

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

► True (Computer Networks and Internets, page82)

► False

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

► Ping (Computer Networks and Internets, page9)

► Traceroute

► ICMP

► Non of the given

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

► ARPA (Computer Networks and Internets, page5)

► IEEE

► EIA

► None of the given

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

► Packet

► Frame (Computer Networks and Internets, page 73)

► Data

► None of the given

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

► Ethernet

► Switch networks

► Packet networks (Computer Networks and Internets, page 73)

► None of the given

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

► CRC

► Parity (Page 19)

► Checksums

► None of given

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

► CSMA/CD

► CSMA/CA

▶ **TOKEN PASSING (Computer Networks and Internets, page95)**

▶ None of the given

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

▶ **8 octets (Computer Networks and Internets, page112)**

▶ 8 bytes

▶ 8 bits

▶ None of the given

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

▶ 10 Base 2

▶ 10 Base 5

▶ **10 Base T (Page 43)**

▶ None of the given

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

▶ **RJ-45, 10 Base T (Computer Networks and Internets, page 126)**

▶ RJ-45, 10 Base 5

▶ BNC, 10 Base 2

- ▶ BNC, 10 Base T

A bridges function in the _____ layers(s).

- ▶ Physical (MAC) [Click here for Detail](#)

- ▶ Data link

- ▶ Network

- ▶ Physical (MAC) and Data link

A Bridge can _____

- ▶ Filter a frame

- ▶ Forward a frame

- ▶ Extend a LAN

- ▶ Do all the above [Click here for Detail](#)

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 [Click here for Detail](#)

- ▶ Layer 3 destination address

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

- ▶ Greedy algorithm
- ▶ Distance vector algorithm
- ▶ Dijkstra's algorithm (Computer Networks and Internets, page112)
- ▶ None of the given

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

- ▶ Constant Bit Rate (CBR) service (Page 71)
- ▶ Variable Bit Rate (VBR) service
- ▶ Available Bit Rate (ABR) service
- ▶ None of the given

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

- ▶ Connectionless service paradigm (Computer Networks and Internets, page112)
- ▶ Connection oriented service paradigm
- ▶ Both Connectionless and Connection-oriented service paradigm
- ▶ None of the given

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

► T / D

► $T \times D$ (Computer Networks and Internets, page 203)

► $T + D$

► None of the given

ATM is designed to work on _____.

► Twisted Pair

► Coaxial

► Radio Frequency

► Fiber (Computer Networks and Internets, page 72)

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

► CSMA/CD (Computer Networks and Internets, page 93)

► CSMA/CA

► TOKEN PASSING

► None of the given

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

▶ 100 million bits per second (Page 314)

▶ 10 million bits per second

▶ 1000 million bits per second

▶ None of the given

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

▶ Star and Tree

▶ Tree and Ring

▶ Star and Ring

▶ Star and Tree (Page 5)

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

▶ Ping (Computer Networks and Internets, page9)

▶ Traceroute

▶ ICMP

▶ None of the given

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

▶ ICMP

▶ Ping (Computer Networks and Internets, page 11)

- ▶ Trace route
- ▶ Non of the given

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

▶ Packet (Page 16)

- ▶ Frame
- ▶ Data
- ▶ None of the given

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

▶ Parity (Computer Networks and Internets, page 77)

- ▶ Checksums
- ▶ CRC
- ▶ None of given

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

▶ Bus topology (Page 30)

- ▶ Ring topology
- ▶ Star topology

- ▶ None of the given

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

- ▶ CSMA/CD
- ▶ CSMA/CA
- ▶ **TOKEN PASSING (Computer Networks and Internets, page95) rep**
- ▶ None of the given

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

- ▶ 64
- ▶ **48 (Computer Networks and Internets, page 109)**
- ▶ 32
- ▶ 8

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

- ▶ 10 Base 2
- ▶ **10 Base 5 (Computer Networks and Internets, page 120)**
- ▶ 10 Base T
- ▶ None of the given

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

- ▶ 10 Base 2
- ▶ 10 Base 5
- ▶ 10 Base T (Page 43) rep
- ▶ None of the given

The maximum size of an Ethernet segment is _____

- ▶ 250 meters
- ▶ 500 meters (Page 27)
- ▶ 700 meters
- ▶ None of the given

A Bridge can _____

- ▶ Filter a frame
- ▶ Forward a frame
- ▶ Extend a LAN
- ▶ Do all the above rep

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

- ▶ Greedy algorithm
- ▶ Distance vector algorithm
- ▶ Dijkstra's algorithm (Computer Networks and Internets, page112) rep
- ▶ None of the given

_____ 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 (Page 71)
- ▶ Available Bit Rate (ABR) service
- ▶ None of the given

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

- ▶ Connectionless service paradigm (Computer Networks and Internets, page112)
- ▶ Connection-oriented service paradigm
- ▶ Both Connectionless and Connection-oriented service paradigm
- ▶ None of the given

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

- ▶ Area

► Volume (Page 80)

► Length

► None of the given

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

► T / D

► T x D (Computer Networks and Internets, page203) rep

► T + D

► None of the given

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

► doubles, triple (Page 49)

► square roots, cube roots

► and, triple

► doubles, cancel

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

► Star Topology (Page 25)

► Ring Topology

- ▶ Bus Topology
- ▶ None of the given

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

▶ CSMA/CD (Computer Networks and Internets, page 93) rep

▶ CSMA/CA

▶ TOKEN PASSING

▶ None of the given

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

▶ OC-2 speed (155Mbps)

▶ OC-3 speed (100Mbps)

▶ OC-3 speed (155Mbps) (Page 72)

▶ OC-3 speed (155Gbps)

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

▶ Area

▶ Volume (Page 80) rep

▶ Length

- ▶ None of the given

_____ 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 (Page 71) rep
- ▶ Available Bit Rate (ABR) service
- ▶ None of the given

Which of the following is a connecting device?

- ▶ Bridge
- ▶ Repeater
- ▶ Hub
- ▶ All the given Click here for Detail

A bridges function in the _____ layers(s).

- ▶ Physical (MAC) rep Click here for Detail
- ▶ Data link
- ▶ Network
- ▶ Physical (MAC) and Data link

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

▶ 8 octets (Computer Networks and Internets, page112) rep

▶ 8 bytes

▶ 8 bits

▶ None of the given

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

▶ 48

▶ 32

▶ 16 (Computer Networks and Internets, page110)

▶ 8

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 (Page 35)

▶ Ideal frame type

▶ Implicit frame type

▶ None of the given

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

- ▶ Star topology
- ▶ Bus topology (Page 30) rep
- ▶ Ring topology
- ▶ None of the given

Questions:

1. Where are destination and source address located in frame? (2 marks)

Answer:- (Page 56) The packet header includes destination and source addresses.

2. If 100mbps Ethernet NIC is connected to a hub which supports 10mbps, what will be the data rate in this scenario? (2 marks)

Answer:- This has two consequences. First, the hub does not necessarily create a broadcast medium. Second, there are no collisions between traffic on 10 Mbps ports and 100 Mbps ports.

3. In connection oriented network, which type of connection identifier is used?

Support your answer with example. (2 marks)

Answer:- (Page 66) ATM uses the concept of connection-oriented networking.

4. Imagine a network of 6 devices A, B, C, D, E and F. All devices are on same packet switch. If computer A wants to send packet to computer E, How would packet switch forward this packet? (3 marks)

Answer:- path between switch A and F and the total distance traveled along this path switch A – switch D – switch E distance = 4

5. Network administrator needs audio and video service for his network. He has to send or receive data at same data rate. Which type of ATM quality service specification would be applied there? Give example? (3 marks)

Answer:- To facilitate the transport of audio and video data across emerging Asynchronous Transfer Mode (ATM) networks, a simple, low cost, audio/video ATM appliance, the AVATAR, has been developed. This appliance is capable of handling uncompressed bidirectional audio and NTSC video connections.

6. We have two satellite locations, at first location one bridge is configured and at second location 2 bridges are configured. Which location performed will be faster? Give reason. (3 marks)

Answer:- Click here for detail Satellite locations with two bridges configured will performed faster. The brigade also had to provide power to virtually all of its East

Timor assets. Setting up the satellite system, for example, required supplying power to both the communications station and the users' computers. A bridge that has multiple ports is known as a networking switch. Both bridges and switches are capable of directing traffic to specific network addresses instead of broadcasting the data to all devices on a network segment. This functionality makes the bridge or switches a more advanced networking device over a hub or repeater.

7. There are two sites office A & B, both are using VPN. If a user of another network wants to send some packet to A, then what will be the behavior of network A? How data is protected in VPN environment? (05 marks)

Answer:- Click here for detail In theory when a machine on private network A wants to send a packet to a machine on private network B the packet is accepted by the VPN server. It is then encrypted and encapsulated within a standard IP packet that has a destination address corresponding to the VPN server at network B. Notice that both VPN servers have to have to be "on the Internet" in the sense of having publicly accessible IP addresses. When the packet arrives at network B's VPN server it extracts the encapsulated private packet, decrypts it and sends it on its way within the local network. The machines within network A and B don't have to have publicly accessible address - that is they don't have to be on the public Internet. This way of using the public Internet to connect two machines that are

not on the public internet is another advantage of the VPN approach. As far as users of network A and B are concerned the VPN is as good as a dedicated physical connection. The idea of using public data packets to transfer embedded private data packets is often called “tunnelling” because it seems to create a data tunnel between the two networks. .

8. Star Textile has huge network of systems and switches. A task is given to IT Officer that if some link goes the entire network works smoothly. Which routing method will be use? 5 marks

Answer:- Distributed routing method is better for this purpose because Distributed routing relies on each node to compute its own routing table and build the required connections with its neighbors. Ideally, the network operation, status, and architecture of each node is transparent. Distributed routing is more flexible than centralized routing because each node handles its own routing. The result is often improved system performance.

9. Six devices are connected in network A,B,C,D,E and F. All devices are on same packet switch. Computer A wants to send packet to E. How will packet switch forwards the packet? 3 marks

Answer:- rep

10. Network administrator wants to build a tunnel between sites offices. How will he build using private virtual network? 3 marks

Answer:- To establishes a private network that can send data securely between these two locations or networks through a "tunnel." A VPN tunnel connects the two PCs or networks and allows data to be transmitted over the Internet as if it were still within those networks.

11. Who examine performance of network? 2 marks

Answer:- Performance is probably the most closely monitored operational feature by users in the network environment

12. How can we compute shortest path in WAN? 2 marks

Answer:- (Page 62) We use Dijkstra's algorithm to compute shortest path from each node to every other node.

13. 100mbps Ethernet NIC is connected to control Hub which supports 10mbps. What will be Data Rate in this scenario? 2 marks

14. There are two sites office A & B, both are using VPN. If a user of another network wants to send some packet to A, then what will be the behavior of network A?

15. What type of switching technique is used in WAN?

Answer:- (Page 55) WANs can use circuit-switching or packet-switching techniques. To span long distances or many computers, networks must replace shared medium with packet switches. Each switch moves an entire packet from one connection to another. That's why they are called packet switches.