

ADVANCED COMPUTER NETWORK

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1. Several computers linked to a server to share programs and storage space.

- A. Library
- B. Network
- C. Grouping
- D. Integrated system

• **Answer**

Answer: B.

Network

2. A term related sending data to a satellite is?

- A. Downlink
- B. Modulate
- C. Demodulate
- D. Uplink

• **Answer**

Answer: D.

Uplink

3. The common name for a modulator-demodulator is

- A. Modem
- B. Joiner
- C. Networker

D. Connector

- **Answer**

Answer: A.

Modem

4. Which of the following device is used to connect two systems, especially if the systems use different protocols?

A. Repeater

B. Gateway

C. Bridge

D. Hub

- **Answer**

Answer: B.

5. The Internet is

A. A communication system for some states of India

B. A communication system for the Indian government

C. An internal communication system for a business

D. A large network of networks

- **Answer**

Answer: D.

A large network of networks

6. A distributed network configuration in which all data/information pass through a central computer is

A. Bus network

B. Star network

- C. Ring network
- D. Point-to-point network

- **Answer**

Answer: B.

Star network

7. Which of the following communications modes support two-way traffic but in only one direction of a time?

- A. Simplex
- B. Half-duplex
- C. Three-quarters duplex
- D. Full duplex

- **Answer**

Answer: B.

Half-duplex

8. The slowest transmission speeds are those of

- A. Coaxial cable
- B. Twisted-pair wire
- C. Fiber-optic cable
- D. Microwaves

- **Answer**

Answer: B.

Twisted-pair wire

9. A modem is connected to

- A. A telephone line
- B. A keyboard
- C. A printer
- D. A monitor

- **Answer**

Answer: A.

A telephone line

10. A popular way to learn about computers without ever going to a classroom is called

- A. E-learning
- B. Star network
- C. I-learning
- D. Close learning

- **Answer**

Answer: A.

E-learning

11. The collection of links throughout the Internet creates an interconnected network called the

- A. WWW
- B. Web
- C. Wide Area Web
- D. All of the above

- **Answer**

Answer: D.

All of the above

12. Networks are monitored by security personnel and supervised by _____ who set(s) up accounts and passwords for authorized network users.

- A. IT managers
- B. The government
- C. Password administrators
- D. Network administrators

• Answer

Answer: D.

Network administrators

13. P2P is a _____ application architecture.

- A. Client/server
- B. Distributed
- C. Centralized
- D. 1-tier

• Answer

Answer: B.

Distributed

14. Codec refers to

- A. Coder-decoder
- B. Co-declaration
- C. Command declaration
- D. Command decoding

• Answer

Answer: A.

Coder-decoder

15. _____ is the most important/powerful computer in a typical network.

A. Desktop

B. Network server

C. Network client

D. Network switch

• **Answer**

Answer: B.

Network server

16. A MODEM is connected in between a telephone line and a

A. Computer

B. Communication Adapter

C. Serial Port

D. Network

• **Answer**

Answer: A.

Computer

17. Computers that control processes accept data in a continuous

A. Data traffic pattern

B. Data highway

C. Infinite loop

D. Feedback loop

- **Answer**

Answer: C.

Infinite loop

18. A device that connects to a network without the use of cables is said to be

- A. Distributed**
- B. Centralized**
- C. Wireless**
- D. Open source**

- **Answer**

Answer: C.

Wireless

19. What is a modem connected to?

- A. Phone line**
- B. Processor**
- C. Printer**
- D. Motherboard**

- **Answer**

Answer: A.

Phone line

20. What device separates a single network into two segments but lets the two segments appear as one to higher protocols?

- A. Switch**
- B. Router**
- C. Bridge**

D. Gateway

- **Answer**

Answer: C.

Bridge

21. What is a benefit of networking your computer with other computers?

- A. Increase in the computer's speed
- B. Sharing of cables to cut down on expenses and clutter
- C. Sharing of resources to cut down on the amount of equipment needed
- D. Increase in the speed of the network

- **Answer**

Answer: C.

Sharing of resources to cut down on the amount of equipment needed

22. Which of the following is required to communicate between two computers?

- A. Communications software
- B. Protocol
- C. Communications hardware
- D. All of the above

- **Answer**

Answer: D.

All of the above

23. Which of the following is not a disadvantage of wireless LAN?

- A. Slower data transmission

- B. Higher error rate
- C. Interference of transmissions from different computers
- D. All of the above

• **Answer**

Answer: D.

All of the above

24. Bluetooth is an example of

- A. Personal area network
- B. Local area network
- C. Virtual private network
- D. Wide area network

• **Answer**

Answer: A.

Personal area network

25. The connection between your computer at home and your local ISP is called

-
- A. The last mile
 - B. The home stretch
 - C. The home page
 - D. The backbone

• **Answer**

Answer: C.

The home page

26. A ____ is a set of rules.

- A. Resource locator
- B. Protocol
- C. Domain
- D. URL

• **Answer**

Answer: B.

Protocol

27. A ____ typically connects personal computers within a very limited geographical area, usually within a single building.

- A. LAN
- B. WAN
- C. MAN
- D. TAN

• **Answer**

Answer: A.

LAN

28. Officer LANs that are spread geographically apart on a large scale can be connected using a corporate

- A. LAN
- B. WAN
- C. MAN
- D. CAN

• **Answer**

Answer: B.

WAN

29. Which device is used to access your computer by other computer or for talk over phone?

- A. RAM
- B. Modem
- C. CD ROM Drive
- D. Hard disk

• Answer

Answer: B.

Modem

30. A device which can be connected to a network without using cable is called

- A. Centralized device
- B. Distributed device
- C. Wireless device
- D. Open-source device

• Answer

Answer: C.

Wireless device

31. Frames from one LAN can be transmitted to another LAN via the device

- A. Router
- B. Bridge
- C. Repeater
- D. Modem

• Answer

Answer: B.

Bridge

32. Which of the following types of channels moves data relatively slowly?

- A. Wideband channel
- B. Voiceband channel
- C. Broadband channel
- D. Narrowband channel

• **Answer**

Answer: D.

Narrowband channel

33. The vast network of computers that connects millions of people all over the world is called

- A. LAN
- B. Web
- C. Hybertext
- D. Internet

• **Answer**

Answer: D.

Internet

34. Which of the following terms is just the collection of networks that can be joined together?

- A. Virtual private network
- B. Intranet
- C. Extranet
- D. LAN

- **Answer**

Answer: B.

Intranet

35. To connect networks of similar protocols _____ are used.

- A. Routers
- B. Bridges
- C. Gateways
- D. Dial-up routers

- **Answer**

Answer: B.

Bridges

36. Telnet is a _____ based computer protocol.

- A. Sound
- B. Text
- C. Image
- D. Animation

- **Answer**

Answer: B.

Text

37. Computers connected to a LAN (local area network) can

- A. Run faster
- B. Go on line
- C. E-mail

D. Share information and/or share peripheral equipment

• **Answer**

Answer: D.

Share information and/or share peripheral equipment

38. Computer and communication technology, such as communication links to the Internet, that provide help and understanding to the end user is known as

A. Presentation file

B. Information technology

C. Worksheet file

D. FTP

• **Answer**

Answer: D.

FTP

39. _____ is a technique that is used to send more than one call over a single line.

A. Digital transmission

B. Infrared transmission

C. Digitizing

D. Multiplexing

• **Answer**

Answer: D.

Multiplexing

40. A collection of computers and devices connected together via communication devices and transmission media is called a

- A. Workgroup
- B. Server
- C. Mainframe
- D. Network

• **Answer**

Answer: D.

Network

1. Which of the following is false with respect to TCP?

- a) Connection-oriented
- b) Process-to-process
- c) Transport layer protocol
- d) Unreliable

[View Answer](#)

Answer: d

Explanation: TCP is a transport layer protocol that provides reliable and ordered delivery of a stream of bytes between hosts communicating via an IP network.

2. In TCP, sending and receiving data is done as _____

- a) Stream of bytes
- b) Sequence of characters
- c) Lines of data
- d) Packets

[View Answer](#)

Answer: a

Explanation: TCP provides stream oriented delivery between hosts communicating via an IP network and there are no message boundaries. TCP can concatenate data from a number of send () commands into one stream of data and still transmit it reliably.

3. TCP process may not write and read data at the same speed. So we need _____ for storage.

- a) Packets
- b) Buffers
- c) Segments
- d) Stacks

[View Answer](#)

Answer: b

Explanation: A TCP receiver has a receive buffer that is used to store the unprocessed incoming packets in case the sender is sending packets faster than the processing rate of the received packets.

4. TCP groups a number of bytes together into a packet called _____

- a) Packet
- b) Buffer
- c) Segment
- d) Stack

[View Answer](#)

Answer: c

Explanation: A segment may be collection of data from many send () statements. TCP transmits each segment as a stream of bytes.

5. Communication offered by TCP is _____

- a) Full-duplex
- b) Half-duplex
- c) Semi-duplex
- d) Byte by byte

[View Answer](#)

Answer: a

Explanation: Data can flow both the directions at the same time during a TCP communication hence, it is full-duplex. This is the reason why TCP is used in systems that require full-duplex operation such as e-mail systems.

6. To achieve reliable transport in TCP, _____ is used to check the safe and sound arrival of data.

- a) Packet
- b) Buffer
- c) Segment
- d) Acknowledgment

[View Answer](#)

Answer: d

Explanation: Acknowledgment mechanism is used to check the safe and sound arrival of data. The sender actively checks for acknowledgement from the receiver and once a specific time period has passed, it retransmits the data.

7. In segment header, sequence number and acknowledgement number fields refer to _____

- a) Byte number
- b) Buffer number
- c) Segment number
- d) Acknowledgment

[View Answer](#)

Answer: a

Explanation: As TCP has to ensure ordered delivery of packets, sequence number and acknowledgement number are used to identify the byte number of the packet in the stream of bytes being transmitted.

8. Suppose a TCP connection is transferring a file of 1000 bytes. The first byte is numbered 10001. What is the sequence number of the segment if all data is sent in only one segment?

- a) 10000
- b) 10001
- c) 12001
- d) 11001

[View Answer](#)

Answer: b

Explanation: The sequence number given to first byte of a segment, with respect to its order among the previous segments, is the sequence number of that segment.

9. Bytes of data being transferred in each connection are numbered by TCP. These numbers start with a _____

- a) Fixed number
- b) Random sequence of 0's and 1's
- c) One
- d) Sequence of zero's and one's

[View Answer](#)

Answer: d

Explanation: One might expect the sequence number of the first byte in the stream to be 0, or 1. But that does not happen in TCP, Instead, the sender has to choose an Initial Sequence Number (ISN), which is basically a random 32 bit sequence of 0's and 1's, during the connection handshake.

1. Which type of Ethernet framing is used for TCP/IP and DEC net?

- a) Ethernet 802.3
- b) Ethernet 802.2
- c) Ethernet II
- d) Ethernet SNAP

[View Answer](#)

Answer: c

Explanation: The Ethernet 802.3 framing is used for NetWare versions 2 to 3.11, and the Ethernet 802.2 framing is used for NetWare versions 3.12 and later plus OSI routing, Ethernet II is used with TCP/IP and DEC net, and Ethernet SNAP is used with TCP/IP and AppleTalk. The type field in Ethernet 802.2 frame is replaced by a length field in Ethernet 802.3.

2. Consider a situation in which you are a system administrator on a NetWare network, you are running NetWare 4.11 and you cannot communicate with your router. What is the likely problem?

- a) NetWare 4.11 defaults to 802.2 encapsulation
- b) NetWare 4.11 defaults to 802.3 encapsulation
- c) Cisco routers only work with NetWare 3.11
- d) NetWare 3.11 defaults to 802.2 encapsulation

[View Answer](#)

Answer: a

Explanation: The default encapsulation on Cisco routers is Novell Ethernet_802.3 and NetWare 3.12 and later defaults to 802.2 encapsulation, 3.11 and earlier defaults to 802.3.

3. NetWare IPX addressing uses a network number and a node number. Which statement is not true?

- a) The network address is administratively assigned and can be up to 16 hexadecimal digits long
- b) The node address is always administratively assigned
- c) The node address is usually the MAC address
- d) If the MAC address is used as the node address, then IPX eliminates the use of ARP

[View Answer](#)

Answer: b

Explanation: The network address can be up to 16 hexadecimal digits in length. The node number is 12 hexadecimal digits. The node address is usually the MAC address. An example IPX address is 4a1d.0000.0c56.de33. The network part is 4a1d. The node part is 0000.0c56.de33. The network number is assigned by the system administrator of the Novell network and the MAC address/node address is not assigned by the administrator.

4. Which NetWare protocol works on layer 3—network layer—of the OSI model?

- a) IPX
- b) NCP
- c) SPX
- d) NetBIOS

[View Answer](#)

Answer: a

Explanation: IPX (Internetwork Packet Exchange) is the NetWare network layer 3 protocol used for transferring information on LANs that use Novell's NetWare.

5. Which NetWare protocol provides link-state routing?

- a) NLSP
- b) RIP
- c) SAP
- d) NCP

[View Answer](#)

Answer: a

Explanation: NetWare Link Services Protocol (NLSP) provides link-state routing. SAP (Service Advertisement Protocol) advertises network services. NCP (NetWare Core Protocol) provides client-to-server connections and applications. RIP is a distance vector routing protocol. NLSP was developed by Novell to replace RIP routing protocols.

6. As a system administrator, you want to debug IGRP but are worried that the “debug IP IGRP transaction” command will flood the console. What is the command that you should use?

- a) Debug IP IGRP event
- b) Debug IP IGRP-events
- c) Debug IP IGRP summary
- d) Debug IP IGRP events

[View Answer](#)

Answer: d

Explanation: The “debug IP IGRP events” is used to display a short summary of IGRP routing information. You can append an IP address onto either console's command-line to see only the IGRP updates from a neighbor. The command will only give a short summary and hence won't flood the command line.

7. What does the following series of commands “Router IGRP 71 network” accomplish?

10.0.0.0 router IGRP 109 network 172.68.7.0

- a) It isolates networks 10.0.0.0 and 172.68.7.0
- b) It loads IGRP for networks 109 and 71
- c) It disables RIP
- d) It disables all routing protocols

[View Answer](#)

Answer: a

Explanation: It isolates network 10.0.0.0 and 172.68.7.0 and associates autonomous systems 109 and 71 with IGRP. IGRP does not disable RIP, both can be used at the same time.

8. The “IPX delay number” command will allow an administrator to change the default settings. What are the default settings?

- a) For LAN interfaces, one tick; for WAN interfaces, six ticks
- b) For LAN interfaces, six ticks; for WAN interfaces, one tick
- c) For LAN interfaces, zero ticks; for WAN interfaces, five ticks
- d) For LAN interfaces, five ticks; for WAN interfaces, zero Ticks

[View Answer](#)

Answer: a

Explanation: Tick is basically the update rate of clients in the network. The IPX delay number will give the ticks at a certain time. The default ticks are—for LAN interfaces, one tick, and for WAN interfaces, six ticks.

9. As a system administrator, you need to set up one Ethernet interface on the Cisco router to allow for both sap and Novell-ether encapsulations. Which set of commands will accomplish this?

- a) Interface Ethernet 0.1 IPX encapsulation Novell-ether IPX network 9e interface Ethernet 0.2 IPX network 6c
- b) Interface Ethernet 0 IPX encapsulation Novell-ether IPX network 9e interface Ethernet 0 IPX encapsulation sap IPX network 6c
- c) Interface Ethernet 0.1 IPX encapsulation Novell-ether interface Ethernet 0.2 IPX encapsulation sap
- d) Interface Ethernet 0.1 ipx encapsulation Novell-ether IPX network 9e interface Ethernet 0.2 IPX encapsulation sap IPX network 6c

[View Answer](#)

Answer: d

Explanation: The following commands setup the sub interfaces to allow for two types of encapsulation: interface Ethernet 0.1 IPX encapsulation Novell-ether IPX network 9e interface Ethernet 0.2 IPX encapsulation sap IPX network 6c.

10. What does the “IPX maximum-paths 2” command accomplish?

- a) It enables load sharing on 2 paths if the paths are equal metric paths
- b) It sets up routing to go to network 2
- c) It is the default for Cisco IPX load sharing
- d) It enables load sharing on 2 paths if the paths are unequal metric paths

[View Answer](#)

Answer: a

Explanation: It enables load sharing on 2 paths if the paths are equal metric paths. The default is 1 path and the maximum is 512 paths. The value must always be greater than 1 and must be a natural number.

11. You want to enable both arpa and snap encapsulation on one router interface. How do you do this?

- a) The interface can handle multiple encapsulation types with no extra configuration
- b) Assign two network numbers, one for each encapsulation type
- c) Enable Novell-ether to run multiple encapsulation types
- d) Both arpa and snap are enabled by default so you don't have to configure anything

[View Answer](#)

Answer: b

Explanation: To assign multiple network numbers, you usually use sub interfaces. A sample configuration follows: IPXEthernet 0.1 IPX encapsulation novell-ether ipx network 9e interface ethernet 0.2 ipx encapsulation sap ipx network 6c

12. By default, Cisco routers forward GNS SAPs to remote networks.

- a) False
- b) True

[View Answer](#)

Answer: a

Explanation: GNS is Novell's protocol to Get Nearest Server. If there is a server on the local network, that server will respond. If there isn't, the Cisco router has to be configured to forward the GNS SAP.

13. To prevent Service Advertisements (SAPs) from flooding a network, Cisco routers do not forward them. How are services advertised to other networks?

- a) Each router builds its own SAP table and forwards that every 60 seconds
- b) Each router assigns a service number and broadcasts that
- c) SAPs aren't necessary with Cisco routers
- d) Cisco routers filter out all SAPs

[View Answer](#)

Answer: a

Explanation: Cisco routers build SAP tables and forward the table every 60 seconds. All SAPs can't be filtered even with 4.x since NDS and time synchronization uses SAPs.

14. Novell's implementation of RIP updates routing tables every _____ seconds.

- a) 60
- b) 90
- c) 10
- d) 30

[View Answer](#)

Answer: a

Explanation: Novell's RIP updates routing tables every 60 seconds, Apple's RTMP is every 10 seconds, routers ARP every 60 seconds, IGRP signal every 90 seconds, and Banyan VINES signals every 90 seconds.

15. In Novell's use of RIP, there are two metrics used to make routing decisions. Select the correct metrics.

- a) Ticks & Hops
- b) Hops & Loops
- c) Loops & Counts
- d) Counts & Ticks

[View Answer](#)

Answer: a

1. The sharing of a medium and its link by two or more devices is called _____

- a) Fully duplexing
- b) Multiplexing
- c) Microplexing

d) Duplexing

[View Answer](#)

Answer: b

Explanation: Multiplexing is a method using which one can send multiples signals through a shared medium at the same time. This helps in using less resources and thus saving the cost of sending messages.

2. Multiplexing is used in _____

- a) Packet switching
- b) Circuit switching
- c) Data switching
- d) Packet & Circuit switching

[View Answer](#)

Answer: b

Explanation: Circuit switching is a switching method by which one can obtain a physical path between end points. Circuit switching method is also called a connection oriented network. Two nodes must be physically and logically connected to each other to create a circuit switching network.

3. Which multiplexing technique used to transmit digital signals?

- a) FDM
- b) TDM
- c) WDM
- d) FDM & WDM

[View Answer](#)

Answer: b

Explanation: TDM abbreviation for Time Division Multiplexing is a method used for digital signals. Whereas FDM and WDM abbreviation for Frequency Division Multiplexing, and Wavelength Division Multiplexing, are used for analog signals. TDM is used in applications like ISDN (Integrated Services Digital Network) and PSTN (Public Switched Telephone Network).

4. If there are n signal sources of same data rate, then the TDM link has _____ slots.

- a) n
- b) $n/2$
- c) $n*2$
- d) 2^n

[View Answer](#)

Answer: a

Explanation: In TDM, the total unit of time is divided equally among all the signal sources and each and every source has access to the complete channel bandwidth during its allotted time slot. When the time slot of the source is not active, it remains idle and waits for its slot to begin.

5. If link transmits 4000frames per second, and each slot has 8 bits, the transmission rate of circuit this TDM is _____

- a) 32kbps
- b) 500bps
- c) 500kbps
- d) 32bps

[View Answer](#)

Answer: a

Explanation: Transmission rate= frame rate * number of bits in a slot.

Given: Frame rate = 4000/sec and number of bits in slot = 8
Thus, Transmission rate = $(4000 * 8)$ bps
= 32000bps
= 32kbps

6. The state when dedicated signals are idle are called _____

- a) Death period
- b) Poison period
- c) Silent period
- d) Stop period

[View Answer](#)

Answer: c

Explanation: There are instances when connection between two endpoints has been established, but no communication or transfer of messages occurs. This period of time is called silent period. The silent period ends when either of the two endpoints starts the communication.

7. Multiplexing provides _____

- a) Efficiency
- b) Privacy
- c) Anti jamming
- d) Both Efficiency & Privacy

[View Answer](#)

Answer: d

Explanation: Multiplexing helps us to transfer our messages over a shared channel. This brings up the issue of privacy and efficiency. Fortunately, Multiplexing has high efficiency and high privacy when implemented because in the implementation, the transport layer of the OSI network model handles the function of multiplexing through interfaces called ports which provide the required efficiency and privacy.

8. In TDM, the transmission rate of a multiplexed path is always _____ the sum of the transmission rates of the signal sources.

- a) Greater than
- b) Lesser than
- c) Equal to
- d) Equal to or greater than

[View Answer](#)

Answer: a

Explanation: In TDM the transmission rate provided by the path that is multiplexed will always be greater than the sum of transmission rates of the single sources. This happens because the transmission rate is provided to each source only for a small period of time.

9. In TDM, slots are further divided into _____

- a) Seconds
- b) Frames
- c) Packets
- d) Bits

[View Answer](#)

Answer: b

1. The IETF standards documents are called _____

- a) RFC
- b) RCF
- c) ID
- d) DFC

[View Answer](#)

Answer: a

Explanation: RFC stands for Request For Comments and they are documents that describe methods, behaviors, research, or innovations applicable to the working of the Internet.

2. In the layer hierarchy as the data packet moves from the upper to the lower layers, headers are _____

- a) Added
- b) Removed
- c) Rearranged
- d) Modified

[View Answer](#)

Answer: a

Explanation: Each layer adds its own header to the packet from the previous layer. For example, in the Internet layer, the IP header is added over the TCP header on the data packet that came from the transport layer.

3. The structure or format of data is called _____

- a) Syntax
- b) Semantics
- c) Struct
- d) Formatting

[View Answer](#)

Answer: a

Explanation: The structure and format of data are defined using syntax. Semantics defines how a particular pattern to be interpreted, and what action is to be taken based on that interpretation. In programming languages, syntax of the instructions plays a vital role in designing of the program.

4. Communication between a computer and a keyboard involves _____ transmission.

- a) Automatic
- b) Half-duplex
- c) Full-duplex
- d) Simplex

[View Answer](#)

Answer: d

Explanation: In simplex transmission, data flows in single direction which in this case refers to the data flowing from the keyboard to the computer. Another example would be of the mouse where the data flows from the mouse to the computer only.

5. The first Network was called _____

- a) CNET
- b) NSFNET
- c) ASAPNET

d) ARPANET

[View Answer](#)

Answer: d

Explanation: ARPANET stands for Advanced Research Projects Agency Networks. It was the first network to be implemented which used the TCP/IP protocol in the year 1969.

6. A _____ is the physical path over which a message travels.

- a) Path
- b) Medium
- c) Protocol
- d) Route

[View Answer](#)

Answer: b

Explanation: Messages travel from sender to receiver via a physical path called the medium using a set of methods/rules called protocol. Mediums can be guided (wired) or unguided (wireless).

7. Which organization has authority over interstate and international commerce in the communications field?

- a) ITU-T
- b) IEEE
- c) FCC
- d) ISOC

[View Answer](#)

Answer: c

Explanation: FCC is the abbreviation for Federal Communications Commission. FCC is responsible for regulating all interstate communications originating or terminating in USA. It was founded in the year 1934.

8. Which of this is not a network edge device?

- a) PC
- b) Smartphones
- c) Servers
- d) Switch

[View Answer](#)

Answer: d

Explanation: Network edge devices refer to host systems, which can host applications like web browser. A switch can't operate as a host, but as a central device which can be used to manage network communication.

9. A _____ set of rules that governs data communication.

- a) Protocols
- b) Standards
- c) RFCs
- d) Servers

[View Answer](#)

Answer: a

Explanation: In communications, a protocol refers to a set of rules and regulations that allow a network of nodes to transmit and receive information. Each layer in the network model has a protocol set, for example, the transport layer has TCP and UDP protocols.

10. Three or more devices share a link in _____ connection.

- a) Unipoint
- b) Multipoint
- c) Point to point
- d) Simplex

[View Answer](#)

Answer: b

1. When collection of various computers seems a single coherent system to its client, then it is called _____

- a) computer network
- b) distributed system
- c) networking system
- d) mail system

[View Answer](#)

Answer: b

Explanation: A Computer network is defined as a collection of interconnected computers which uses a single technology for connection.

A distributed system is also the same as computer network but the main difference is that the whole collection of computers appears to its users as a single coherent system.

Example:- World wide web

2. Two devices are in network if _____

- a) a process in one device is able to exchange information with a process in another device
- b) a process is running on both devices
- c) PIDs of the processes running of different devices are same
- d) a process is active and another is inactive

[View Answer](#)

Answer: a

Explanation: A computer network, or data network, is a digital telecommunications network which allows nodes to share resources. In computer networks, computing devices exchange data with each other using connections between nodes. The nodes have certain processes which enable them to share a specific type of data using a distinct protocol.

3. Which of the following computer networks is built on the top of another network?

- a) prior network
- b) chief network
- c) prime network
- d) overlay network

[View Answer](#)

Answer: d

Explanation: An overlay network is a computer network that is built on top of another network. Some examples of an overlay network are Virtual Private Networks (VPN) and Peer-to-Peer Networks (P2P).

4. In computer network nodes are _____

- a) the computer that originates the data
- b) the computer that routes the data
- c) the computer that terminates the data

d) all of the mentioned

[View Answer](#)

Answer: d

Explanation: In a computer network, a node can be anything that is capable of sending data or receiving data or even routing the data to its destination. Routers, Computers and Smartphones are some examples of network nodes.

5. Communication channel is shared by all the machines on the network in _____

- a) broadcast network
- b) unicast network
- c) multicast network
- d) anycast network

[View Answer](#)

Answer: a

Explanation: In a broadcast network, information is sent to all stations in a network whereas in a multicast network the data or information is sent to a group of stations in the network. In unicast network, information is sent to only one specific station. The broadcast address of the network is the last assigned address of the network.

6. Bluetooth is an example of _____

- a) personal area network
- b) local area network
- c) virtual private network
- d) wide area network

[View Answer](#)

Answer: a

Explanation: Bluetooth is a wireless technology used to create a wireless personal area network for data transfer up to a distance of 10 meters. It operates on 2.45 GHz frequency band for transmission.

7. A _____ is a device that forwards packets between networks by processing the routing information included in the packet.

- a) bridge
- b) firewall
- c) router
- d) hub

[View Answer](#)

Answer: c

Explanation: A router is a networking device that forwards data packets between computer networks. Routers perform the traffic directing functions on the Internet. They make use of routing protocols like RIP to find the cheapest path to the destination.

8. A list of protocols used by a system, one protocol per layer, is called _____

- a) protocol architecture
- b) protocol stack
- c) protocol suite
- d) protocol system

[View Answer](#)

Answer: b

Explanation: A protocol stack refers to a group of protocols that are running concurrently that

are employed for the implementation of network protocol suite. Each layer in the network model has to use one specific protocol from the protocol stack.

9. Network congestion occurs _____
- a) in case of traffic overloading
 - b) when a system terminates
 - c) when connection between two nodes terminates
 - d) in case of transfer failure

[View Answer](#)

Answer: a

Explanation: Network congestion occurs when traffic in the network is more than the network could handle. To avoid network congestion, the network management uses various open-loop and closed-loop congestion control techniques.

10. Which of the following networks extends a private network across public networks?
- a) local area network
 - b) virtual private network
 - c) enterprise private network
 - d) storage area network

[View Answer](#)

Answer: b

1. Which of this is not a constituent of residential telephone line?
- a) A high-speed downstream channel
 - b) A medium-speed downstream channel
 - c) A low-speed downstream channel
 - d) An ultra-high speed downstream channel

[View Answer](#)

Answer: c

Explanation: A low-speed downstream channel is not a constituent of a residential telephone line. But it might be just a two-way telephone channel. Internet can be provided through a high-speed downstream channel in a residential telephone line.

2. DSL telcos provide which of the following services?
- a) Wired phone access
 - b) ISP
 - c) Wired phone access and ISP
 - d) Network routing and ISP

[View Answer](#)

Answer: c

Explanation: DSL stands for Digital Subscriber Line and ISP stands for Internet Service Provider. In a Digital Subscriber Line system, the same company which provides phone connection is also an ISP. The internet is provided through the pre-installed telephone lines.

3. The function of DSLAM is to _____
- a) Convert analog signals into digital signals
 - b) Convert digital signals into analog signals
 - c) Amplify digital signals

d) De-amplify digital signals

[View Answer](#)

Answer: a

Explanation: DSLAM stands for Digital Subscriber Line Access Multiplexer and it's used by Telcos to convert the analog signals to digital signals for the purpose of providing internet. The DSLAM located in a telco's Central Office does this function.

4. Which of the following terms is not associated with DSL?

a) DSLAM

b) CO

c) Splitter

d) CMTS

[View Answer](#)

Answer: d

Explanation: CMTS stands for Cable modem termination system. It is used in cable internet access. In cable internet access, internet is not provided through telephone lines and the companies that provide such connections don't necessarily provide telephone access.

5. HFC contains _____

a) Fibre cable

b) Coaxial cable

c) A combination of Fibre cable and Coaxial cable

d) Twisted Pair Cable

[View Answer](#)

Answer: c

Explanation: Hybrid fiber-coaxial (HFC) is a telecommunications industry term for a broadband network that combines optical fiber and coaxial cable. It has been popularly used since the early 1990s. It is stronger than the optical fiber cables and faster than the co-axial cables.

6. Which of the following statements is not applicable for cable internet access?

a) It is a shared broadcast medium

b) It includes HFCs

c) Cable modem connects home PC to Ethernet port

d) Analog signal is converted to digital signal in DSLAM

Answer: d

Explanation: CMTS stands for Cable modem termination system. In cable access analog signal is converted to digital signal by CMTS. In cable internet access, internet is not provided through telephone lines. DSLAM is used by Telecom companies.

7. Among the optical-distribution architectures that are essentially switched ethernet is

a) AON

b) PON

c) NON

d) MON

[View Answer](#)

Answer: a

Explanation: AON stands for Active optical networks which are essentially switched Ethernets. Each user has his/her own dedicated optical fiber line connecting to the ISP in an AON.

8. StarBand provides _____

- a) FTTH internet access
- b) Cable access
- c) Telephone access
- d) Satellite access

[View Answer](#)

Answer: d

Explanation: StarBand was a two-way satellite broadband Internet service available in the U.S. from 2000–2015. It was discontinued from September 30 2015 due to increasing competition from other ISPs.

9. Home Access is provided by _____

- a) DSL
- b) FTTP
- c) Cable
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: Home Internet Access is provided by DSL, FTTP, and Cable. FTTP provides the fastest speeds followed by the cable connections and then the DSLs. FTTP is popularly used in modern connections.

10. ONT is connected to splitter using _____

- a) High speed fibre cable
- b) HFC
- c) Optical cable
- d) Twisted pair cable

[View Answer](#)

Answer: c

Explanation: ONT stands for Optical Network Terminal. The ONT connects to the Termination Point (TP) with an optical fibre cable. It translates light signals from the fibre optic line to electric signals that the router can read.

11. Which of the following factors affect transmission rate in DSL?

- a) The gauge of the twisted-pair line
- b) Degree of electrical interference
- c) Shadow fading
- d) The gauge of the twisted-pair line and degree of electrical interference

[View Answer](#)

Answer: d

1. The network layer is concerned with _____ of data.

- a) bits
- b) frames
- c) packets
- d) bytes

[View Answer](#)

Answer: c

Explanation: In computer networks, the data from the application layer is sent to the transport

layer and is converted to segments. These segments are then transferred to the network layer and these are called packets. These packets are then sent to data link layer where they are encapsulated into frames. These frames are then transferred to physical layer where the frames are converted to bits.

2. Which one of the following is not a function of network layer?

- a) routing
- b) inter-networking
- c) congestion control
- d) error control

[View Answer](#)

Answer: d

Explanation: In the OSI model, network layer is the third layer and it provides data routing paths for network communications. Error control is a function of the data link layer and the transport layer.

3. A 4 byte IP address consists of _____

- a) only network address
- b) only host address
- c) network address & host address
- d) network address & MAC address

[View Answer](#)

Answer: c

Explanation: An ip address which is 32 bits long, that means it is of 4 bytes and is composed of a network and host portion and it depends on address class. The size of the host address and network address depends upon the class of the address in classful IP addressing.

4. In virtual circuit network each packet contains _____

- a) full source and destination address
- b) a short VC number
- c) only source address
- d) only destination address

[View Answer](#)

Answer: b

Explanation: A short VC number also called as VCID (virtual circuit identifier) is a type of identifier which is used to distinguish between several virtual circuits in a connection oriented circuit switched network. Each virtual circuit is used to transfer data over a larger packet switched network.

5. Which of the following routing algorithms can be used for network layer design?

- a) shortest path algorithm
- b) distance vector routing
- c) link state routing
- d) all of the mentioned

[View Answer](#)

Answer: d

Explanation: The routing algorithm is what decides where a packet should go next. There are several routing techniques like shortest path algorithm, static and dynamic routing, decentralized routing, distance vector routing, link state routing, Hierarchical routing etc. The routing algorithms go hand in hand with the operations of all the routers in the networks. The routers are the main participants in these algorithms.

6. Which of the following is not correct in relation to multi-destination routing?

- a) is same as broadcast routing
- b) contains the list of all destinations
- c) data is not sent by packets
- d) there are multiple receivers

[View Answer](#)

Answer: c

Explanation: In multi-destination routing, there is more than one receiver and the route for each destination which is contained in a list of destinations is to be found by the routing algorithm. Multi-destination routing is also used in broadcasting.

7. A subset of a network that includes all the routers but contains no loops is called _____

- a) spanning tree
- b) spider structure
- c) spider tree
- d) special tree

[View Answer](#)

Answer: a

Explanation: Spanning tree protocol (STP) is a network protocol that creates a loop free logical topology for ethernet networks. It is a layer 2 protocol that runs on bridges and switches. The main purpose of STP is to ensure that you do not create loops when you have redundant paths in your network.

8. Which one of the following algorithm is not used for congestion control?

- a) traffic aware routing
- b) admission control
- c) load shedding
- d) routing information protocol

[View Answer](#)

Answer: d

Explanation: The Routing Information Protocol (RIP) is used by the network layer for the function of dynamic routing. Congestion control focuses on the flow of the traffic in the network and uses algorithms like traffic aware routing, admission control and load shedding to deal with congestion.

9. The network layer protocol for internet is _____

- a) ethernet
- b) internet protocol
- c) hypertext transfer protocol
- d) file transfer protocol

[View Answer](#)

Answer: b

Explanation: There are several protocols used in Network layer. Some of them are IP, ICMP, CLNP, ARP, IPX, HRSP etc. Hypertext transfer protocol is for application layer and ethernet protocol is for data link layer.

10. ICMP is primarily used for _____

- a) error and diagnostic functions
- b) addressing
- c) forwarding

d) routing

[View Answer](#)

Answer: a