnection of the devices. We can say that **it is defined by the specific network technology.**

Question No: 22 (Marks: 2)

Define Vector-Distance Algorithm.

Packet switches wait for next update message and they iterate through entries in message. If entry has shortest path to destination, insert source as next hop to destination and record distance as distance from next hop to destination plus distance from this switch to next hop.

Question No: 23 (Marks: 3)

What is the concept of store and forward technology?

STORE AND FORWARD:
Data delivery from one computer to another is accomplished through store and forward technology. In this technology packet switch stores incoming packet and also forwards that packet to another switch or computer. For this purpose packet switch has internal memory into which it can hold packet if outgoing connection is busy. Packets for each connection held on queue.

Question No: 24 (Marks: 3)

How can Switched Virtual Network be established?
SWITCHED VIRTUAL CIRCUITS:

Most networks offer dynamic connections, which last for a relatively short time.
To handle this, ATM can dynamically establish a switched virtual circuit (SVC), allow it last as long as necessary and then terminate it.
The terminology comes from the Telco's where switching system normally refers to all switching.

ESTABLISHING AN SVC:

The computer sends a connection request to the switch to which it is attached.
Software in the switch finds a network path to the destination and sends along the connection request.
Each pair of switches in the path communicates to choose a VPI/VCI for their tables.
Once the connection is established by the destination, a message is sent back to the originating computer to indicate the SVC is ready.
If any switch or the destination computer does not agree to setting up the VC, an error message is sent back and the SVC is not established

Question No: 25 (Marks: 5)

How can a bridge know whether to forward frames?

The bridge builds a list of MAC addresses on either side of the bridge. Therefore, it knows which packets should be forwarded to the other side and which should not. Most bridges are self-learning bridges. As soon as a frame arrives to a bridge, it extracts a source address from its header and automatically adds it in the list for that segment. In this way a bridge builds up address lists.
In the example of a packet that uses a MAC address not in its table it can err on the side of caution by forwarding the packet.

Question No: 26 (Marks: 5)

Compare connection oriented and connectionless Service.

Connection-Oriented vs. Connectionless Service
This characteristic specifies whether conversations take place in a more or less structured manner. When using a **connection-oriented** protocol, you incur the overhead of setting up a virtual circuit (a defined communications path) between the sender and receiver, which is maintained until the sender and receiver have completed their entire conversation.
When the conversation is completed, you incur the overhead of tearing down the virtual circuit. Connection-oriented protocols provide guaranteed delivery of messages in the order in which they were sent.
Contrast this with **Connectionless** service, which does not require establishing a session and a virtual circuit. This can be found in the network layer or transport layer, depending on the protocol. You can think of a connectionless protocol as being akin to mailing a post card. You send it and hope that the receiver gets it. Common features of a connectionless service are:

- Packets do not need to arrive in a specific order
- Reassembly of any packet broken into fragments during transmission must be in proper order
- No time is used in creating a session
- No Acknowledgement is required.
- The largest connectionless network in use today is the Internet

MIDTERM EXAMINATION
Fall 2008
CS610- Computer Network (Session - 2)

Time: 60 min
Marks: 38

Question No: 1 (Marks: 1) - Please choose one

A typical port on an ATM switch operates at _____ or higher.

► OC-2 speed (155Mbps)
► OC-3 speed (100Mbps)
► **OC-3 speed (155Mbps)**
► OC-3 speed (155Gbps)

Question No: 2 (Marks: 1) - Please choose one

The product of delay and throughput measures the _____ of data that can be present on the network.

► Area

- ► Volume
- ► Length
- ► None of the given

Question No: 3 (Marks: 1) - Please choose one

_____is used for compressed audio and video where the data rate depends on the level of compression that can be achieved.

- ► Constant Bit Rate (CBR) service
- **► Variable Bit Rate (VBR) service**
- ► Available Bit Rate (ABR) service
- ► None of the given

Question No: 4 (Marks: 1) - Please choose one

Which of the following is a connecting device?

- ► Bridge
- ► Repeater
- ► Hub
- **► All the given**

Question No: 5 (Marks: 1) - Please choose one

A bridges function in the _____ layers(s).

- ► Physical (MAC)
- ► Data link
- **► Network (not sure)**
- ► Physical (MAC) and Data link

Question No: 6 (Marks: 1) - Please choose one

IEEE LLC/SNAP header is --------, which is used to specify the type of data.

- **► 8 octets**
- ► 8 bytes
- ► 8 bits
- ► None of the given

Question No: 7 (Marks: 1) - Please choose one

The third field of the header consists of ------ bit Ethernet frame type.

- **► 48(not sure)**
- ► 32
- ► 16
- ► 8

Question No: 8 (Marks: 1) - Please choose one

An ----------method, the network hardware designers specify how type information is included in the frame and the value use to identify various frame types.

- **► Explicit frame type**

- ▶Ideal frame type
- ▶Implicit frame type

- ▶None of the given

Question No: 9 (Marks: 1) - Please choose one

Local Talk is a LAN technology that employs ----------

- ▶Star topology
- ▶**Bus topology**

- ▶Ring topology
- ▶None of the given

Question No: 10 (Marks: 1) - Please choose one

The Fast Ethernet hardware operates at a rate of --------

- ▶10 Mbps
- ▶**100 Mbps**
- ▶1000 Mbps
- ▶None of the given

Question No: 11 (Marks: 1) - Please choose one

---------- scheme, which is designed to help detect transmissions errors, send one extra bit of information with each character

- ▶Parity
- ▶Checksums
- ▶**CRC**
- ▶None of given

Question No: 12 (Marks: 1) - Please choose one

Computer networks are often called ---------- because they use packet technology.

- ▶Ethernet

- ▶Switch networks

- ▶Packet networks

- ▶None of the given

Question No: 13 (Marks: 1) - Please choose one

------ Program sends a message to a remote computer and reports whether the computer responds.

- ▶**Ping**
- ▶Traceroute
- ▶ICMP

▶ Non of the given

Question No: 14 (Marks: 1) - Please choose one

In ---------, network occupies larger areas like cities & countries.

- ▶ LAN
- ▶ **WAN**
- ▶ MAN
- ▶ None of the given

Question No: 15 (Marks: 1) - Please choose one

In -------------, network occupies the smaller area like a room a floor or a building

- ▶ **LAN**
- ▶ WAN
- ▶ MAN
- ▶ None of the given

Question No: 16 (Marks: 1) - Please choose one

In *Point-to-Point* topology there are two topologies.

- ▶ Tree and Ring
- ▶ Star and Ring
- ▶ **Star and Tree**
- ▶ None of the given

Question No: 17 (Marks: 2)

□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□

Question No: 18 (Marks: 2)

□□□
□□□

Question No: 19 (Marks: 3)

Why 10-base T wiring scheme is called star shaped bus wiring scheme.

The main feature of twisted pair Ethernet is that it forms a classic star topology however functions like a bus. 10Base-T Ethernet is often called a star shaped bus.

Question No: 20 (Marks: 5)

What are the main factors due to which mechanism of error detections schemes differ?

Question No: 21 (Marks: 10)

How much data can be present on an original Ethernet segment at one time? To find out, compute the delay-throughput product. The original Ethernet operate at 10 mega bits per second, and a segment was limited to 500 meters. Assume the signals propagate down the cable at 66 percent of the speed of light.\

One Ethernet cable is sometimes called a segment. This segment is limited to 500 meters in length. The minimum separation between connections is 3 meters.

MIDTERM EXAMINATION
Fall 2008
CS610- Computer Network (Session - 2)

Ref No: 109816
Time: 60 min
Marks: 38

Question No: 1 (Marks: 1) - Please choose one

_____ has a jitter zero

► None of the given

► Virtual Private Network
► Isochronous Network
► Asynchronous Network

Question No: 2 (Marks: 1) - Please choose one

Unlike Frame Relay and ATM, SMDS (Switched multi-megabit Data service) offers_____ .

► Connectionless service paradigm
► **Connection oriented service paradigm**
► Both Connectionless and Connection-oriented service paradigm

► None of the given

Question No: 3 (Marks: 1) - Please choose one

ATM assigns each VC a _____ identifier that is divided two parts to produce a hierarchy.

► 21-bit
► 22-bit
► 23-bit
► **24-bit**

Question No: 4 (Marks: 1) - Please choose one

Most WAN systems include a mechanism that can be used to eliminate the common case of duplication routing is called_____

► Hierarchal address
► Default route
► Shortest path
► None of the given

Question No: 5 (Marks: 1) - Please choose one

The next hop to which a packet is sent depends only on

▶ **Packet's destination**
▶ Packet's original source
▶ Path the packet has taken
▶ Non of the given

Question No: 6 (Marks: 1) - Please choose one

An interface for twisted pair Ethernet must have an _____ connector , and must generate signals according to the_____ specification.

▶ **RJ-45, 10 Base T**
▶ RJ-45, 10 Base 5
▶ BNC, 10 Base 2
▶ BNC, 10 Base T

Question No: 7 (Marks: 1) - Please choose one

When an application---------- data, it makes a copy of the data available to all other computers on the network.

▶ **Broadcasting**
▶ Multicasting
▶ Unicasting
▶ None of the given

Question No: 8 (Marks: 1) - Please choose one

A ---------- provide a mechanism that a customer can use to set a physical address.

▶ **Static addressing scheme**
▶ Configurable addressing scheme
▶ Dynamic addressing scheme
▶ None of the given

Question No: 9 (Marks: 1) - Please choose one

FDDI can transmits data at a rate of -----**100 million bits per second** -----

▶ 100 million bits per second
▶ 100 million bits per second
▶ 100 million bits per second
▶ None of the given

Question No: 10 (Marks: 1) - Please choose one

Computers attached to an ether use ------ in which a computer waits for the ether to be idle before transmitting a frame.

▶ **CSMA/CD**

▶CSMA/CA
▶TOKEN PASSING

▶None of the given

Question No: 11 (Marks: 1) - Please choose one

---------- have advantages arisen from the size and ease of computation.

▶CRC (not sure)
▶Parity
▶Checksums

▶None of given

Question No: 12 (Marks: 1) - Please choose one

The term -------- is used to denote the definition of a packet used with a specific type of network.

▶Packet

▶Frame

▶Data

▶None of the given

Question No: 13 (Marks: 1) - Please choose one

------ has no way to determine the cause of the problem.

▶Ping
▶Trace route
▶ICMP
▶Non of the given

Question No: 14 (Marks: 1) - Please choose one

------ Program sends a message to a remote computer and reports whether the computer responds.

▶Ping
▶Traceroute
▶ICMP
▶Non of the given

Question No: 15 (Marks: 1) - Please choose one

In ----------, network occupies the smaller area like a room a floor or a building

▶LAN

► WAN
► MAN
► None of the given

Question No: 16 (Marks: 1) - Please choose one

No error detection scheme is perfect because transmission errors can affect the additional information as well as the data.

► □□□□ False
► □□□□□

Question No: 17 (Marks: 2) Format is not clear even I try to do with cntl+A and then change format with 12/Times new roman or ariel. But fail

□□□□□□□□□□□□□□□□□□□□□□□

Question No: 18 (Marks: 2) ???? Format nt clear

□□
□□□

Question No: 19 (Marks: 3) ????? Format not Clear

□□□□□□□□□□□□□□□□□□□□□□□□□□□□□

Question No: 20 (Marks: 5)

Which type of information is obtained from network sniffer and in which mode Network sniffer operates?

Solution:

A network analyzer also called network monitor or a network sniffer is used to examine the performance of or debug a network. It can report statistics such as capacity utilization, distribution of frame size, collision rate or token circulation time

Most installations still use DIX Ethernet encoding in which there is no LLC/SNAP header in the frame. A network analyzer can tell from the values in the type field (small values are lengths, which mean an LLC/SNAP header is located in the first octets of the data area; large values are types, which mean no LLC/SNAP header is included).

The operation of network analyzer is a computer with a network interface that receives all frames, which is called promiscuous mode. So many desktop computers have interface that can be configured for promiscuous mode. When combined with software computer can examine any frame on LAN. In this way the communication across LAN is guaranteed to be private. Computer receives and displays frames on the LAN.
Network analyzer can be configured to filter and process frames. It can count frames of specific type of size. It displays only frames from or to specific computers.

Question No: 21 (Marks: 10)

□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□

Thick Ethernet, Thin Ethernet and Twisted pair Ethernet.

Solution:-

Thick Ethernet:
Thick Ethernet, officially known as 10 Base-5, is the oldest form of Ethernet.
One form of cabling supported by Ethernet is low-loss 50 Ohm coaxial cable as shown in the figure below. This type of cable is 0.5" diameter (usually supplied with a yellow outer PVC coating) and rather inflexible. It has become known in the communications industry as "Thick Ethernet". The official name for this cable is 10 Baseband5 (10B5), indicating that it is specified for baseband communications at 10 Mbps over distances up to 500m.

Thin Ethernet:

Thin Ethernet, officially called 10 Base-2, is a less expensive version of 10 Base-5 (Thick Ethernet) technologies. It uses a lighter and thinner coaxial cable and dispenses with the external transceivers used with 10 Base-5.

10 Base-2 uses an RG-58A/U coaxial cable and is wired in a bus topology. Each device on the network is connected to the bus through a BNC "T" adapter, and each end of the bus must have a 50 Ohm terminator attached. Each node on the bus must be a minimum of 0.5 meters (1.5 feet) apart, and the overall length of the bus must be less than 185 meters (606 feet).

Twisted Pair Ethernet:

Twisted Pair Ethernet (10baseT), sometime also called "UTP" from "Unshielded Twisted Pair", is based on using a cable similar to phone-wiring. The cable is connected via RJ-45 connectors to the network card installed in the PC.