

- Q.1)** What does it mean if a protocol is stateless?  
A: If a stateless protocol is used, it cannot be traced.  
**B: Server responds to a request, and then forgets about it**  
C: Client responds to server request and keeps track of the conversation.  
D: If a protocol is stateless, it means it is unreliable
- Q.2)** Identify the FALSE statement  
A: Wireless LAN and Ethernet are broadcast medium  
**B: Wireless LAN & Ethernet cannot co-exist**  
C: WLAN provides less bandwidth compared to Gigabit Ethernet  
D: WLAN & Ethernet can use IP as their network layer protocol
- Q.3)** Which of the following statement about ICMP is FALSE?.  
A: ICMP sends 5 types of error reporting messages and 4 pairs of query messages to support unreliable and connection less IP  
B: The source-quench error message is sent in an effort to alleviate congestion  
C: The echo-request and echo-reply messages test the connectivity between 2 systems  
**D: ICMP messages are not encapsulated in IP datagram**
- Q.4)** Which of the following is not part of IP header?  
**A: Window size**  
B: Fragment offset  
C: Header checksum  
D: Time to live
- Q.5)** Which of these commands displays the IP address and MAC address mappings known to a windows system?  
A: Netstat -a  
B: Tracert  
C: Ipconfig  
**D: Arp -a**
- Q.6)** Match the following with the corresponding protocols  
a) IP to host name resolution      i) ICMP Internet Control Message Protocol  
b) Accessing mail account      ii) ARP Address Resolution Protocol  
c) Who owns IP address 172.16.1.2?      iii) DNS  
d) Destination unreachable      iv) IMAP Internet Message Access Protocol  
  
A: a-iii, b-i, c-ii, d-iv  
B: a-ii, b-iv, c-iii, d-i  
**C: a-iii, b-iv, c-ii, d-i**  
D: a-ii, b-iii, c-iv, d-I
- Q.7)** Which of the following statements is a true description of fiber Optic Cable.  
A: Fiber optic cables transfer data in a mesh  
B: Fiber optic cables are similar to coaxial cables  
**C: Fiber optic cables transfer data in light form**  
D: Fiber optic cable are similar to twisted pair cables
- Q.8)** What is the maximum data field length (MTU) supported by the Ethernet?  
**A: 1500 Bytes**  
B: 1518 Bytes  
C: 1400 Bytes  
D: 1024 Bytes

**Q.9)** For which of the following is UDP unsuitable? Choose the most appropriate answer.

- A: DNS
- B: Multicasting
- C: RTP
- D: SMTP**

**Q.10)** The routing table of the router is shown below:

Destination	Subnet Mask	Interface
192.168.43.0	255.255.255.0	eth0
192.168.43.0	255.255.255.128	eth1
192.12.17.5	255.255.255.255	eth3
Default		eth2

On which interface will the router forward packets addressed to destinations 192.168.43.16 and 192.168.17.10

- A: eth1 and eth2**
- B: eth0 and eth2
- C: eth0 and eth3
- D: eth1 and eth3

**Q.11)** Which of the following uniquely identifies a TCP connection?

- A: Sender IP, Receiver IP
- B: Sender port, Receiver port**
- C: Sender IP & Sender Port, Receiver IP & Receiver Port
- D: Sender MAC & Sender IP, Receiver MAC & Receiver IP

**Q.12)** Which of this IEEE standard defines Token Ring?

- A: 802.11
- B: 802.3
- C: 802.7
- D: 802.5**

**Q.13)** Which type of Packet (or Address) is not supported in IPV6?

- A: Unicast
- B: Multicast
- C: Broadcast**
- D: Anycast

**Q.14)** Match the following

- |                      |         |
|----------------------|---------|
| i. UTP               | 1. RJ11 |
| ii. Serial Interface | 2. RJ45 |
| iii. Telephone.      | 3. V.35 |

A: UTP-RJ11,Serial I/F – RJ45, Telephone – V.35

**B: UTP-RJ45,Serial I/F – V.35, Telephone – RJ11**      Unshielded Twisted Pair.

C: UTP-V.35,Serial I/F – RJ45 Telephone – RJ11

D: UTP-RJ45,Serial I/F – RJ11, Telephone – V.35

**Q.15)** After a host name is resolved to an IP address, what does a local host need to do next to communicate with the target host if the target host resides on the same subnet?

- A: Resolve the IP address to physical address using ARP
- B: Update routing table
- C: Resolve the IP address to physical address using RARP
- D: Send the packet to the default Router

**Q.16)** A hub connects 24 computers. In that A and B are two machines. A sends data to B. How many computers will receive that data?

- A: Only B will receive
- B: All 24 computers will receive
- C: Only A and B will receive
- D: All computers except A will receive

**Q.17)** Which type of NAT maps private IP address to a public IP address on one to one basis?

- A: Static NAT
- B: Dynamic NAT
- C: Port Address Translation
- D: None

**Q.18)** Which of the following TCP flag is set in the first packet that goes from the web client to a web server while opening a web site?

- A: SYN
- B: RST
- C: ACK
- D: URG

**Q.19)** Which of the statements is not true related to a network switch?

- A: All the computers connected to a switch are in a same broadcast domain
- B: Each port of a switch is a different broadcast domain
- C: The switch uses source and destination MAC address fields in Ethernet frames to create MAC table
- D: Each port of a switch is a different collision domain

**Q.20)** Which of this device stops MAC address broadcasts and thus separates two broadcast domains?

- A: Switch
- B: HUB
- C: Repeater
- D: Router

**Q.21)** A computer is given an IP address as 192.168.100.35 with a subnet mask of 255.255.255.224. Which of this IP address is not in the same IP subnet as this computer?

- A: 192.168.100.33
- B: 192.168.100.55
- C: 192.168.100.60
- D: 192.168.100.65

**Q.22)** What will be the broadcast address for the network 10.10.0.0 with subnet mask 255.255.0.0?

- A: 10.10.0.255
- B: 10.10.255.254
- C: 10.10.255.255
- D: 10.10.255.0

**Q.23)** What is the correct representation of following IPV6 address 3ffe:3700:0200:00ff:0000:0000:0000:0001?

- A: 3ffe:3700:02:ff::1
- B: 3ffe:3700:200:ff::1
- C: 3ffe:37:2:00ff::1
- D: 3ffe:37:200:ff::1

**Q.24)** Assume you are working on a PC and you are typing www.somesite.in . but you are not able to connect to it, but when you try 202.141.151.33 you are able to connect. What might be wrong? (assuming IP address of www.somesite.in is 202.141.151.33)

- A: The company firewall restricts the access to websites
- B: A virus could have caused the problem
- C: The DNS server or DNS settings are not properly configured
- D: The PC is configured to accept only IP address

**Q.25)** Which OS command shows the routing table of the machine?

- A: arp -all
- B: netstat -r
- C: showroute -all
- D: systems does not have the routing tables only routers have the routing tables

**Q.26)** Correctly match the "Layer Name" with the "Name of the unit exchanged" at that Layer.

- |                    |           |
|--------------------|-----------|
| A) Physical layer  | i) Packet |
| B) Data link layer | ii) TPDU  |
| C) Network Layer   | iii) Bit  |
| D) Transport Layer | iv) Frame |
- A: A- iii, B- i, C-ii, D-iv  
B: A- iii, B- iv, C- ii, D- i  
C: A-iv, B-iii, C-ii, D-I  
D: A - iii, B - iv, C - i, D – ii

**Q.27)** Which of this is a routed protocol?

- A: IP
- B: RIP
- C: OSPF
- D: EIGRP

**Q.28)** Which of the following is the issue NOT addressed by the IP protocol at Network Layer.

- A: Addressing
- B: Subnetting
- C: Routing
- D: Circuit setup

**Q.29)** Which of the OSI layers defines encryption technologies to protect transmitted data?

- A: Application Layer
- B: Session Layer
- C: Presentation Layer
- D: Physical Layer

**Q.30)** Which all transport layer header flags are involved while establishing a connection?

- A: SYN and FIN
- B: SYN and ACK
- C: SYN , ACK and FIN
- D: FIN and ACK

**Q.31)** FTP at the Application Layer, TCP at the Transport Layer, IP at the Network Layer and 802.3 at the Data Link Layer would be representing a system in \_\_\_\_

- A: LAN
- B: MAN
- C: WAN
- D: WLAN

**Q.32)** Which TCP/IP layer attaches a header and trailer to the transmitting data?

- A: Application Layer
- B: Data Link Layer
- C: Transport Layer
- D: Network Layer

**Q.33)** What is the principle difference between CDMA and GSM?

- A: GSM and CDMA use the same technology but difference is in the handset
- B: GSM uses TDMA while CDMA uses Spread Spectrum modulation
- C: GSM phones can be used with CDMA , but the other way around is not possible
- D: CDMA uses TDM While GSM uses FDM

**Q.34)** Which of the following is FALSE for VLANs?

- A: Segmented by port or MAC address
- B: Span multiple switches
- C: No routing is needed for connectivity between VLANS
- D: VLANS operates at layer 2

**Q.35)** \_\_\_in Example of Physical Address and \_\_\_ is an example of logical address

- A: IP Address, MAC Address
- B: MAC address, Sequence Number
- C: **MAC address, IP Address**
- D: Sequence Number, IP Address

**Q.36)** Which of the following statement is not true related to Multi-mode Fiber optic cable?

- A: It suffers a lot from high dispersion and attenuation rates.
- B: It is used for short distance communication.
- C: It uses a large diameter fiber optic core.
- D: **It has very low dispersion and attenuation rates.**

**Q.37)** Which of the Wireless standard works only on 5GHz band?

- A: **802.11a**
- B: 802.11b
- C: 802.11g
- D: 802.11n

**Q.38)** How to set the privileged mode password in cisco router?

- A: router> password cdac
- B: router # enable password cdac
- C: router > enable password cdac
- D: **router(config)# enable password cdac**

**Q.39)** Administrator have configured an inbound access list on a serial interface to deny the packet entry for tcp and udp port 21,23,25. Now, what type of packet will be passing through the network :

- A: SMTP
- B: TELNET
- C: **HTTP**
- D: FTP

**Q.40)** If a PC does not have network connectivity to a router, which router port can be used to establish communication?

- A: Ethernet
- B: **Console**
- C: VTY
- D: Serial

### **Module Name: Fundamentals of Computers and Networks (FCN)**

#### **Session 1:**

**Q.No.1.** The maximum frame size supported by a communication link is known as?

- A: Load
- B: Reliability
- C: **MTU**
- D: Delay

#### **Session 2:**

**Q.No.3.** Which of the following IP Header field is used by the traceroute (tracert) command to find the route to the destination?

- A: TTL      B: Header Length      C: Version      D: Flags

**Q.No.4.** Which of the following command allows you to release IP address assigned to the computer and get it renewed from the DHCP server?

- A: netstat      B: ipconfig      C: arp      D: tracert

**Q.No.5.** Which of the following command allows you to view the IP address and MAC address mapping that the computer has learned over the network?

- A: netstat      B: ipconfig      C: arp      D: ping

### Session 3:

**Q.No.6.** Which of the following cable can be used for long distance reliable connectivity?

- A: UTP Cable      B: Multi Mode Fiber  
C: STP Cable      D: Single Mode Fiber

Shielded Twisted Pair

**Q.No.7.** Which of the following statement is true about the STP cable?

- A: It can be used for a distance more than 100 meters.  
B: supports more throughput as it has more cores than UTP  
C: It is less affected by the Electro Magnetic Interference than UTP  
D: It uses Infrared light for data transmission.

### Session 4

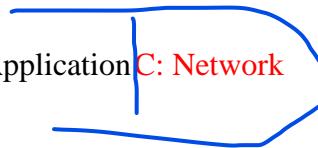
**Q.No.8.** Which of the following OSI layer states the requirement of an address like the MAC address?

- A: Physical      B: Data Link      C: Network      D: Transport

**Q.No.9.** Which of the following OSI layer works to provide host to host reliable data transfer?

- A: Transport      B: Network      C: Presentation      D: Physical

**Q.No.10.** Which of the following OSI layer is not mapped by the Application layer of the TCP/IP model?

- A: Session      B: Application      C: Network      D: Presentation
- 

## Session 5

**Q.No.11.** Which of the following function is provided by the data link layer in the Ethernet technology?

- A: Error Correction      B: Encryption  
C: Route Identification      D: Error Detection

**Q.No.12.** Which of the following ICMP packet is sent by the host when you ping to a network computer from it?

- A: Echo Reply      B: Ping request      C: Echo request      D: Ping reply

**Q.No.13.** Which of the following device can function at Layer 2 and layer 3?

- A: Hub      B: Switch      C: Repeater      D: Bridge

## Session 6

**Q.No.14.** What is the first field of the Ethernet frame without considering Preamble?

- A: Source MAC Address      B: Type  
C: DATA      D: Destination MAC Address

**Q.No.15.** What is Fast Ethernet?

- A: It supports 10/100 Mbps speed      B: It supports only 10 Mbps speed  
C: It supports only 100 Mbps speed      D: It supports 1 Gbps speed

**Q.No.16.** What is the maximum frame size supported by the Ethernet?

- A: 64 Bytes      B: 600 Bytes      C: 1518 Bytes      D: 1024 Bytes

## Session 7

**Q.No.17.** Which of the following technology is defined by the IEEE 802.5 specification?

- A: Wireless      B: Token Ring      C: Ethernet      D: Frame Relay

**Q.No.18.** What is the maximum speed supported by the Token Ring network while using Twisted pair cables?

A: 16 Mbps

B: 8 Mbps

C: 100 Mbps

D: 1 Gbps

## Session 8 & 9

**Q.No.19.** Which of the following is the **WAN protocol** that supports authentication?

A: X.25

**B: PPP**

C: IP

D: Frame Relay

**Q.No.20.** Which of the following authentication protocol provides password security by not transmitting the actual password over the link? .

A: LAPB

B: PAP

C: Frame Relay

**D: CHAP**

**Q.No.21.** Which of the following protocol allows you to trap particular events taking place on a system and send them to a central monitor system?

A: ICMP

B: NTP

**C: SNMP**

D: PPTP

Simple Network Management Protocol

**Q.No.22.** Which of the following protocol is used by the devices to send error messages regarding the communication to the source?

**A: ICMP**

B: IP

C: TCP

D: SNMP

Internet Control Message Protocol

## Session 10

**Q.No.23.** Which of the following Wi-Fi security option makes use of RADIUS server to provide additional security?

A: WEP

B: WPA-Personal

**C: WPA-Enterprise**

D: TKIP

**Q.No.24.** What is the length of the IPV6 address?

A: 64 Bit

B: 32 Bit

C: 256 Bit

**D: 128 Bit**

**Q.No.25.** What is the correct EUI-64 representation of the MAC address 00-02-4A-57-6B-73?

A: 0002:FFFE:4A57:6B73

**B: 0002:4AFF:FE57:6B73**

C: 0002:4A57:FFFE:6B73

D: 0202:4AFF:FE57:6B73

**Q.No.26.** Which of the following IEEE standard for wireless networks supports streaming of multimedia files?

**A: 802.11a**

B: 802.11e

C: 802.11g

D: 802.11n

## Session 11

**Q.No.27.** What will be the subnet mask if 18 bits are reserved for the network addressing?

- A: 255.255.192.0      B: 255.255.255.192      C: 255.192.0.0D: 255.255.0.0

**Q.No.28.** Which of the following NAT option allows multiple LAN clients to use same public IP address to access internet?

- A: Static NAT B: Dynamic NAT      C: **NAT Overload**      D: DNAT

**Q.No.29.** How many hosts you get within a IP subnet, with the subnet mask of /19?

- A: 64 Hosts      B: 16 Hosts      C: 8 Hosts      D: **32 Hosts**

**Q.No.30.** Which of the following is the broadcast address for a network address and subnet mask combination of 192.168.10.0 / 255.255.255.240?

- A: 192.168.10.18      B: **192.168.10.47**      C: 192.168.10.54      D: 192.168.10.125

## Session 12

**Q.No.31.** You have configured routers between 4 IP subnets. You have subnetted a network address 192.168.1.0 to create 4 IP subnets. You have configured RIP however the network is not established. What may be the reason?

- A: You configured RIP version 1      B: RIP does not support IPv4  
C: You forgot to enter static routes      D: RIP is not a routing protocol

**Q.No.32.** What is the default administrative distance for OSPF?

- A: 90      B: 100      C: **110**      D: 120

**Q.No.33.** Which of the following protocol does not support Variable Length Subnet mask?

- A: EIGRP      B: OSPF      C: RIP v2      D: **IGRP**

## Session 13

**Q.No.34.** Which of the following header field of the IP protocol is reduced by 1 by each router before forwarding the IP packet?

- A: Header Length      B: Destination IP address  
C: **TTL**      D: Source IP address

**Q.No.35.** Which of the following IP header field flag is used by the TCP protocol to find the MTU supported between the source and the destination?

- A: TTL      **B: Don't Fragment**      C: More Fragments      D: HLEN

**Q.No.36.** Which of the following ICMP packet type is used by the routers to inform source when the TTL value in the packet becomes zero.

- A: 0      B: 3      **C: 11**      D: 8

## Session 14

**Q.No.37.** Which of the following protocol on manageable switches helps to avoid switching loops?

- A: ICMP      B: VTP      C: NNTP      **D: STP**

**Q.No.38.** Which of the following protocol helps admin replicate the VLAN information across multiple switches within the network?

- A: VTP**      B: STP      C: ICMP      D: SNMP

**Q.No.39.** How many collision domains are created by a HUB?

- A: 1**      B: 2      C: 255      D: Depends on no. of ports

**Q.No.40.** How many broadcast domains will be created by a 24 port switch with the default configuration?

- A: 24      B: 2      **C: 1**      D: 255

## **Q. No. 1**

### **Question:**

Which functions of the OSI model occur at layer two?

### **Answer Choices**

A: physical addressing

B: encoding

C: routing

D: cabling

## **Q. No. 2**

### **Question:**

A technician is asked to secure the privileged EXEC mode of a switch by requiring a password. Which type of password would require this login and be considered the most secure?

### **Answer Choices**

A: console

B: enable

C: enable secret

D: VTY

## **Q. No. 3**

### **Question:**

Which OSI layer does IP rely on to determine whether packets have been lost and to request retransmission?

### **Answer Choices**

A: application

B: presentation

C: session

D: transport

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## **Q. No. 4**

### **Question:**

When connectionless protocols are implemented at the lower layers of the OSI model, what is usually used to acknowledge that the data was received and to request the retransmission of missing data?

### **Answer Choices**

A: IP

B: UDP

C: Ethernet

D: an upper-layer, connection-oriented protocol or service

## **Q. No. 5**

### **Question:**

Which subnet mask will allow 2040 hosts per subnet on the IP network 10.0.0.0?

### **Answer Choices**

A: 255.255.0.0

B: 255.255.254.0

C: 255.255.252.0

D: 255.255.248.0

## **Q. No. 6**

### **Question:**

Which statement is true about the TTL value of an IPv4 packet?

### **Answer Choices**

- A: It determines the priority of a packet.
- B: It specifies the remaining "life" of the packet.
- C: It indicates that the packet has been fragmented.
- D: It denotes the data payload type that the packet is carrying.

**Q. No. 7**

**Question:**

What type of network is maintained if a server takes no dedicated role in the network?

**Answer Choices**

- A: mainframe
  - B: client/server
  - C: peer-to-peer
  - D: centralized
- 

**Q. No. 8**

**Question:**

A routing issue has occurred in your internetwork. Which of the following type of devices should be examined to isolate this error?

**Answer Choices**

- A: access point
- B: hub
- C: router
- D: switch

**Q. No. 9**

**Question:**

A user sees the command prompt: Router(config-if)#. What task can be performed at this mode?

**Answer Choices**

- A: Reload the device.
- B: Perform basic tests.
- C: Configure individual interfaces.
- D: Configure individual terminal lines.

**Q. No. 10**

**Question:**

What information can be gathered by using the command netstat?

**Answer Choices**

- A: the default gateway
  - B: the routing protocol
  - C: active TCP connections
  - D: the locally configured subnet mask
- 

**Q. No. 11**

**Question:**

How can ARP be used to help document the network?

**Answer Choices**

- A: It can list each hop on the way to a destination host.
- B: It can show the average latency of hosts on the network.
- C: **It can provide a list of physical addresses on the network.**
- D: It can indicate which hosts are not responding to network traffic.

**Q. No. 12**

**Question:**

What is the protocol data unit that is associated with the data link layer of the OSI reference model?

**Answer Choices**

- A: data
- B: **frame**
- C: packet
- D: segment

**Q. No. 13**

**Question:**

Which application layer protocol allows administrators to log into a server from remote locations and control a server as though logged in locally?

**Answer Choices**

- A: DNS
- B: FTP
- C: SMTP
- D: **Telnet**

**Q. No. 14**

**Question:**

Which statement identifies the DNS protocol?

**Answer Choices**

- A: It transmits information using TCP port 25.
  - B: It transfers and conveys information using HTML pages.
  - C: **It matches a resource name with the required network address.**
  - D: It requests and assigns an IP address, default gateway, and server addresses to hosts.
- 

**Q. No. 15**

**Question:**

Which password would allow a user to establish a Telnet session with a Cisco device?

**Answer Choices**

- A: **VTY password**
- B: enable password
- C: console password
- D: enable secret password

**Q. No. 16**

**Question:**

Which identifier is contained in the header of the Layer 2 Ethernet frame?

**Answer Choices**

- A: timing and synchronization of bits
- B: source and destination port numbers
- C: logical source and destination addresses
- D: **physical source and destination addresses**

**Q. No. 17**

**Question:**

What happens when a node on an Ethernet network is creating a frame and it does not have the destination MAC address?

**Answer Choices**

- A: The node drops the frame.
  - B: The node sends out a Layer 3 broadcast message.
  - C: The node sends a message directly to the router for the address.
  - D: **The node sends out an ARP request with the destination IP address.**
- 

### **Q. No. 18**

#### **Question:**

An administrator makes changes to the default configuration of a router and saves them to NVRAM. After testing, it is discovered that the configurations did not have the desired effect and must be removed. What steps must be taken to remove the changes and return the router to the default configuration?

#### **Answer Choices**

- A: Reboot the router.
- B: Use no version of the commands that are issued.
- C: **Issue the erase startup-config command, and then reboot the router.**
- D: Issue the erase running-config command, and then reboot the router.

### **Q. No. 19**

#### **Question:**

A network administrator is tasked with connecting two workgroups that are configured to use different subnets. Which device should be selected to allow connectivity between users on the two networks?

#### **Answer Choices**

- |                  |                          |
|------------------|--------------------------|
| A: hub           | B: switch                |
| C: <b>router</b> | D: wireless access point |

### **Q. No. 20**

#### **Question:**

Which program can be used to accomplish terminal emulation for configuring a router from the CLI through the console port?

#### **Answer Choices**

- |                         |                      |
|-------------------------|----------------------|
| A: <b>HyperTerminal</b> | B: Internet Explorer |
| C: Secure Shell         | D: Telnet            |

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### **Q. No. 21**

**Question:**

Which statement accurately describes file sharing in a peer-to-peer network?

**Answer Choices**

- A: A dedicated server is required.
- B: Access control is decentralized.
- C: Files are typically stored on the most powerful peer in the network.
- D: Peers can either make requests, or respond to requests, but not both.

**Q. No. 22****Question:**

What is primary responsibilities of the Ethernet MAC sublayer?

**Answer Choices**

- A: frame delimiting
- B: data encapsulation
- C: logical addressing
- D: error detection

**Q. No. 23****Question:**

Which router configuration mode would an administrator use to configure the router for SSH or Telnet login access?

**Answer Choices**

- A: line
- B: router
- C: global
- D: interface

**Q. No. 24****Question:**

What purpose does a hostname serve on a router?

**Answer Choices**

- A: uniquely identifies a router on the internet
  - B: used by routing protocols to identify peer routers
  - C: provides device identification to users logging on remotely
  - D: determines the hosts that are allowed to connect to the device
- 

**Q. No. 25****Question:**

Which prompt is associated with the privileged exec mode?

**Answer Choices**

- A: R1>
- B: R1#
- C: R1(config)#
- D: R1(config-router)#

**Q. No. 26****Question:**

A technician wishes to connect two computers to move data from one to the other before reloading the operating system. The NICs on both PCs do not support autosensing feature. Which procedure will satisfy the requirement?

**Answer Choices**

- A: Interconnect the two PCs with a rollover cable.
- B: Interconnect the two PCs with two rollover cables and a hub.
- C: Interconnect the two PCs with a crossover cable.
- D: Interconnect the two PCs with two crossover cables and a hub.

**Q. No. 27**

**Question:**

Two routers are connected via their serial ports in a lab environment. The routers are configured with valid IP addresses, but they cannot ping each other. The show interface serial0/0 command shows that the serial0/0 interface is up but the line protocol is down. What could be the cause of this problem?

**Answer Choices**

- A: The no shutdown command has not been applied to the interfaces.
  - B: The clock rate command has not been entered on the DCE interface.
  - C: The interface timers are not cleared.
  - D: The Fast Ethernet interface is emulating a serial interface by assigning it a timing signal.
- 

**Q. No. 28****Question:**

An organization has been assigned network ID 10.10.128.0 and subnet mask 255.255.224.0. Which IP address range can be used for this organization?

**Answer Choices**

- A: 10.10.128.0 to 10.10.160.255
- B: 10.10.128.0 to 10.10.159.255
- C: 10.10.128.0 to 10.10.192.255
- D: 10.10.128.0 to 10.10.0.159

**Q. No. 29****Question:**

When must a router serial interface be configured with the clock rate command?

**Answer Choices**

- A: when the interface is functioning as a DTE device
- B: when the interface timers have been cleared
- C: when the connected DTE device is shut down
- D: when the interface is functioning as a DCE device

**Q. No. 30****Question:**

Due to a security violation, the router passwords must be changed. What information can be learned from the following configuration entries?

```
Router(config)# line vty 0 3  
Router(config-line)# password c13c0  
Router(config-line)# login
```

**Answer Choices**

- A: The entries specify three Telnet lines for remote access.
- B: The entries specify four Telnet lines for remote access.
- C: The entries set the console and Telnet password to "c13c0".
- D: Telnet access will be denied because the Telnet configuration is incomplete.

---

**Q. No. 31****Question:**

Which password is automatically encrypted when it is created?

**Answer Choices**

- A: vty
- C: enable secret**

- B: console
- D: enable password

**Q. No. 32****Question:**

Which prompt represents the appropriate mode used for the copy running-config startup-config command?

**Answer Choices**

- A: Switch-6J>
- C: Switch-6J (config) #

- B: Switch-6J#**
- D: Switch-6J (config-if) #

**Q. No. 33****Question:**

Which information is used by the router to determine the path between the source and destination hosts?

**Answer Choices**

- A: the host portion of the IP address
- B: the network portion of the IP address**
- C: host default gateway address
- D: the MAC address

**Q. No. 34****Question:**

Well-known services and applications use which range of TCP/UDP port numbers?

**Answer Choices**

- A: 0 to 255
- C: 1024 to 49151

- B: 0 to 1023**
- D: 49152 to 65535

---

**Q. No. 35****Question:**

Which IPv4 address represents subnet broadcast addresses?

**Answer Choices**

- A: 192.168.4.63 /26**
- C: 192.168.4.51 /27

- B: 192.168.4.129 /26
- D: 192.168.4.221 /27

**Q. No. 36****Question:**

Which statement is true about network layer addressing?

**Answer Choices**

- A: The addresses are 48 bits long.
- B: Network layer addressing is used by Ethernet switches to make forwarding decisions.

C: A portion of the address is used to identify the network.

D: It does not support broadcasts.

**Q. No. 37**

**Question:**

Which OSI layer addressing is required to route packets between two networks?

**Answer Choices**

A: Layer 1

B: Layer 2

C: Layer 3

D: Layer 4

**Q. No. 38**

**Question:**

How many host addresses may be assigned when using the 128.107.0.0 network address with a subnet mask of 255.255.248.0?

**Answer Choices**

A: 30

B: 256

C: 2046

D: 2048

---

**Q. No. 39**

**Question:**

During the encapsulation process, what is the PDU of the internet layer?

**Answer Choices**

A: bit

B: data

C: frame

D: packet

**Q. No. 40**

**Question:**

Which service is used when the nslookup command is issued on a computer?

**Answer Choices**

A: FTP

B: DNS

C: DHCP

### **Q. No. 1**

#### **Question:**

What are the default terminal emulation software settings when configuring a Cisco device through a console port?

#### **Answer Choices**

A: Bits per second: 19200

    Data bits: 7

    Parity: None

    Stop bits: 0

    Flow control: None

B: Bits per second: 9600

    Data bits: 8

    Parity: None

    Stop bits: 1

    Flow control: None

C: Bits per second: 19200

    Data bits: 7

    Parity: None

    Stop bits: 0

    Flow control: Hardware

D: Bits per second: 9600

    Data bits: 8

    Parity: None

    Stop bits: 1

    Flow control: Hardware

### **Q. No. 2**

#### **Question:**

In a packet-switched data network, what is used to reassemble the packets in the correct order at the destination device?

#### **Answer Choices**

A: source address

B: sequence number

C: priority assignment

D: destination address

### **Q. No. 3**

#### **Question:**

Which router configuration mode will require user authentication if an administrator issues the enable secret command?

#### **Answer Choices**

A: user executive mode

B: privileged executive mode

C: global configuration mode

D: service specific configuration mode

**Q. No. 4****Question:**

Which location of router memory is cleared with the erase startup-config command?

**Answer Choices**

- A: flash
- B: RAM
- C: ROM
- D: **NVRAM**

**Q. No. 5****Question:**

Which subnet mask should be used for a Class B network that is divided into subnets and will accommodate between 800 hosts and 1000 hosts?

**Answer Choices**

- A: 255.255.255.0
- B: 255.255.254.0
- C: **255.255.252.0**
- D: 255.255.248.0

**Q. No. 6****Question:**

Which prompt is associated with the user exec mode?

**Answer Choices**

- A: R1>
- B: **R1#**
- C: R1(config)#
- D: R1(config-router)#

**Q. No. 7****Question:**

What is the effect of using the Router# copy running-config startup-config command on a router?

**Answer Choices**

- A: The contents of ROM will change.
- B: The contents of RAM will change.
- C: **The contents of NVRAM will change.**
- D: The contents of flash will change.

**Q. No. 8****Question:**

In a network design project, a network designer needs to select a device to provide collision free connections to 40 hosts on the LAN. Which device should be selected?

**Answer Choices**

- A: hub
- B: router
- C: **switch**
- D: firewall

**Q. No. 9****Question:**

Which communication tool allows real-time collaboration?

**Answer Choices**

- A: wiki
- B: e-mail

- C: weblog
- D: instant messaging

**Q. No. 10**

**Question:**

Which range of port numbers are reserved for services that are commonly used by applications that run on servers?

**Answer Choices**

- A: 0 to 255
- B: 0 to 1023
- C: 1024 to 49151
- D: 49152 to 65535

**Q. No. 11**

**Question:**

Which OSI layer manages data segments?

**Answer Choices**

- A: application layer
- B: presentation layer
- C: session layer
- D: transport layer

**Q. No. 12**

**Question:**

Which type of media can provide bandwidth up to 1 Gb/s?

**Answer Choices**

- A: 10 BASE-T
- B: 100 BASE-T
- C: 100 BASE-FX
- D: 1000 BASE-TX

**Q. No. 13**

**Question:**

A user enters <http://www.cisco.com/web1.htm> in the address line of a browser. Which statement is true about this transaction?

**Answer Choices**

- A: The “http” portion indicates the protocol that is being used.
- B: The “web1.htm” portion is the specific service name.
- C: The retrieved web page will be displayed in URL code.
- D: The “www.cisco.com” is the name of the web page file that is called

**Q. No. 14**

**Question:**

What can the user do from the command prompt, Router(config-line)#?

**Answer Choices**

- A: Configure one of the network interfaces.
- B: Configure one of the physical or virtual lines.
- C: Verify the running configuration on the device.
- D: Configure the parameters for one of the routing protocols.

**Q. No. 15**

**Question:**

A technician is setting up a workgroup for six users and wants to allow users to share files without setting up a server. Which application layer protocol will provide for peer-to-peer file sharing in a workgroup?

**Answer Choices**

- A: DNS
- B: **SMB**
- C: HTTP
- D: DHCP

**Q. No. 16**

**Question:**

Which router component will have contents erased when the command `erase startup-config` is issued?

**Answer Choices**

- A: flash
- B: RAM
- C: ROM
- D: **NVRAM**

**Q. No. 17**

**Question:**

What is described by the network access layer of the TCP/IP model?

**Answer Choices**

- A: **rules for packet acknowledgment, error recovery, and sequencing**
- B: rules for the handoff from the internet layer to the network access protocols
- C: rules for how source and destination hosts exchange data between programs
- D: rules for determining which processes can be used to route messages through an internetwork

**Q. No. 18**

**Question:**

A network technician has made a UTP cable that is terminated as T568A on one end and T568B on the opposite end. What type of cable has been constructed?

**Answer Choices**

- A: patch
- B: console
- C: **crossover**
- D: straight-through

**Q. No. 19**

**Question:**

Which application belongs to the category of the client/server model?

**Answer Choices**

- A: using Telnet to access a router
- B: exchanging information via instant messaging
- C: **printing a document to a locally connected printer**
- D: scanning a document with a directly connected scanner

**Q. No. 20**

**Question:**

What command can be used to troubleshoot domain name resolution issues?

**Answer Choices**

- A: get
- B: **arp -a**

- C: tracert
- D: nslookup

**Q. No. 21**

**Question:**

Which address belongs to the category of public IP addresses?

**Answer Choices**

- A: 127.0.0.1
- B: 196.1.105.6
- C: 10.0.0.1
- D: 172.16.9.10

**Q. No. 22**

**Question:**

What is the effect of the command copy running-config tftp?

**Answer Choices**

- A: copies the configuration from a remote machine into RAM
- B: copies the configuration from a remote machine into NVRAM
- C: copies the configuration currently in RAM to a remote machine
- D: copies the configuration currently in NVRAM to a remote machine

**Q. No. 23**

**Question:**

A technician makes several changes to the running configuration on a router, but the desired results are not achieved. The technician issues the reload command. What action will be taken by the router?

**Answer Choices**

- A: All changes will be lost and the router will restart immediately.
- B: Changes will be saved automatically and the router will restart.
- C: The user will be prompted to save changes before the router restarts.
- D: The router will detect changes to the running configuration and will reload using the configuration stored in RAM.

**Q. No. 24**

**Question:**

Which scenario describes a typical peer-to-peer network environment?

**Answer Choices**

- A: An employee downloads a file that is stored on a departmental file server.
- B: An employee edits and reviews web pages on a web server that is located in the server farm.
- C: A teleworker logs into a core router of the corporate network and makes a configuration change.
- D: A user on one office PC sends output to a printer that is attached to the USB port of another PC in an adjacent office.

**Q. No. 25**

**Question:**

What type of cable is being used if a network administrator is connecting two Cisco routers and uses the 100BaseTX standard?

**Answer Choices**

- A: rollover cable
- B: smart serial cable
- C: **crossover UTP**
- D: straight-through UTP

**Q. No. 26****Question:**

A PC cannot connect to any remote websites, ping its default gateway, or ping a printer that is functioning properly on the local network segment. Which action will verify that the TCP/IP stack is functioning correctly on this PC?

**Answer Choices**

- A: Use the ipconfig /all command at the host's command prompt.
- B: Use the ping 127.0.0.1 command at the command prompt.**
- C: Use the traceroute command at the command prompt to identify any failures on the path to the gateway.
- D: Use FTP to check for connectivity to remote sites.

**Q. No. 27****Question:**

What is purpose for configuring a banner on a router?

**Answer Choices**

- A: to announce system downtime
- B: to prevent unauthorized access to the router
- C: to provide a description of interface connections
- D: to assist in legal prosecution for unauthorized access**

**Q. No. 28****Question:**

Which device should be used for enabling a host to communicate with another host on a different network?

**Answer Choices**

- A: switch
- B: hub
- C: router**
- D: host

**Q. No. 29****Question:**

During the encapsulation process, what identifiers are added at the transport layer?

**Answer Choices**

- A: source and destination IP addresses
- B: source and destination MAC addresses

- C: source and destination port numbers
- D: source and destination channel identifiers

#### **Q. No. 30**

##### **Question:**

What action is taken by a host on an Ethernet network when the host attempts to contact a remote host on another network?

##### **Answer Choices**

- A: The PDU is sent using the IP and MAC address of the destination host.
- B: The PDU is sent using the IP address and MAC address of the default gateway.
- C: The PDU is sent using the IP address of the destination host and MAC address of the default gateway.
- D: The PDU is sent using the IP address of the default gateway and the MAC address of the destination host.

#### **Q. No. 31**

##### **Question:**

A network administrator needs to provide administrative access for certain users. Which mode will allow users access to both the show and debug commands?

##### **Answer Choices**

- A: user executive mode
- B: privileged executive mode
- C: global configuration mode
- D: router configuration mode

#### **Q. No. 32**

##### **Question:**

Which statement is true about Layer 3 addresses?

##### **Answer Choices**

- A: They are physical addresses.
- B: They are used in routing decisions.
- C: They are only used on local networks.
- D: They are altered each time a packet crosses a router.

#### **Q. No. 33**

##### **Question:**

A network technician wants to configure an IP address on a router interface by using the ip address 192.168.1.1 255.255.255.0 command. Which prompt should the technician see when entering this command?

##### **Answer Choices**

- A: Router>
- B: Router(config-if) #
- C: Router#
- D: Router(config)#

**Q. No. 34****Question:**

UDP is the transport layer protocol for which application?

**Answer Choices**

- A: SMTP
- B: Telnet
- C: **TFTP**
- D: FTP-data control

**Q. No. 35****Question:**

What is the Cisco IOS?

**Answer Choices**

- A: **system software for Cisco devices**
- B: Read Only Memory in Cisco devices
- C: non-volatile storage for device configurations
- D: an initial operating system that is used for boot functions

**Q. No. 36****Question:**

A network has grown too large for technicians to configure network addresses and hosts files for name resolution. Which one application layer services should be added to the server to allow these needs to be satisfied dynamically?

**Answer Choices**

- A: FTP
- B: **DHCP**
- C: HTTP
- D: SMTP

**Q. No. 37****Question:**

An administrator needs management access to a switch from a remote offsite location. Which configuration is required on the switch to allow the administrator to have remote access using either SSH or Telnet?

**Answer Choices**

- A: **default gateway**
- B: banner message
- C: **VLAN IP address**
- D: vty line password

**Q. No. 38****Question:**

Which command will change the current configuration mode of a router?

**Answer Choices**

- A: **line vty 0 4**
- B: password class
- C: hostname RouterA
- D: enable secret class

**Q. No. 39****Question:**

Which factor contributes to the increased throughput when all nodes of a LAN are connected to a switch instead of a hub?

**Answer Choices**

- A: **collision-free environment**
- B: logical bus media access
- C: broadcast-free environment
- D: point-to-multipoint topology

**Q. No. 40****Question:**

When must a router serial interface be configured with the clock rate command?

**Answer Choices**

- A: when the interface is functioning as a DTE device
- B: when the interface timers have been cleared
- C: when the connected DTE device is shut down
- D: **when the interface is functioning as a DCE device**

**Date:**

**Module Name: Fundamental of Computer Networks**

**Q. No. 1**

**Question:**

Which functions of the OSI model occur at layer two?

**Answer Choices**

A: physical addressing

C: routing

B: encoding

D: cabling

**Q. No. 2**

**Question:**

A technician is asked to secure the privileged EXEC mode of a switch by requiring a password. Which type of password would require this login and be considered the most secure?

**Answer Choices**

A: console

C: enable secret

B: enable

D: VTY

**Q. No. 3**

**Question:**

Which OSI layer does IP rely on to determine whether packets have been lost and to request retransmission?

**Answer Choices** transport

A: application

B: presentation

**Q. No. 4**

**Question:**

When connectionless protocols are implemented at the lower layers of the OSI model, what is usually used to acknowledge that the data was received and to request the retransmission of missing data?

**Answer Choices**

A: IP

B: UDP

C: Ethernet

D: an upper-layer, connection-oriented protocol or service

**Q. No. 5**

**Question:**

Which subnet mask will allow 2040 hosts per subnet on the IP network 10.0.0.0?

**Answer Choices**

- A: 255.255.0.0  
C: 255.255.252.0
- B: 255.255.254.0  
D: **255.255.248.0**

**Q. No. 6**

**Question:**

Which statement is true about the TTL value of an IPv4 packet?

**Answer Choices**

- A: It determines the priority of a packet.  
**B: It specifies the remaining “life” of the packet.**  
C: It indicates that the packet has been fragmented.  
D: It denotes the data payload type that the packet is carrying.

**Q. No. 7**

**Question:**

What type of network is maintained if a server takes no dedicated role in the network?

**Answer Choices**

- A: mainframe  
**C: peer-to-peer**
- B: client/server  
D: centralized

**Q. No. 8**

**Question:**

A routing issue has occurred in your internetwork. Which of the following type of devices should be examined to isolate this error?

**Answer Choices**

- A: access point  
**C: router**
- B: hub  
D: switch

**Q. No. 9**

**Question:**

A user sees the command prompt: Router(config-if)#. What task can be performed at this mode?

**Answer Choices**

- A: Reload the device.  
B: Perform basic tests.  
**C: Configure individual interfaces.**  
D: Configure individual terminal lines.

**Q. No. 10**

**Question:**

What information can be gathered by using the command netstat?

**Answer Choices**

- A: the default gateway  
B: the routing protocol

C: active TCP connections

D: the locally configured subnet mask

**Q. No. 11**

**Question:**

How can ARP be used to help document the network?

**Answer Choices**

A: It can list each hop on the way to a destination host.

B: It can show the average latency of hosts on the network.

C: It can provide a list of physical addresses on the network.

D: It can indicate which hosts are not responding to network traffic.

**Q. No. 12**

**Question:**

What is the protocol data unit that is associated with the data link layer of the OSI reference model?

**Answer Choices**

A: data

B: frame

C: packet

D: segment

**Q. No. 13**

**Question:**

Which application layer protocol allows administrators to log into a server from remote locations and control a server as though logged in locally?

**Answer Choices**

A: DNS

B: FTP

C: SMTP

D: Telnet

**Q. No. 14**

**Question:**

Which statement identifies the DNS protocol?

**Answer Choices**

A: It transmits information using TCP port 25.

B: It transfers and conveys information using HTML pages.

C: It matches a resource name with the required network address.

**Q. No. 15**

**Question:**

Which password would allow a user to establish a Telnet session with a Cisco device?

**Answer Choices**

A: VTY password

B: enable password

C: console password

D: enable secret password

## **Q. No. 16**

### **Question:**

Which identifier is contained in the header of the Layer 2 Ethernet frame?

### **Answer Choices**

- A: timing and synchronization of bits
- B: source and destination port numbers
- C: logical source and destination addresses
- D: physical source and destination addresses

## **Q. No. 17**

### **Question:**

What happens when a node on an Ethernet network is creating a frame and it does not have the destination MAC address?

### **Answer Choices**

- A: The node drops the frame.
- B: The node sends out a Layer 3 broadcast message.
- C: The node sends a message directly to the router for the address.
- D: The node sends out an ARP request with the destination IP address.

## **Q. No. 18**

### **Question:**

An administrator makes changes to the default configuration of a router and saves them to NVRAM. After testing, it is discovered that the configurations did not have the desired effect and must be removed. What steps must be taken to remove the changes and return the router to the default configuration?

### **Answer Choices**

- A: Reboot the router.
- B: Use no version of the commands that are issued.
- C: Issue the erase startup-config command, and then reboot the router.
- D: Issue the erase running-config command, and then reboot the router.

## **Q. No. 19**

### **Question:**

A network administrator is tasked with connecting two workgroups that are configured to use different subnets. Which device should be selected to allow connectivity between users on the two networks?

### **Answer Choices**

- A: hub
- B: switch
- C: router
- D: wireless access point

## **Q. No. 20**

### **Question:**

Which program can be used to accomplish terminal emulation for configuring a router from the CLI through the console port?

**Answer Choices**

- A: HyperTerminal  
C: Secure Shell
- B: Internet Explorer  
D: Telnet

**Q. No. 21****Question:**

Which statement accurately describes file sharing in a peer-to-peer network?

**Answer Choices**

- A: A dedicated server is required.  
B: Access control is decentralized.  
C: Files are typically stored on the most powerful peer in the network.  
D: Peers can either make requests, or respond to requests, but not both.

**Q. No. 22****Question:**

What is primary responsibilities of the Ethernet MAC sublayer?

**Answer Choices**

- A: frame delimiting  
C: logical addressing
- B: data encapsulation  
D: error detection

**Q. No. 23****Question:**

Which router configuration mode would an administrator use to configure the router for SSH or Telnet login access?

**Answer Choices**

- A: line  
C: global
- B: router  
D: interface

**Q. No. 24****Question:**

What purpose does a hostname serve on a router?

**Answer Choices**

- A: uniquely identifies a router on the internet  
B: used by routing protocols to identify peer routers  
C: provides device identification to users logging on remotely  
D: determines the hosts that are allowed to connect to the device

**Q. No. 25****Question:**

Which prompt is associated with the privileged exec mode?

**Answer Choices**

A: R1>  
C: R1(config)#

B: R1#  
D: R1(config-router)#

#### **Q. No. 26**

##### **Question:**

A technician wishes to connect two computers to move data from one to the other before reloading the operating system. The NICs on both PCs do not support autosensing feature. Which procedure will satisfy the requirement?

##### **Answer Choices**

- A: Interconnect the two PCs with a rollover cable.
- B: Interconnect the two PCs with two rollover cables and a hub.
- C: **Interconnect the two PCs with a crossover cable.**
- D: Interconnect the two PCs with two crossover cables and a hub.

#### **Q. No. 27**

##### **Question:**

Two routers are connected via their serial ports in a lab environment. The routers are configured with valid IP addresses, but they cannot ping each other. The show interface serial0/0 command shows that the serial0/0 interface is up but the line protocol is down. What could be the cause of this problem?

##### **Answer Choices**

- A: **The no shutdown command has not been applied to the interfaces.**
- B: **The clock rate command has not been entered on the DCE interface.**
- C: The interface timers are not cleared.
- D: The Fast Ethernet interface is emulating a serial interface by assigning it a timing signal.

#### **Q. No. 28**

##### **Question:**

An organization has been assigned network ID 10.10.128.0 and subnet mask 255.255.224.0. Which IP address range can be used for this organization?

##### **Answer Choices**

- A: 10.10.128.0 to 10.10.160.255
- B: **10.10.128.0 to 10.10.159.255**
- C: 10.10.128.0 to 10.10.192.255
- D: 10.10.128.0 to 10.10.0.159

#### **Q. No. 29**

##### **Question:**

When must a router serial interface be configured with the clock rate command?

##### **Answer Choices**

- A: when the interface is functioning as a DTE device
- B: when the interface timers have been cleared
- C: when the connected DTE device is shut down
- D: **when the interface is functioning as a DCE device**

#### **Q. No. 30**

**Question:**

Due to a security violation, the router passwords must be changed. What information can be learned from the following configuration entries?

```
Router(config)# line vty 0 3  
Router(config-line)# password c13c0  
Router(config-line)# login
```

**Answer Choices**

- A: The entries specify three Telnet lines for remote access.
- B: The entries specify four Telnet lines for remote access.
- C: The entries set the console and Telnet password to "c13c0".
- D: Telnet access will be denied because the Telnet configuration is incomplete.

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Which password is automatically encrypted when it is created?

**Answer Choices**

- A: vty
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Which prompt represents the appropriate mode used for the copy running-config startup-config command?

**Answer Choices**

- A: Switch-6J>
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Which information is used by the router to determine the path between the source and destination hosts?

**Answer Choices**

- A: the host portion of the IP address
- B: the network portion of the IP address
- C: host default gateway address
- D: the MAC address

**Q. No. 34****Question:**

Well-known services and applications use which range of TCP/UDP port numbers?

**Answer Choices**

A: 0 to 255  
C: 1024 to 49151

B: 0 to 1023  
D: 49152 to 65535

### **Q. No. 35**

#### **Question:**

Which IPv4 address represents subnet broadcast addresses?

#### **Answer Choices**

A: 192.168.4.63 /26  
C: 192.168.4.51 /27

B: 192.168.4.129 /26  
D: 192.168.4.221 /27

### **Q. No. 36**

#### **Question:**

Which statement is true about network layer addressing?

#### **Answer Choices**

- A: The addresses are 48 bits long.  
B: Network layer addressing is used by Ethernet switches to make forwarding decisions.  
**C: A portion of the address is used to identify the network.**  
D: It does not support broadcasts.

### **Q. No. 37**

#### **Question:**

Which OSI layer addressing is required to route packets between two networks?

#### **Answer Choices**

- A: Layer 1  
**C: Layer 3**
- B: Layer 2  
D: Layer 4

### **Q. No. 38**

#### **Question:**

How many host addresses may be assigned when using the 128.107.0.0 network address with a subnet mask of 255.255.248.0?

#### **Answer Choices**

- A: 30  
**C: 2046**
- B: 256  
D: 2048

### **Q. No. 39**

#### **Question:**

During the encapsulation process, what is the PDU of the internet layer?

#### **Answer Choices**

- A: bit  
C: frame
- B: data  
D: packet

**Q. No. 40**

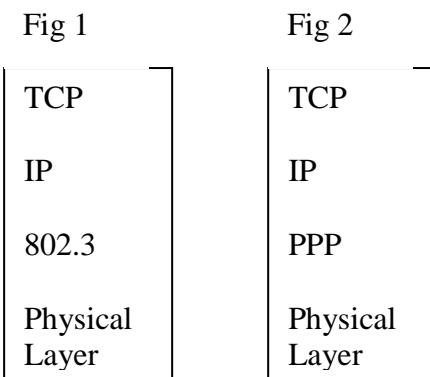
**Question:**

Which service is used when the nslookup command is issued on a computer?

**Answer Choices**

- A: FTP  
C: DHCP
- B: DNS  
D: Telnet

- 1) UDP and IP protocols provides
  - (a) **Connection less and connection less service**
  - (b) Connection oriented and connection oriented service
  - (c) Connection oriented and connection less service
  - (d) Connection less and connection oriented service
  
- 2) Which of the following statements is a true description of fiber Optic Cable.
  - (a) Fiber optic cables transfer data in a mesh
  - (b) **Fiber optic cables transfer data in light form**
  - (c) Fiber optic cables are similar to coaxial cables
  - (d) Fiber optic cable are similar to twisted pair cables
  
- 3) Fig 1 denotes a \_\_\_\_\_ and fig 2 denotes a \_\_\_\_\_



- (a) LAN, WAN
- (b) WAN, LAN
- (c) LAN, LAN
- (d) WAN, WAN

- 4) Match the following Devices with the layers it belongs/functionalities?

Protocol	Functionalities
a) Get MAC Address for this IP Address	i) RARP
b) Get IP Address for this MAC Address	ii) ICMP
c) Get The Host Name for this IP	iii) ARP
d) Destination is unreachable	iv) DNS
(a) a- i, b-iii, c-iv, d-ii	
<b>(b) a- iii, b-i, c-iv, d-ii</b>	
(c) a- i, b-iii, c-ii, d-iv	
(d) a- iii, b-i, c-ii, d-iv	

- 5) Which of the following is FALSE for VLANs?

- (a) Segmented by port or MAC address
- (b) No routing is needed for connectivity**
- (c) Span multiple switches
- (d) VLANs operates at layer 2

- 6) What does it mean if a protocol is stateless?
- (a) If a stateless protocol is used, it cannot be traced.
  - (b) Server responds to a request, and then forgets about it**
  - (c) Client responds to server request and keeps track of the conversation.
  - (d) If a protocol is stateless, it means it is unreliable
- 7) There is a host with IP address like 202.141.152.2. This belongs to which class of IP, what is the network address to which this belongs and assuming there are no sub networks associated with this what will be the broadcast address for the network it is attached with?
- (a) Class C, 202.141.0.0, 202.141.152.255
  - (b) Class B, 202.141.0.0, 255.255.0.0
  - (c) Class B, 127.0.0.0, 255.0.0.0
  - (d) Class C, 202.141.152.0, 202.141.152.255**
- 8) For which of the following is UDP unsuitable? Choose the most appropriate answer.
- (a) DNS
  - (b) SNMP
  - (c) RTP
  - (d) SMTP**
- 9) A subnet mask is used to
- (a) Identify different subnets within an intranet
  - (b) Identify different subnets within an internet
  - (c) Identify the number of bits to be used as the network portion in the IP address**
  - (d) Mask the IP address of a machine from hackers
- 10) When IP address of a host is known, to map IP address of the host with MAC address which protocol is used?
- (a) DHCP
  - (b) RARP
  - (c) ICMP
  - (d) ARP**
- 11) Error detection at the data link level is achieved by?
- (a) Bit stuffing
  - (b) Cyclic redundancy codes**
  - (c) Hamming codes
  - (d) Equalization
- 12) A hub connects 24 computers. In that A and B are two machines. A sends data to B. How many computers will receive that data?
- (a) Only B will receive
  - (b) All 24 computers will receive
  - (c) Only A and B will receive
  - (d) All computers except A will receive**

13) Which protocol immediately encapsulates an ICMP message?

- (a) **IP**
- (b) TCP
- (c) UDP
- (d) Link Layer Protocol(802.3,802.11 etc)

14) Which of the following network devices can also act as a packet filter?

- (a) Switch
- (b) HUB
- (c) BRIDGE
- (d) **Router**

15) Identify the FALSE statement

- (a) Wireless LAN and Ethernet are broadcast medium
- (b) WLAN provides less bandwidth compared to Gigabit Ethernet
- (c) **Wireless LAN & Ethernet can not co-exist**
- (d) WLAN & Ethernet can use IP as their network layer protocol

16) End-to-end connectivity is provided from host-to-host in:

- (a) the network layer
- (b) **the transport layer**
- (c) the session layer
- (d) it is a combined functionality of the network and the data link layers

17) Which of the following uniquely identifies a TCP connection?

- (a) Sender IP, Receiver IP
- (b) Sender port, Receiver port
- (c) Sender MAC & Sender IP, Receiver MAC & Receiver IP
- (d) **Sender IP & Sender Port, Receiver IP & Receiver Port**

18) Which of the following layers are not part of TCP/IP when compared OSI model

- (a) Session, Application
- (b) **Session, Presentation**
- (c) Application, Presentation
- (d) Session, Transport

19) Which of the following is NOT the issue to be addressed at Physical layer  
(transmission media)

- (a) How many volts should be used to represent 1 & 0 bits.
- (b) Should the transmission be simultaneously in both directions?
- (c) What should be the duration of the bit
- (d) **What sliding window protocol to be used**

20) Correctly match the "Layer Name" with the "Name of the unit exchanged" at that Layer.

- |                    |           |
|--------------------|-----------|
| A) Physical layer  | i) Packet |
| B) Data link layer | ii) TPDU  |
| C) Network Layer   | iii) Bit  |
| D) Transport Layer | iv) Frame |

- (a) A - iii, B - iv, C - i, D - ii
- (b) A- iii, B- i, C-ii, D-iv
- (c) A- iii, B- iv, C- ii, D- i
- (d) A-iv, B-iii, C-ii, D-I

21) Which of the following statement is TRUE regarding wireless networks?

- (a) FHSS,DSSS,OFDM,HDSSS are part of Physical layer**
- (b) FHSS,DSSS,OFDM,HDSSS are part of MAC sub layer
- (c) FHSS,DSSS,OFDM,HDSSS are part of LLC sub layer
- (d) FHSS,DSSS,OFDM,HDSSS are part of Upper layers

22) Which TCP/IP layer attaches a header and trailer to the transmitting data?

- (a) Application Layer
- (b) Transport Layer
- (c) Network Layer
- (d) Data Link Layer**

23) A router has the following (CIDR) entries in the routing table

Address/Mask	Next HOP
202.112.12.5/28	interface1
202.112.12.61/28	interface2
Default	interface3

If a packet comes with destination address 202.112.12.45 arrives at the router, on which interface it will be routed?

- (a) interface1
- (b) interface2
- (c) interface3**
- (d) Packet will be dropped

24) Which of the following is the valid sequence in the three-way handshake for tcp connection establishment(SEQ= sequence number, ACK= acknowledge number & SYN = syn flag)

- (a) SYN(SEQ=x), SYN(SEQ=y, ACK=x+1), (SEQ=x+1, ACK=y+1)**
- (b) SYN(SEQ=x), SYN(SEQ=x, ACK=x+1), (SEQ=x+1, ACK=x)
- (c) SYN(SEQ=y), SYN(SEQ=x, ACK=y), (SEQ=y+1, ACK=x+1)
- (d) SYN(SEQ=x), SYN(SEQ=y, ACK=x), (SEQ=x, ACK=y)

25) Which of the following IP Header fields changes from HOP to HOP during routing?

- i. Source IP Address
- ii. Destination IP Address
- iii. TTL (Time to Live)
- iv. Protocol

- (a) iii only**
- (b) iv only
- (c) i, ii & iii only
- (d) All the above fields

26) You have a class C network address divided into 3 subnets, you will add 2 subnets in the next 2 years each subnet will have 25 hosts. What subnet mask should you use to create those subnets without wasting the IP addresses?

- (a) 255.255.255.192
- (b) 255.255.255.248
- (c) 255.255.255.224**
- (d) none of the above

27) IPV4 address is \_\_\_\_ bits, IPV6 is \_\_\_\_\_ bits

- (a) 32 and 64
- (b) 48 and 128
- (c) 32 and 128**
- (d) 48 and 64

28) Match the following

- |                      |         |
|----------------------|---------|
| i. UTP               | 1. RJ11 |
| ii. Serial Interface | 2. RJ45 |
| iii. Telephone       | 3. V.35 |

- (a) UTP-RJ11,Serial I/F – RJ45, Telephone – V.35
- (b) UTP-V.35,Serial I/F – RJ45 Telephone – RJ11
- (c) UTP-RJ45,Serial I/F – V.35, Telephone – RJ11**
- (d) UTP-RJ45,Serial I/F – RJ11, Telephone – V.35

29) TCP and IP protocols provides

- (a) Connection less and connection less service
- (b) Connection oriented and connection oriented service
- (c) Connection oriented and connection less service**
- (d) Connection less and connection oriented service

30) As data moves from the lower to upper layers (ie Layer X to Layer X+1) in a TCP/IP network , headers are getting \_\_\_\_\_ but when data moves between the devices in the same layers (ie Layer X of Device A and Layer X of Device B) headers are getting \_\_\_\_\_

- (a) Deleted, Added
- (b) Deleted, Modified**
- (c) Added, Modified
- (d) Modified, Added

31) Match the following

- |             |             |
|-------------|-------------|
| a) VLAN     | i) 802.3    |
| b) Ethernet | ii) 802.4   |
| c) WLAN     | iii) 802.1q |

d) Token Bus iv) 802.5  
e) Token Ring v) 802.11

- (a) a-i, b-v, c-iii, d-ii, e-iv
- (b) a-iii, b-i, c-v, d-iv, e-ii
- (c) a-v, b-i, c-iii, d-ii, e-iv
- (d)a-iii, b-i, c-v, d-ii, e-iv**

**Date:**

**Module Name: Fundamental of Computer Networks**

**Q. No. 1**

**Question:**

Which functions of the OSI model occur at layer two?

**Answer Choices**

- |                        |             |
|------------------------|-------------|
| A: physical addressing | B: encoding |
| C: routing             | D: cabling  |

**Q. No. 2**

**Question:**

A technician is asked to secure the privileged EXEC mode of a switch by requiring a password. Which type of password would require this login and be considered the most secure?

**Answer Choices**

- |                  |           |
|------------------|-----------|
| A: console       | B: enable |
| C: enable secret | D: VTY    |

**Q. No. 3**

**Question:**

Which OSI layer does IP rely on to determine whether packets have been lost and to request retransmission?

**Answer Choices**

- |                |   |                 |
|----------------|---|-----------------|
| A: application |  | B: presentation |
|----------------|---|-----------------|

**Q. No. 4**

**Question:**

When connectionless protocols are implemented at the lower layers of the OSI model, what is usually used to acknowledge that the data was received and to request the retransmission of missing data?

**Answer Choices**

- |  |  |
|--|--|
| A: IP  |  |
| B: UDP   |  |
| C: Ethernet  |  |
| D: an upper-layer, connection-oriented protocol or service |  |

**Q. No. 5**

**Question:**

Which subnet mask will allow 2040 hosts per subnet on the IP network 10.0.0.0?

**Answer Choices**

- A: 255.255.0.0
- B: 255.255.254.0
- C: 255.255.252.0
- D: 255.255.248.0

**Q. No. 6**

**Question:**

Which statement is true about the TTL value of an IPv4 packet?

**Answer Choices**

- A: It determines the priority of a packet.
- B: It specifies the remaining “life” of the packet.
- C: It indicates that the packet has been fragmented.
- D: It denotes the data payload type that the packet is carrying.

**Q. No. 7**

**Question:**

What type of network is maintained if a server takes no dedicated role in the network?

**Answer Choices**

- A: mainframe
- B: client/server
- C: peer-to-peer
- D: centralized

**Q. No. 8**

**Question:**

A routing issue has occurred in your internetwork. Which of the following type of devices should be examined to isolate this error?

**Answer Choices**

- A: access point
- B: hub
- C: router
- D: switch

**Q. No. 9**

**Question:**

A user sees the command prompt: Router(config-if)#. What task can be performed at this mode?

**Answer Choices**

- A: Reload the device.
- B: Perform basic tests.
- C: Configure individual interfaces.
- D: Configure individual terminal lines.

**Q. No. 10**

**Question:**

What information can be gathered by using the command netstat?

**Answer Choices**

- A: the default gateway
- B: the routing protocol

C: active TCP connections

D: the locally configured subnet mask

**Q. No. 11**

**Question:**

How can ARP be used to help document the network?

**Answer Choices**

A: It can list each hop on the way to a destination host.

B: It can show the average latency of hosts on the network.

**C: It can provide a list of physical addresses on the network.**

D: It can indicate which hosts are not responding to network traffic.

**Q. No. 12**

**Question:**

What is the protocol data unit that is associated with the data link layer of the OSI reference model?

**Answer Choices**

A: data

**B: frame**

C: packet

D: segment

**Q. No. 13**

**Question:**

Which application layer protocol allows administrators to log into a server from remote locations and control a server as though logged in locally?

**Answer Choices**

A: DNS

B: FTP

C: SMTP

**D: Telnet**

**Q. No. 14**

**Question:**

Which statement identifies the DNS protocol?

**Answer Choices**

A: It transmits information using TCP port 25.

B: It transfers and conveys information using HTML pages.

**C: It matches a resource name with the required network address.**

**Q. No. 15**

**Question:**

Which password would allow a user to establish a Telnet session with a Cisco device?

**Answer Choices**

A: VTY password

B: enable password

C: console password

D: enable secret password

## **Q. No. 16**

### **Question:**

Which identifier is contained in the header of the Layer 2 Ethernet frame?

### **Answer Choices**

- A: timing and synchronization of bits
- B: source and destination port numbers
- C: logical source and destination addresses
- D: physical source and destination addresses**

## **Q. No. 17**

### **Question:**

What happens when a node on an Ethernet network is creating a frame and it does not have the destination MAC address?

### **Answer Choices**

- A: The node drops the frame.
- B: The node sends out a Layer 3 broadcast message.
- C: The node sends a message directly to the router for the address.
- D: The node sends out an ARP request with the destination IP address.**

## **Q. No. 18**

### **Question:**

An administrator makes changes to the default configuration of a router and saves them to NVRAM. After testing, it is discovered that the configurations did not have the desired effect and must be removed. What steps must be taken to remove the changes and return the router to the default configuration?

### **Answer Choices**

- A: Reboot the router.
- B: Use no version of the commands that are issued.
- C: Issue the erase startup-config command, and then reboot the router.**
- D: Issue the erase running-config command, and then reboot the router.

## **Q. No. 19**

### **Question:**

A network administrator is tasked with connecting two workgroups that are configured to use different subnets. Which device should be selected to allow connectivity between users on the two networks?

### **Answer Choices**

- A: hub
- C: router**
- B: switch
- D: wireless access point

## **Q. No. 20**

### **Question:**

Which program can be used to accomplish terminal emulation for configuring a router from the CLI through the console port?

### **Answer Choices**

- A: HyperTerminal  
C: Secure Shell



- B: Internet Explorer  
D: Telnet

### **Q. No. 21**

#### **Question:**

Which statement accurately describes file sharing in a peer-to-peer network?

### **Answer Choices**

- A: A dedicated server is required.  
**B: Access control is decentralized.**  
C: Files are typically stored on the most powerful peer in the network.  
D: Peers can either make requests, or respond to requests, but not both.

### **Q. No. 22**

#### **Question:**

What is primary responsibilities of the Ethernet MAC sublayer?

### **Answer Choices**

- A: frame delimiting  
C: logical addressing



- B: data encapsulation**  
D: error detection

### **Q. No. 23**

#### **Question:**

Which router configuration mode would an administrator use to configure the router for SSH or Telnet login access?

### **Answer Choices**

- A: line**  
C: global

- B: router  
D: interface

### **Q. No. 24**

#### **Question:**

What purpose does a hostname serve on a router?

### **Answer Choices**

- A: uniquely identifies a router on the internet  
B: used by routing protocols to identify peer routers  
**C: provides device identification to users logging on remotely**  
D: determines the hosts that are allowed to connect to the device

### **Q. No. 25**

#### **Question:**

Which prompt is associated with the privileged exec mode?

### **Answer Choices**

A: R1>  
C: R1(config)#

B: R1#  
D: R1(config-router)#

#### **Q. No. 26**

##### **Question:**

A technician wishes to connect two computers to move data from one to the other before reloading the operating system. The NICs on both PCs do not support autosensing feature. Which procedure will satisfy the requirement?

##### **Answer Choices**

- A: Interconnect the two PCs with a rollover cable.
- B: Interconnect the two PCs with two rollover cables and a hub.
- C: Interconnect the two PCs with a crossover cable.**
- D: Interconnect the two PCs with two crossover cables and a hub.

#### **Q. No. 27**

##### **Question:**

Two routers are connected via their serial ports in a lab environment. The routers are configured with valid IP addresses, but they cannot ping each other. The show interface serial0/0 command shows that the serial0/0 interface is up but the line protocol is down. What could be the cause of this problem?

##### **Answer Choices**

- A: The no shutdown command has not been applied to the interfaces.
- B: The clock rate command has not been entered on the DCE interface.**
- C: The interface timers are not cleared.
- D: The Fast Ethernet interface is emulating a serial interface by assigning it a timing signal.

#### **Q. No. 28**

##### **Question:**

An organization has been assigned network ID 10.10.128.0 and subnet mask 255.255.224.0. Which IP address range can be used for this organization?

##### **Answer Choices**

- A: 10.10.128.0 to 10.10.160.255
- B: 10.10.128.0 to 10.10.159.255**
- C: 10.10.128.0 to 10.10.192.255
- D: 10.10.128.0 to 10.10.0.159

#### **Q. No. 29**

##### **Question:**

When must a router serial interface be configured with the clock rate command?

##### **Answer Choices**

- A: when the interface is functioning as a DTE device
- B: when the interface timers have been cleared
- C: when the connected DTE device is shut down
- D: when the interface is functioning as a DCE device**

#### **Q. No. 30**

**Question:**

Due to a security violation, the router passwords must be changed. What information can be learned from the following configuration entries?

```
Router(config)# line vty 0 3  
Router(config-line)# password c13c0  
Router(config-line)# login
```

**Answer Choices**

- A: The entries specify three Telnet lines for remote access.
- B: The entries specify four Telnet lines for remote access.**
- C: The entries set the console and Telnet password to "c13c0".
- D: Telnet access will be denied because the Telnet configuration is incomplete.

**Q. No. 31****Question:**

Which password is automatically encrypted when it is created?

**Answer Choices**

- A: vty
- C: enable secret**
- B: console
- D: enable password

**Q. No. 32****Question:**

Which prompt represents the appropriate mode used for the copy running-config startup-config command?

**Answer Choices**

- A: Switch-6J>
- C: Switch-6J (config) #
- B: Switch-6J#**
- D: Switch-6J (config-if) #

**Q. No. 33****Question:**

Which information is used by the router to determine the path between the source and destination hosts?

**Answer Choices**

- A: the host portion of the IP address
- B: the network portion of the IP address**
- C: host default gateway address
- D: the MAC address

**Q. No. 34****Question:**

Well-known services and applications use which range of TCP/UDP port numbers?

**Answer Choices**

A: 0 to 255  
C: 1024 to 49151

B: 0 to 1023  
D: 49152 to 65535

### **Q. No. 35**

#### **Question:**

Which IPv4 address represents subnet broadcast addresses?

#### **Answer Choices**

A: 192.168.4.63 /26  
C: 192.168.4.51 /27

B: 192.168.4.129 /26  
D: 192.168.4.221 /27

### **Q. No. 36**

#### **Question:**

Which statement is true about network layer addressing?

#### **Answer Choices**

- A: The addresses are 48 bits long.  
B: Network layer addressing is used by Ethernet switches to make forwarding decisions.  
**C: A portion of the address is used to identify the network.**  
D: It does not support broadcasts.



### **Q. No. 37**

#### **Question:**

Which OSI layer addressing is required to route packets between two networks?

#### **Answer Choices**

- A: Layer 1  
**C: Layer 3**  
B: Layer 2  
D: Layer 4

### **Q. No. 38**

#### **Question:**

How many host addresses may be assigned when using the 128.107.0.0 network address with a subnet mask of 255.255.248.0?

#### **Answer Choices**

- A: 30  
**C: 2046**  
B: 256  
D: 2048

### **Q. No. 39**

#### **Question:**

During the encapsulation process, what is the PDU of the internet layer?

#### **Answer Choices**

A: bit  
C: frame

B: data  
D: packet

**Q. No. 40**

**Question:**

Which service is used when the nslookup command is issued on a computer?

**Answer Choices**

A: FTP  
C: DHCP

B: DNS  
D: Telnet

1. Any electronic device on a network is called a:  
(A) **Node.**  
(B) Hub.  
(C) Router.  
(D) Cable.
  
2. Which piece of equipment installs in a PC and allows the PC to connect to a network?  
(A) Hub.  
(B) Access Router.  
(C) Graphic Accelerator Card.  
(D) **Network Interface Card.**
  
3. Centralized database:  
(A) **Is best for security and management.**  
(B) Has all or part of the database copied at 2 or more computers.  
(C) Is dispersed among multiple computer systems.  
(D) Has problem of keeping all up to date data.
  
4. The disadvantage of a replicated database is:  
(A) Contention among multiple processors attempting to access data simultaneously.  
(B) Slow response time.  
(C) **High storage cost.**  
(D) All processors loose access to data during disk failure.
  
5. What requirement of distributed data processing is critical for the design and enhancement of the system?  
(A) Connectivity.  
(B) Availability.  
(C) **Performance.**  
(D) All of the above.
  
6. What is the distention address of a frame containing an ARP request?  
(A) A broadcast IP address.  
(B) **A broadcast MAC address.**  
(C) The default getaway IP address.  
(D) The default getaway MAC address.
  
7. How many bits make up an IP address?  
(A) **32 Bits.**  
(B) 64 Bits.  
(C) 48 Bits.  
(D) 8 Bits.
  
8. What address is an example of a broadcast address for a class B network with a default subnet mask?  
(A) 147.1.1.1

- (B) 147.13.0.0  
(C) 147.14.255.0  
**(D) 147.14.255.255**
9. If one is given a class C type IP address block, what is the maximum number of machines that he/she can use it for, if a unique number is allocated per machine?  
(A) 512  
(B) 250  
**(C) 254**  
(D) 255
10. Which of the following IP address is valid to be assigned to a host?  
(A) 127.0.0.1  
(B) 192.248.16.255  
**(C) 180.15.1.5**  
(D) 150.7.0.0
11. To interconnect two IP classes, Class A and Class C networks.  
(A) a class B network is needed.  
(B) a bridge is needed.  
**(C) a router is needed.**  
(D) a firewall is needed.
12. Which statement accurately describes the way DHCP assigns IP Address?  
(A) The network administrator must re-assign a previously assigned address to the DHCP pool once a host no longer requires the address.  
(B) DHCP offers a many-to-one ratio of IP addresses to users.  
(C) DHCP only allows users to obtain IP addresses if users a profile in the DHCP pool.  
**(D) DHCP has the ability to reclaim an IP address after a host workstation releases it.**
13. The Reverse Address Resolution Protocol (RARP) in the IP protocol family is used to find out which?  
(A) Ethernet address corresponds to a given IP address.  
(B) Subnet mask corresponds to a given Ethernet address.  
**(C) IP address corresponds to a given Ethernet address.**  
(D) IP address corresponds to a given NetBIOS name.
14. Which of the following is/are correct regarding TCP and UDP protocols?  
**(A) UDP is a connectionless end-to-end protocol.**  
(B) TCP is not a connection-oriented end-to-end protocol.  
(C) TCP is a connectionless end-to-end protocol.  
(D) UDP uses a three-way handshaking to establish a connection.
15. Which of the following protocols use the layer 4 UDP protocol?  
(A) SMTP.

(B) SNMP.

(C) FTP.

(D) DNS.

16. Which of the following is a feature of TCP?

(A) Exchange the diagram without acknowledgments.

(B) Error processing handled through other protocols.

(C) Connectionless.

(D) Windowing.

17. What are the primary functions of TCP?

(A) Establishment of physical connections between endpoints.

(B) Reliability and flow control.

(C) Unreliable transport and buffers.

(D) Connectionless best effort delivery.

18. What is the purpose of the TCP three-way handshake?

(A) To adjust the size of the sliding window.

(B) To verify the source and destination IP addresses.

(C) To determine the number of bytes that will be included in each segment.

(D) To synchronize sequence numbers prior to data transmission.

19. TCP is a connection-oriented protocol. Which correctly describes TCP?

(A) Data is sent using best-effort delivery.

(B) Data is sent after a virtual connection is established at both ends.

(C) Data is sent as soon as it is requested using the best means possible.

(D) Data is sent in hexadecimal 1s and 0s.

20. Why are the pairs of wires twisted together in UTP cable?

(A) Twisting the wires makes six pairs fit in the space of four pairs.

(B) Twisting the wires makes it less expensive.

(C) Twisting the wires makes it less thinner.

(D) Twisting the wires reduces noise problem.

21. What is required for electrons to flow?

(A) A closed loop of conductors.

(B) An open loop of insulator.

(C) A closed loop of insulator.

(D) An open loop of conductors.

22. How does using a hub or repeater affect the size of a collision domain?

(A) It reduces it.

(B) It enlarges it.

(C) It eliminates it.

(D) It has no affect it.

23. Which of the following will cause a collision on an Ethernet network?
- (A) Two nodes having the same MAC address.
  - (B) Two or more nodes transmitting at the same time.**
  - (C) Non-OSI compliant protocols running on the network.
  - (D) Multiple routed protocols running on the same network.
24. Which of the following statements regarding switches is correct?
- (A) Switches encapsulate segments into packets.
  - (B) Switches regulate traffic based on layer 1 addressing.
  - (C) Switches designed for Token Ring networks are known MAUs.
  - (D) Switches combine the connectivity of a hub with the traffic regulation of a bridge.**
25. Which of the following is used to describe the rated throughput capacity of a given network medium?
- (A) Bandwidth.**
  - (B) Base band.
  - (C) Delay.
  - (D) Latency.
26. Which of the following describe a LAN?
- (A) A network that covers a larger area than a WAN.
  - (B) A network that connect workstations, terminals, and other devices in a large metropolitan area.
  - (C) A network that connect workstations, switches, and other devices in a geographically limited area.**
  - (D) A network that serves users across a geographically large area and often uses transmission devices provided by a common carrier.
27. What is the purpose of VPN?
- (A) Faster public access.
  - (B) Connection to a private network through the internet.**
  - (C) Insecure connection.
  - (D) Connection to the internet through a private network.
28. Why was the OSI model created?
- (A) To ensure the secrecy of proprietary networking technologies.
  - (B) To ensure that networks are compatible with each other.**
  - (C) To slow down the expansion of new technologies.
  - (D) To ensure that network administrators receive a high salary to decipher networks.
29. The layers of the OSI model from the lower layer to the upper layer in the order specified are
- (A) Physical, Data link, Transport, Network, Session, Presentation, Application.
  - (B) Physical, Data link, Network, Transport, Presentation, Session, Application.
  - (C) Physical, Data link, Transport, Network, Presentation, Session, Application.
  - (D) Physical, Data link, Network, Transport, Session, Presentation, Application.**
30. Which is the correct statement with respect to ISO/OSI and TCP/IP models?

- (A) OSI reference model implementation was made operational before TCP/IP.  
(B) Both have the same number of layers.  
**(C) The network layer of the OSI model allows higher functionality than the IP layer of the TCP/IP model.**  
(D) Popular network applications are mostly based on the OSI protocol model.
31. Which of the following statements is correct with respect to fiber optic cables?  
(A) They are not suitable for short distance connections.  
**(B) In multimode fibres, the transmitted light beam is 'bounced' off the cladding as it travels down the core.**  
(C) Data transmitted over fibre is susceptible for electromagnetic interferences.  
(D) Single mode fibres have not a higher bandwidth than multimode fibres.
32. Two workstations A and B each have an RJ45 port need to be connected to a 10Base T network hub having RJ45 ports. The distance from A to hub is 75 meters and from B to hub is 160 meters. What would be the acceptable way to implement this connectivity requirement?  
(A) Co-axial cable to A and wire-less link to B.  
(B) UTP cables to A and B.  
**(C) UTP cable to A and fibre cable to B with media converters.**  
(D) UTP cable to A and wire-less link to B.
33. Which of the following is correct regarding Token Ring networks?  
**(A) Whenever a network node wishes to send a frame, it has to wait for the free token to arrive.**  
(B) The IEEE 802.6 specifies the token ring MAC protocol.  
(C) After initialisation of a token ring network, a token can be transmitted in both directions of the network.  
(D) A token ring with a shielded twisted pair transmission medium can have a minimum data rate of 16Mbps.
34. Which of the following is correct with regard to Frame Relay?  
**(A) Allows the use of variable length packets.**  
(B) Performs extensive error checking.  
(C) Acknowledges each frame transmitted.  
(D) Can be considered as a broadband packet switching technology.
35. Network bridges can be used to  
(A) Secure the organizational network from intruders.  
**(B) Interconnect different kinds of network topologies.**  
(C) Handle congestion.  
(D) Control data flow.
36. In asynchronous data transmission.  
(A) Each character/byte is encapsulated within a start bit and a parity bit.  
**(B) Each character/byte is encapsulated within a start bit and one or more stop bits.**  
(C) No communication control characters are used.

- (D) Start bit is essential but the stop bit(s) is/are optional for each transmitted character/byte.
37. Which of the following statements is correct with regard to Time Division Multiplexing?
- (A) Statistical TDM can not make efficient use of the bandwidth if the data stream is probabilistic.
- (B) TDM requires the transmitter and receiver to be synchronized periodically.**
- (C) TDM performs efficiently if the data stream is probabilistic.
- (D) Statistical TDM is efficient if the data stream is deterministic.
38. Which of the following error correction methods can be successfully employed on a simplex communication line?
- (A) A Cyclic Redundancy Check (CRC) code.
- (B) A Hamming code.**
- (C) A RSA code.
- (D) A Huffman code.
39. On a full duplex data link, the most widely used error recovery technique is
- (A) Backward Error Correction (BEC).
- (B) Forward Error Correction (FEC).
- (C) Automatic Repeat Request (ARQ).**
- (D) Huffman error correction technique.
40. Which of the following statements is correct with regard to Asymmetric Digital Subscriber Line (ADSL) technology?
- (A) ADSL has two different data rates, one for incoming and another for outgoing connections.**
- (B) ADSL is a 64 Kbps leased line.
- (C) ADSL needs special cabling infrastructure.
- (D) The same domestic telephone connection can not be shared for normal telephony as well as for ADSL.

**41**-what do WANs do

- a. operate over a large area
- b. provide full and part time connectivity
- c. interconnect LANs
- d. all of the above

**42**-what is the decimal number 151 in binary?

- e. 10010011
- f. 10101011
- g. 10010111
- h. 10100111

**43**-what is the binary number 11011010 in decimal?

- i. 186
- j. 222
- k. 202
- l. 218

**44**-bandwidth is described in

- m. centimeters.
- n. Megabits
- o. Bits per second
- p. Bytes per second

**45**-which of the following is the PDU for the transport layer?

- q. segment
- r. Packet
- s. Segments
- t. Frame

**46**-which layer of the OSI model provides connectivity and selection between two end systems where routing occurs?

- u. transport layer
- v. network layer
- w. data link layer
- x. physical layer

**47**- packets are encapsulated in frames at which layer of the OSI model?

- a. session
- b. Transport
- c. Network
- d. Data link

**48**- a hub is an OSI layer ----- device

- a. six
- b. four
- c. Two
- d. one

**49**- what do routers connect?

- a. Hubs and nodes
- b. Two or more networks
- c. Bridges and hubs
- d. Bridges and repeaters

**50**- What does a router route

- a. layer 4 segment
- b. layer 3 packets
- c. layer 2 frames
- d. layer 1 bits

51- what is the correct order of encapsulation?

- a. Data, segment, packet, frame, bits
- b. Data, frame, packet, segment, bits
- c. Bits, data, packet, frame
- d. Bits, frame, data, packet

52- where is the safety ground connected for computer?

- a. Exposed metal parts
- b. The monitor
- c. The mouse
- d. The network connection

53- What is called when two bits from two different communicating computers are on a shared-medium at the same time?

- a. Latency
- b. Dispersion
- c. collision
- d. Obstruction

54-The network area within which data packets originate and collide is called a -----  
-----?

- a. Network segment
- b. Collision segment
- c. Network domain
- d. Collision domain

55- What is another name for a rollover cable?

- a. An inverted cable
- b. A console cable
- c. A cross connect cable
- d. A patch cable

56-Which best describes collision in Ethernet network?

- a. The result of having non OSI compliant protocols on the network
- b. The effect when two nodes have the same MAC address
- c. The result of two nodes transmitting at the same time
- d. The effects of having too many repeaters in a network

57- Which best describes an extended star topology?

- a. LAN topology where central points on a network are connected to a common central switch by liner links
- b. LAN topology where a central hub is connected by vertical cabling to other hubs
- c. A and b
- d. None of the above

58-Convert the decimal number 24032 to hex?

- a. ABCD
- b. ADE3

- c. 6DE0
- d. 5DE0

59-Convert the hex number 3F4B to a decimal number?

- a. 26203
- b. 16204
- c. 16203
- d. 12345

60- a frame is a \_\_\_\_\_

- a. layer 2 PDU
- b. layer 3 PDU
- c. an encapsulated packet
- d. both a and c

61- which of the following describe Token-Ring?

- a. Data transfer rates of 4 mbps or 16 mbps
- b. can physically use a star topology
- c. can only be implemented with fiber
- d. both a and b

62- how does a token ring topology differ from an Ethernet topology?

- a. token ring is deterministic
- b. token ring networks do not face problems with collisions
- c. neither a or b
- d. both a and b

63- one of the primary reasons FDDI is extremely reliable is because\_\_\_\_\_?

- a. of its dual ring design
- b. it is a CSMA/CD network
- c. stations are guaranteed their turn to transmit
- d. both a and c

64- if you have to connect a FDDI between buildings, which mode of fiber would you use

- a. inter mode
- b. intra mode
- c. multi mode
- d. single mode

65- which of the following is an accurate description of an Ethernet variety?

- a. 10Base-T uses cat5 cable and transmits at 10 Mbps
- b. 100Base-Fx is multi-mode fiber that transmits at 10 Mbps
- c. both a and b are correct
- d. none of the above

66- where should the main distribution facility (MDF) be located if a LAN with an extended star typology is used in a multi-story building?

- a. next to the POP.
- b. on the first floor
- c. on one of the middle floors
- d. in the basement

67- what type of cabling provides interconnections between wiring closets, wiring closets and POP, and between buildings that are part of the same LAN?

- a. token ring cabling.

b. backbone cabling.

- c. coaxial cabling
- d. horizontal cabling.

68- what is the one-hand rule?

a. only touch devices with one hand so any electrical current will not flow through the heart

b. when setting up the network only use one bare hand-always wear a glove on at least one hand.

- c. a & b
- d. none of the above

69- what is the maximum distance backbone cabling if a single-mode, fiber optic cable is used to connect the horizontal cross-connect to the main cross-connect?

- a. 500 meters
- b. 1000 meters
- c. 2500 meters
- d. 3000 meters

70- which address is an example of a broadcast address for a class B network?

- a. 123.255.255.255
- b. 123.14.2555.255
- c. 123.13.0.0
- d. 123.1.1.1

71. how many host addresses are available to a class C network?

- a. 254
- b. 255
- c. 256
- d. none of the above

72. how many subnets can a class C network use?

- a. 245
- b. 26
- c. 256
- d. none of the above

73. how many bits can be borrowed to created a subnet for a class C network?

- a. 2
- b. 4
- c. 6
- d. 8

74. for what purpose does the router "AND" the subnet mask to the destination address?

- a. to derive the host numbers so it knows where to sent the packet
- b. to derive subnet mask and compare it with information in routing table
- c. to derive which network and subnet to sent the packet to
- d. none of the above

75. with a class C of 197.15.22.31 and a subnet mask of 255.255.255.224, how many bits have been borrowed to created a subnet?

- a. 1
  - b. 2
  - c. 3
  - d. none of the above
76. what is the minimum number of bits can be borrowed to form a subnet?
- a. 1
  - b. 2
  - c. 4
  - d. none of the above



### **Session 1:**

**Q.No.1.** The maximum frame size supported by a communication link is known as?

- A: Load      B: Reliability      C: MTU      D: Delay

### **Session 2:**

**Q.No.3.** Which of the following IP Header field is used by the traceroute (tracert) command to find the route to the destination?

- A: TTL      B: Header Length      C: Version      D: Flags

**Q.No.4.** Which of the following command allows you to release IP address assigned to the computer and get it renewed from the DHCP server?

- A: netstat      B: ipconfig      C: arp      D: tracert

**Q.No.5.** Which of the following command allows you to view the IP address and MAC address mapping that the computer has learned over the network?

- A: netstat      B: ipconfig      C: arp      D: ping

### **Session 3:**

**Q.No.6.** Which of the following cable can be used for long distance reliable connectivity?

- A: UTP Cable      B: Multi Mode Fiber  
C: STP Cable      D: Single Mode Fiber

**Q.No.7.** Which of the following statement is true about the STP cable?

- A: It can be used for a distance more than 100 meters.  
B: supports more throughput as it has more cores than UTP  
C: It is less affected by the Electro Magnetic Interference than UTP  
D: It uses Infrared light for data transmission.

### **Session 4**

**Q.No.8.** Which of the following OSI layer states the requirement of an address like the MAC address?

- A: Physical      B: Data Link      C: Network      D: Transport

**Q.No.9.** Which of the following OSI layer works to provide host to host reliable data transfer?

- A: Transport      B: Network      C: Presentation      D: Physical

**Q.No.10.** Which of the following OSI layer is not mapped by the Application layer of the TCP/IP model?

- A: Session      B: Application      C: Network      D: Presentation

## Session 5

**Q.No.11.** Which of the following function is provided by the data link layer in the Ethernet technology?

- A: Error Correction      B: Encryption  
C: Route Identification      D: Error Detection

**Q.No.12.** Which of the following ICMP packet is sent by the host when you ping to a network computer from it?

- A: Echo Reply      B: Ping request      C: Echo request      D: Ping reply

**Q.No.13.** Which of the following device can function at Layer 2 and layer 3?

- A: Hub      B: Switch      C: Repeater      D: Bridge

## Session 6

**Q.No.14.** What is the first field of the Ethernet frame without considering Preamble?

- A: Source MAC Address      B: Type  
C: DATA      D: Destination MAC Address

**Q.No.15.** What is Fast Ethernet?

- A: It supports 10/100 Mbps speed      B: It supports only 10 Mbps speed  
C: It supports only 100 Mbps speed      D: It supports 1 Gbps speed

**Q.No.16.** What is the maximum frame size supported by the Ethernet?

- A: 64 Bytes      B: 600 Bytes      C: 1518 Bytes      D: 1024 Bytes

## Session 7

**Q.No.17.** Which of the following technology is defined by the IEEE 802.5 specification?

A: Wireless

B: Token Ring

C: Ethernet

D: Frame Relay

**Q.No.18.** What is the maximum speed supported by the Token Ring network while using Twisted pair cables?

A: 16 Mbps

B: 8 Mbps

C: 100 Mbps

D: 1 Gbps

## Session 8 & 9

**Q.No.19.** Which of the following is the WAN protocol that supports authentication?

A: X.25

B: PPP

C: IP

D: Frame Relay

**Q.No.20.** Which of the following authentication protocol provides password security by not transmitting the actual password over the link?

A: LAPB

B: PAP

C: Frame Relay

D: CHAP

**Q.No.21.** Which of the following protocol allows you to trap particular events taking place on a system and send them to a central monitor system?

A: ICMP

B: NTP

C: SNMP

D: PPTP

**Q.No.22.** Which of the following protocol is used by the devices to send error messages regarding the communication to the source?

A: ICMP

B: IP

C: TCP

D: SNMP

## Session 10

**Q.No.23.** Which of the following Wi-Fi security option makes use of RADIUS server to provide additional security?

A: WEP

B: WPA-Personal

C: WPA-Enterprise

D: TKIP

**Q.No.24.** What is the length of the IPV6 address?

A: 64 Bit

B: 32 Bit

C: 256 Bit

D: 128 Bit

**Q.No.25.** What is the correct EUI-64 representation of the MAC address 00-02-4A-57-6B-73?

A: 0002:FFFE:4A57:6B73

B: 0002:4AFF:FE57:6B73

C: 0002:4A57:FFFE:6B73

D: 0202:4AFF:FE57:6B73

**Q.No.26.** Which of the following IEEE standard for wireless networks supports streaming of multimedia files?

A: 802.11a

B: 802.11e

C: 802.11g

D: 802.11n

## Session 11

**Q.No.27.** What will be the subnet mask if 18 bits are reserved for the network addressing?

A: 255.255.192.0

B: 255.255.255.192

C: 255.192.0.0

D: 255.255.0.0

**Q.No.28.** Which of the following NAT option allows multiple LAN clients to use same public IP address to access internet?

A: Static NAT

B: Dynamic NAT

C: NAT Overload

D: DNAT

**Q.No.29.** How many hosts you get within a IP subnet, with the subnet mask of /19?

A: 64 Hosts

B: 16 Hosts

C: 8 Hosts

D: 32 Hosts

**Q.No.30.** Which of the following is the broadcast address for a network address and subnet mask combination of 192.168.10.0 / 255.255.255.240?

A: 192.168.10.18

B: 192.168.10.47

C: 192.168.10.54

D: 192.168.10.125

## Session 12

**Q.No.31.** You have configured routers between 4 IP subnets. You have subnetted a network address 192.168.1.0 to create 4 IP subnets. You have configured RIP however the network is not established. What may be the reason?

A: You configured RIP version 1

B: RIP does not support IPv4

C: You forgot to enter static routes

D: RIP is not a routing protocol

**Q.No.32.** What is the default administrative distance for OSPF?

A: 90

B: 100

C: 110

D: 120

**Q.No.33.** Which of the following protocol does not support Variable Length Subnet mask?

A: EIGRP

B: OSPF

C: RIP v2

D: IGRP

## Session 13

**Q.No.34.** Which of the following header field of the IP protocol is reduced by 1 by each router before forwarding the IP packet?

- A: Header Length
  - B: Destination IP address
  - C: TTL
  - D: Source IP address

**Q.No.35.** Which of the following IP header field flag is used by the TCP protocol to find the MTU supported between the source and the destination?

- A: TTL                  B: Don't Fragment                  C: More Fragments                  D: HLEN

**Q.No.36.** Which of the following ICMP packet type is used by the routers to inform source when the TTL value in the packet becomes zero.

- A: 0      B: 3      C: 11      D: 8

Session 14

**Q.No.37.** Which of the following protocol on manageable switches helps to avoid switching loops?

- A: ICMP                  B: VTP                  C: NNTP                  D: STP

**Q.No.38.** Which of the following protocol helps admin replicate the VLAN information across multiple switches within the network?

- A: VTP                  B: STP                  C: ICMP                  D: SNMP

**Q.No.39.** How many collision domains are created by a HUB?

- A: 1                  B: 2                  C: 255                  D: Depends on no. of ports

**Q.No.40.** How many broadcast domains will be created by a 24 port switch with the default configuration?

- A: 24      B: 2      C: 1      D: 255

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Module: Fundamental of Computer Networks

Time: 11-12 AM

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**Q.No.1)** End-to-end connectivity is provided from host-to-host in:

- A. the network layer
- B. the transport layer
- C. the session layer
- D. it is a combined functionality of the network and the data link layers

**Q.No.2)** A subnet mask is used to

- A. Identify different subnets within an intranet
- B. Identify different subnets within an internet
- C. Mask the IP address of a machine from hackers
- D. Identify the number of bits to be used as the network portion in the IP address

**Q.No.3)** Which of the following is not true about firewalls?

- A. Packet level instruction is possible
- B. It prevents virus
- C. We can block certain connection
- D. Inspection of outgoing packets is possible

**Q.No.4)** As data moves from the lower to upper layers (ie Layer X to Layer X+1) in a TCP/IP network , headers are getting \_\_\_\_\_ but when data moves between the devices in the same layers (ie Layer X of Device A and Layer X of Device B) headers are getting \_\_\_\_\_

- A. Deleted, Modified
- B. Deleted, Added
- C. Added, Modified
- D. Modified, Added

**Q.No.5)** Fig 1 denotes a \_\_\_\_\_ and fig 2 denotes a \_\_\_\_\_

Fig 1

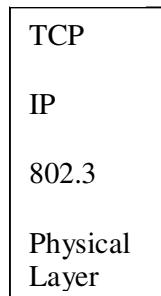
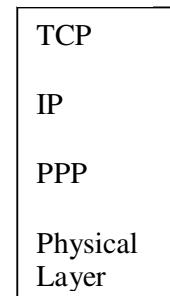


Fig 2



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- A. LAN, WAN
- B. WAN, LAN
- C. LAN, LAN
- D. WAN, WAN

**Q.No.6)** A router has the following (CIDR) entries in the routing table

Address/Mask	Next HOP
202.112.12.5/28	interface1
202.112.12.61/28	interface2
Default	interface3

If a packet comes with destination address 202.112.12.45 arrives at the router, on which interface it will be routed?

- A. interface1
- B. interface2
- C. interface3
- D. Packet will be dropped

**Q.No.7)** What is the first field of the Ethernet frame without considering Preamble?

- A. Destination MAC Address
- B. Source MAC Address
- C. Type
- D. DATA

**Q.No.8)** You have a class C network address divided into 3 subnets, you will add 2 subnets in the next 2 years each subnet will have 25 hosts. What subnet mask should you use to create those subnets without wasting the IP addresses?

- A. 255.255.255.192
- B. 255.255.255.248
- C. 255.255.255.224
- D. none of the above

**Q.No.9)** For which of the following is UDP unsuitable? Choose the most appropriate answer.

- A. FTP
- B. DNS
- C. SNMP
- D. RTP

**Q.No.10)** Some ranges of IP address has been reserved as Private Address and no packet containing these addresses may appear on the Internet. Which of the IP range is NOT reserved Private Address.

- A. 10.0.0.0 - 10.255.255.255/8
- B. 172.16.0.0 - 172.31.255.255/12
- C. 192.168.0.0 - 192.168.255.255/16
- D. 202.164.168.0 - 202.164.168.255/20

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**Q.No.11)** Which of the following cable can be used for long distance reliable connectivity?

- A. UTP Cable
- B. Multi Mode Fiber
- C. STP Cable
- D. Single Mode Fiber

**Q.No.12)** Match the Type and Value of DNS:

Type	Value
1. SOA	1. 32-bit Integer
2. PTR	2. Domain Name
3. MX	3. IP Address
4. CNAME	4. Priority, domain willing to accept emails
5. A	5. Parameter for zone

**A.** 1-2,2-3,3-1,4-5,5-4  
**B.** 1-4,2-3,3-1,4-5,5-2  
**C.** 1-5,2-3,3-4,4-2,5-1  
**D.** 1-2,2-5,3-1,4-3,5-4

**Q.No.13)** Which of the following IP Header field changes from HOP to HOP during routing?

- A. Source IP Address
- B. Destination IP Address
- C. Both Source IP address and Destination IP address
- D. TTL (Time to Live)

**Q.No.14)** Which TCP Flag does NOT affect in the state transition of TCP protocol?

- A. PSH
- B. RST
- C. SYN
- D. FIN

**Q.No.15)** Which of the following statements are TRUE regarding routing in a TCP/IP networks.

- i. Tcp layer header gets modified at the intermediate routers
  - ii. IP Layer header gets modified at the intermediate routers.
  - iii. Data Link Layer Header Gets modified at the intermediate Routers
- A. Only iii  
B. Only ii & iii  
C. All the above  
D. None of the above

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**Q.No.16)** Which of the following statements is/are TRUE regarding the Connection oriented are connection less service?

- i. Connection less service must need tight co-operation of all systems.
  - ii. The packet forwarding mechanism in connection-oriented service is more complex than the packet forwarding mechanism in connection less networks.
  - iii. In connection Less networks every intermediate routers needs a rule to handle every possible packet that it may ever receive.
- A. i & ii  
B. Only ii  
C. Only iii  
D. ii & iii.

**Q.No.17)** OSPF and BGP belongs to

- A. Inter AS Routing & Intra AS Routing
- B. Intra AS Routing & Inter AS Routing
- C. Both belong to Intra AS Routing
- D. Both belong to Inter AS Routing

**Q.No.18)** Consider the following network diagram, which contains 2 LANs and 1 WAN segment.. LAN<sub>1</sub> is having 25 systems and LAN<sub>2</sub> is having 55 systems to be connected using **192.168.1.0** network.



What is the most suitable CIDR (slash) notation to represent LAN1 and LAN2

- A. 25, 26
- B. 26,26
- C. 27,26
- D. 27,25

**Q.No.19)** Which type of network uses dual fibre-optic rings?

- A. FDDI
- B. Ethernet
- C. Token Ring
- D. ATM

**Q.No.20)** Which protocol is connection oriented?

- A. UDP
- B. TCP
- C. IP
- D. ICMP

Date: 19-07-16

Course-end Re-examination**Q.No.21)** At which layer of the OSI model, does FTP operate?

- A. Application
- B. Presentation
- C. Session
- D. Transport

**Q.No.22)** Routers can be configured using several sources. Select which of the following sources can be used.

- A. DNS Server
- B. Floppy disk
- C. TFTP Server
- D. SMTP Server

**Q.No.23)** Which of the following true regarding switches and hubs:

- A. Switches take less time to process frames than hubs take
- B. Hubs can filter frames
- C. Switches do not forward broadcasts
- D. Switches increase the number of collision domains in the network

**Q.No.24)** What is the maximum frame size supported by the Ethernet?

- A. 64 Bytes
- B. 600 Bytes
- C. 1518 Bytes
- D. 1024 Bytes

**Q.No.25)** VPN stands for :

- A. Virtual Protocol Network
- B. Virtual Public Network
- C. Virtual Private Network
- D. None of the Above

**Q.No.26)** What are the two types of access lists that can be configured on a Cisco router?

- A. Standard and extended
- B. Extended and filtering
- C. Filtering and standard
- D. Packet and filtering

Date: 19-07-16

Course-end Re-examination

**Q.No.27)** Identify the purpose of the following command 'ip route 192.168.100.0 255.255.255.0 10.1.0.1

- A. Enabling a dynamic routing protocol
- B. Assigning the IP address 192.168.100.0 to an interface
- C. Teaches the router about the distant network 192.168.100.0 and how it can be reached via 10.1.0.1
- D. None of these

**Q.No.28)** What does the 'S' mean when looking at the routing table?

- A. Shutdown route
- B. Directly connected
- C. Dynamically attached
- D. Statically connected

**Q.No.29)** Which of the following is NOT a part of the IP header?

- A. Fragment offset
- B. Window size
- C. Header checksum
- D. Time to live

**Q.No.30)** Correctly match the "Layer Name" with the "Name of the unit exchanged" at that Layer.

- |                    |           |
|--------------------|-----------|
| A) Physical layer  | i) Packet |
| B) Data link layer | ii) TPDU  |
| C) Network Layer   | iii) Bit  |
| D) Transport Layer | iv) Frame |
- A. A- iii, B- i, C-ii, D-iv  
B. A- iii, B- iv, C- ii, D- i  
C. A-iv, B-iii, C-ii, D- I  
D. A - iii, B - iv, C - i, D – ii

**Q.No.31)** Which of the following describes a MAC (Media Access Control) address?

- A. Used to identify systems of a LAN and the Internet
- B. Hardware address used by the Ethernet to deliver frames on a LAN
- C. Used when referring to a remote system
- D. Is typically assigned by the network in order to deliver IP datagrams to the proper system

**Q.No.32)** Assume you are the Network administrator maintaining the systems/networks for your organization. Now you want to remove an old machine and attach a new machine to the existing LAN that has a NIC card inside. Which among the following you will have to do in order to attach the machine to the network.

Date: 19-07-16

Course-end Re-examination

- A. You have to provide the new machine with the logical and physical addresses
- B. No need to provide any address to the machine
- C. You have to provide the new machine with the physical address only
- D. You have to provide the new machine with the logical address only

**Q.No.33)** If the data can travel in either direction, but not simultaneously is called

- A. half-duplex communication
- B. full-duplex communication
- C. base band communication
- D. broad band communication

**Q.No.34)** You are responsible for setting up a LAN, for which you have decided to go for a 10/100 Ethernet. For your structured cabling which among the following would you use to connect the individual PCs to the switch with a constraint of keeping the expenditure to the minimum.

- A. Coax – 50 ohms
- B. Single Mode fibre
- C. Multi mode fibre
- D. UTP

**Q.No.35)** TCP and IP protocols provides

- A. Connection less and connection less service
- B. Connection oriented and connection oriented service
- C. Connection oriented and connection less service
- D. Connection less and connection oriented service

**Q.No.36)** Match the following:

- |                         |  |
|-------------------------|--|
| 1. Data Link Layer -    | a. Dialogue control and Synchronization    |
| 2. Transport Layer -    | b. Translation, Encryption and Compression |
| 3. Presentation Layer - | c. Framing, Flow control and Error control |
| 4. Session Layer -      | d. Flow control and Error control          |
- A. 1-b, 2-c, 3-d, 4-a  
B. 1-d, 2-c, 3-b, 4-a  
C. 1-c, 2-d, 3-a, 4-b  
D. 1-c, 2-d, 3-b, 4-a

Date: 19-07-16

Course-end Re-examination

**Q.No.37)** Assume a tcp concurrent server A running at host with ip address 202.62.226.35 and port address 5672. Now if we have 4 tcp clients running on the host with ip address 202.62.226.36 and they have established connection with the server A. In this case

- A. The association maintained by the server with the client will differ only by protocol
- B. The association maintained by the server with the client will differ only by ip addresses of the client.
- C. The association maintained by the server with the client will differ only by port addresses of the client.
- D. The association maintained by the server with the client will differ only by ip and port addresses of the client.

**Q.No.38)** A packet with a special code in the address field is transmitted which is received and processed by all the machines in that network. Such an operation is called as

- A. Multicasting
- B. Broadcasting
- C. Unicasting
- D. None of the above

**Q.No.39)** The length of an IP v 6 Address is \_\_

- A. 32
- B. 48
- C. 64
- D. 128

**Q.No.40)** Which protocol does the ping command use when attempting to test whether a remote host is running?

- A. ICMP
- B. TCP
- C. UDP
- D. ARP



# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted   Attempted

 00:59:56

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 1**

What is a shell?

---

**Options:**

- It is a hardware component
  - It is a command interpreter
  - It is a part in compiler
  - It is a tool in CPU scheduling
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:54:27

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 2**

Which of the following wireless standard works at 5 GHz band?

---

**Options:**

- 802.11a
  - 802.11g
  - 802.11b
  - 802.11n
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:54:20

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 3**

How many broadcast domains will be created on a 24 port switch?

**Options:**

- 24
  - 12
  - 25
  - 1
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:54:14

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 4**

Which of these ports is used by the SMTP service?

**Options:**

- 20
  - 23
  - 25
  - 80
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted Attempted

 00:49:53

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 5**

How many subnets you get with network address as 192.168.100.0 and subnetmask as 255.255.255.240?

**Options:**

- 16
  - 8
  - 2
  - 4
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:49:46

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

**Question No: 6**

Which of these is a routing protocol?

**Options:**

- TCP
- IP
- OSPF
- ARP

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:49:39

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 7**

Which of these protocol avoids creation of switching loops?

**Options:**

- FTP
  - VTP
  - STP
  - SNMP
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:49:29

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 8**

Which of the following routing protocol is a class full routing protocol?

**Options:**

- OSPF
  - EIGRP
  - RIP
  - BGP
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:49:23

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 9**

What is the default TTL value for windows computers?

**Options:**

- 64
  - 128
  - 16
  - 256
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:49:17

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 10**

What is the length of the IPV6 address?

**Options:**

- 64 bit
  - 32 bit
  - 128 bytes
  - 128 bits
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:49:12

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 11**

Which of thses service uses UDP protocol?

---

**Options:**

- HTTP
  - FTP
  - TFTP
  - SMTP
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:49:06

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 12**

What factor determines the amount of RAM supported by a CPU?

---

**Options:**

- Width of Data Bus
  - Width of the Control Bus
  - CPU Instruction Set
  - Width of the Address Bus
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:49:00

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 13**

Which of the following memory type loses the stored data if not refreshed at regular intervals?

**Options:**

- ROM
  - SRAM
  - EEPROM
  - DRAM
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:48:53

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

Question No: 14

A RAM is called a Dynamic RAM (DRAM)?

---

**Options:**

- When it is read sequentially
  - It is made of transistors
  - It requires periodic refreshing
  - It is non volatile
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:48:46

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

**Question No: 15**

Which of these switch port mode allows a port to work in multiple VLAN's?

**Options:**

- Access
- Trunk
- Blocked
- Forwarding

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted   Attempted

 00:48:38

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 16**

Which of thses is an application layer protocol?

**Options:**

- HTTP
  - TCP
  - IP
  - ARP
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted   Attempted

 00:48:33

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 17**

Which of these protection rings in the CPU is used to run user programs?

---

**Options:**

- Ring 0
  - Ring1
  - Ring 3
  - Ring2
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:48:27

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 18**

How much data is stored in a sector of a hard disk?

---

**Options:**

- 512 Bytes
  - 512 GB
  - 512 KB
  - 512 MB
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted   Attempted

 00:48:20

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

Question No: 19

Which of these is not an interface used to connect hard disks to computers?

---

**Options:**

- SATA
  - ISA
  - SCSI
  - IDE
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted   Attempted

 00:48:15

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 20**

Which of the following have the fastest access time?

---

**Options:**

- semi conductor memories
  - Compact Disks
  - Magnetic Tapes
  - Hard Disk Drives
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted   Attempted

 00:48:07

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 21**

What is the length of the source & Destination port fields in TCP or UDP header?

---

**Options:**

- 16 bit
  - 16 bytes
  - 32 bit
  - 8 bit
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted   Attempted

 00:47:58

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 22**

What is the maximum frame size in bytes supported on Ethernet networks?

---

**Options:**

- 1400
  - 1518
  - 1200
  - 1214
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted   Attempted

 00:47:53

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 23**

When a running process encounters an I/O instruction, its state is changed to?

---

**Options:**

- Ready
  - Blocked/Waiting
  - Idle
  - Running
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:47:46

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 24**

What is the maximum length that an UTP cable can be used?

**Options:**

- 200mtr
  - 150mtr
  - 100mtr
  - 50mtr
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:47:39

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 25**

Software embedded in a hardware is called?

---

**Options:**

- Firmware
  - BIOS
  - Software
  - Bootstrap
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:47:30

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 26**

Which of these is a broadcast address for the subnet 255.255.255.240?

**Options:**

- 192.168.1.18
  - 192.168.1.50
  - 192.168.1.82
  - 192.168.1.143
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:47:24

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 27**

Interrupts which are initiated by an instruction are?

---

**Options:**

- internal
  - Software
  - hardware
  - external
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:47:18

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

**Question No: 28**

While processing a program if the processor fails to find the required page in the memory, it generates an error, the error is known as?

**Options:**

- Page Error
- Page Fault
- Stack Overflow
- Buffer Overflow

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:47:11

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 29**

What is the maximum hop count supported by RIP V1?

---

**Options:**

- 100
  - 32
  - 64
  - 16
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 2 Exam

Unattempted    Attempted

 00:47:05

---

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

---

**Question No: 30**

Which of the following fragmentation is suffered by the fixed partitioning memory management method?

**Options:**

- External
  - Complete
  - Internal
  - Partial
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:19:24

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 1

A thread

## Options:

- is a lightweight process where the context switching is high
- is a lightweight process where the context switching is low
- is used to speed up paging
- none of the above

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:19:02

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 2**

A table that contains entry about the frame number where the corresponding page is physically located is called as?

**Options:**

- Process Table
- Page Register
- Page Table
- Segment Table

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:18:56

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 3**

The state of a process after it encounters an I/O instruction is \_\_\_\_\_.

**Options:**

- Ready
- Blocked/Waiting
- Idle
- Running

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:18:50

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 4

of the following protocol is used to resolve MAC addresses from the known IP Address?

---

**Options:**

- ICMP
  - DNS
  - ARP
  - RARP
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:18:44

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 5**

Which of the following routing protocol suffers from the problem of routing loops?

**Options:**

- EIGRP
- OSPF
- RIP
- BGP

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:18:38

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 6**

which of the following statement is true?

**Options:**

- A logical address identifies a memory location in RAM
- A physical address identifies a memory location in Virtual Memory
- A physical address identifies a memory location in RAM
- A physical address is also called as Relative Address.

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:18:32

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 7**

Which of the following is not a network address for the subnet mask 255.255.224.0?

**Options:**

- 172.16.32.0
- 172.16.130.0
- 172.16.96.0
- 172.16.160.0

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:18:26

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 8**

which of the following flag is used to do find MTU supported till the destination?

**Options:**

- SYN
- RST
- ACK
- Don't Fragment

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:18:21

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

## Question No: 9

How many protection rings are supported by the processor?

## Options:

- 6
- 2
- 4
- 10

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:18:15

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 10**

which of the following type identifies an ICMP echo request packet?

**Options:**

- Type 8
- Type 11
- Type 0
- Type 4

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:18:08

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 11**

what is the broadcast address for the network 192.168.102.32 with subnet mask 255.255.255.240?

**Options:**

- 192.168.102.255
- 192.168.102.63
- 192.168.102.47
- 192.168.102.48

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:18:03

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 12

A logical address in memory paging is made of ?

Options:

- Page Number + Offset
- Page Number + Frame number
- Frame Number + Offset
- Offset

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:17:56

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 13

which of the following is not an interface used for Hard Disks?

---

**Options:**

- SCSI
  - PCI
  - SATA
  - IDE
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:17:50

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 14

which of the following scheduling algorithm suffers convoy effect?

---

**Options:**

- Shortest-Job-First
  - First-In-First-Out
  - Priority Based
  - Round Robin
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:17:44

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 15**

which of the following command allows you to clear the DNS cache of a windows machine?

**Options:**

- Ping
- nslookup
- ipconfig
- telnet

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:17:37

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 16**

Which of the following port is used by the DHCP server?

**Options:**

- TCP 67
- UDP 68
- UDP 67
- TCP 68

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:17:30

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 17**

Which of the following fragmentation is suffered by the fixed partitioning memory management method?

**Options:**

- External
- Internal
- Partial
- Complete

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:17:23

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 18**

which of the following register hold the starting physical address of a segment?

**Options:**

- Program Counter
- Bound Register
- Length Register
- Base Register

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:17:16

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 19

which of the following component is used by static memory to store data bit?

---

**Options:**

- Capacitor
  - Transistor
  - Resistor
  - Inductor
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:17:10

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 20**

which of the following IPv6 address identifies a link local address?

**Options:**

- fec0::
- fe80::
- fffe::
- ff20::

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:17:02

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 21

which of the following routing protocol is not an open source protocol?

---

Options:

- RIP v1
  - OSPF
  - RIP v2
  - EIGRP
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:15:55

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 22

How many boot loader programs can exist in Master Boot record of a Hard Disk?

Options:

- 1
- 2
- 3
- Unlimited

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:15:48

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 23

which of the following application uses TCP port 22?

---

Options:

- PING
  - SSH
  - TELNET
  - HTTP
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:15:42

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 24

Which of the following is used to store actual data on a hard disk?

Options:

- Sector
- Cylinder
- Tracks
- Actuator Arm

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:15:34

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 25

A page is called as dirty when?

**Options:**

- It is moved from memory to virtual Memory
- It has been altered since it was loaded into main memory
- It has not been altered since it was loaded into main memory
- When some data is lost from a page

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:15:27

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 26**

In case of Inter VLAN routing , the switch port where the router is connected should be configured to work in?

**Options:**

- Access Mode
- Transparent Mode
- VLAN Mode
- Trunk Mode

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:15:20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 27

which of the following statement is true about the Virtual Trunking protocol (VTP)?

---

**Options:**

- It avoids switching loops
  - It avoids routing loops
  - It replicates VLAN information to all switches
  - None
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:15:13

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 28**

Which of the following cable has a limitation of 100 mtr?

**Options:**

- UTP
- Coaxial cable
- Fiber Optic Cable
- None

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:15:07

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 29

which of the following wireless standard can work with both 2.4 GHz and 5 GHz bands?

---

**Options:**

- 802.11
  - 802.11a
  - 802.11g
  - 802.11n
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:15:00

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 30

which of the following port in a computer system is used to connect console cable of the router?

Options:

- RS-232(Serial)
- parallel
- IEE1394 (Firewire)
- PS/2

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:15:51

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 31

which of the following identifies the state of a process which was in memory and ready to execute but is shifted to virtual memory?

Options:

- Ready Suspended
- Blocked
- Ready
- Blocked Suspended

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:15:43

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 32

you have a Class B network, and you need fourteen subnets. You wish to have as many addresses available for hosts as possible. Which one of the following subnet masks should you use?

Options:

- 255.255.192.0
- 255.255.240.0
- 255.255.255.240
- 255.255.248.0

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End Exam



# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:15:36

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 33

Which of the following task is performed by the Interrupt Mask Register present in Programmable Interrupt Controller?

Options:

- Stores information about interrupts which are not to be acknowledged and ignored
- Stores information about interrupts which are already acknowledged
- Stores information about interrupts which are not yet acknowledged
- Stores information about interrupts which are waiting for End Of Interrupt

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:15:29

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 34

Which of the following statement is not true about the symmetric multiprocessing system?

---

**Options:**

- All the processors are peers
  - Each processor can perform all the tasks
  - There is no master slave relationship between processors
  - The master processor assigns task to the slave processor
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:15:22

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 35

Which of the following page replacement algorithm removes a selected page from the RAM, based on the R bit associated with it (if R=0 page removed or if R=1it is made zero and another page is selected) ?

Options:

- First In First Out
- Least Recently Used
- Optimal
- Clock Page Replacement

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:15:15

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 36**

which of the following field in IPV4 header is not used for packet fragmentation information?

**Options:**

- Identification
- Fragment Offset
- Type of service
- Flags

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:15:04

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 37

which of the following statement is true about Maximum Transmittable Unit (MTU)?

Options:

- Maximum Amount of Application Data that can be carried by Data Link Layer.
- Maximum Amount of TCP segment that can be carried by Data Link Layer.
- Maximum Amount of IP Packet that can be carried by Data Link Layer.
- Maximum Amount of Encrypted data that can be carried by Data Link Layer.

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:14:58

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 38

which of the following field in IP header is reduced by 1 by the each router when it forwards an IP Packet?

---

**Options:**

- IHL
  - TTL
  - flags
  - Protocol
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:14:52

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 39

which of the following field occupies the first 6 bytes of an Ethernet frame?

---

**Options:**

- Source MAC
  - CRC
  - Destination IP Address
  - Destination MAC
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:14:44

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 40**

which of the following protocol is used by switches or routers to tag frames in VLAN environment?

**Options:**

- 802.1q
- 802.11
- 802.2
- 802.qq

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:14:37

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 41

Which of the following is not a process placement algorithm used in dynamic partitioning?

---

**Options:**

- Best-Fit
  - Last-Fit
  - Next-Fit
  - First-Fit
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:14:31

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 42**

which following IP address can be assigned to the PC in a network in which the router address is 192.168.110.126 with a subnet mask of 255.255.255.224?

**Options:**

- 192.168.110.35
- 192.168.110.78
- 192.168.110.92
- 192.168.110.115

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:14:24

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

**Question No: 43**

Which of the following is the first DHCP packet sent by a client while getting IP configuration from DHCP Server?

**Options:**

- DHCP-Suggest
- DHCP-Ack
- DHCP-Offer
- DHCP-Request

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:14:19

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 44

If a host has a MAC address 00-5A-4D-72-11-7C, what will be the 64 bit Interface Identifier generated by EUI-64 method in IPV6 address?

Options:

- 025A:4DFF:FE72:117C
- 005A: FFFE: 4D72:117C
- 005A:4DFF:FE72:117C
- 025A:4D72: FFFE: 117C

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End Exam



# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:14:13

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 45

What is the length of the source port field in TCP or UDP header?

Options:

- 16 Bit
- 8 Bit
- 32 Bit
- 4 Bit

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:14:05

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 46

which of the following protocol is used by the DNS server?

---

**Options:**

- TCP
  - HTTP
  - ICMP
  - UDP
- 

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# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:12:59

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 47

which of the following Buffer improves the time taken for converting the logical address to physical address in case of memory paging?

Options:

- Translation Lookaside Buffer
- Input Buffer
- Segment Buffer
- Translation Local Buffer

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End Exam



# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted

Attempted

 01:12:52

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 48

which of the following Bus is known as Front Side Bus (FSB)?

Options:

- A Bus that connects South Bridge to Hard Disk
- A Bus that connects North Bridge to Memory
- A Bus that connects North Bridge to Processor
- A Bus that connects North Bridge to South Bridge

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Next &gt;&gt;

End Exam



# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:12:45

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 49

which of the following class is used for multicast addressing?

Options:

- Class D
- Class A
- Class E
- Class C

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Next &gt;&gt;

End Exam



# ePariksha

## Analyse your Knowledge

### FCN Test 1 Exam

Unattempted    Attempted

 01:12:38

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Question No: 50

which of the following application does not use UDP protocol?

---

Options:

- DNS
  - FTP Server
  - TFTP Server
  - DHCP Server
- 

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***Question Bank -DCN (Solved)*****Fill in the Blanks:**

**I.** When a user's information is converted into bits that hardware can use, five conversion steps can occur. Write these five steps on the lines provided below. The first and last steps are provided as your reference.

- |   |                              |
|---|------------------------------|
| 1. User information is converted to _____ | (Data)                       |
| 2. _____ is converted to _____            | (Data, Segments)             |
| 3. _____ are converted to _____           | (Segments, Packets/Datagram) |
| 4. _____ are converted to _____           | (Packets/Datagram, Frames)   |
| 5. _____ are converted to bits.           | (Frames)                     |

**II.** Identifying major sections of a network device driver.

A network device driver contains following sections:

- An include files section.
- A declarations section.

- |                                  |                      |
|----------------------------------|----------------------|
| 1. A _____ Section.              | (CONFIG)             |
| 2. A _____ Configuration section | (AUTO)               |
| 3. An _____ Section              | (IOCTL)              |
| 4. An _____ Handler section.     | (INTERRUPT)          |
| 5. An _____ section.             | (INITIALIZATION)     |
| 6. A _____ section               | (START TRANSMISSION) |
| 7. A _____ section.              | (WATCHDOG)           |

**III.** Write full forms of the following protocols:

- |                 |  |
|-----------------|--|
| 1. SMTP _____   | (Simple Mail Transfer Protocol)          |
| 2. FTP _____    | (File Transfer Protocol)                 |
| 3. SNMP _____   | (Simple Network Management Protocol)     |
| 4. CMIP _____   | (Common Management Information Protocol) |
| 5. TCP _____    | (Transmission Control Protocol)          |
| 6. SLIP _____   | (Serial Line Internet Protocol)          |
| 7. IMAP _____   | (Internet Mail Access Protocol)          |
| 8. ASP _____    | (AppleTalk Session Protocol)             |
| 9. SCP _____    | (Session Control Protocol)               |
| 10. ARP _____   | (Address Resolution Protocol)            |
| 11. BOOTP _____ | (Bootstrap Protocol)                     |
| 12. DHCP _____  | (Dynamic Host Configuration Protocol)    |
| 13. HTTP _____  | (Hyper Text Transport Protocol)          |
| 14. ICMP _____  | (Internet Control Message Protocol)      |
| 15. RARP _____  | (Reverse Address Resolution Protocol)    |
| 16. TFTP _____  | (Trivial File Transfer Protocol)         |
| 17. UDP _____   | (User Datagram Protocol)                 |

**IV.** Complete the following sentences :

1. SMTP is a part of the \_\_\_\_\_ protocol suite. (TCP/IP)
2. \_\_\_\_\_ protocol is used to map an IP address into a hardware address. (ARP)
3. The term \_\_\_\_\_ is used to describe the general shape of a network. (Topology)
4. Full form of URL is \_\_\_\_\_. (Uniform Resource Locator)
5. CMSA stands for \_\_\_\_\_. (Carrier Sense Multiple Access)
6. The IEEE standard for Ethernet is \_\_\_\_\_. (802.3)
7. The IEEE standard for Token Ring is \_\_\_\_\_. (802.5)
8. ATM stands for \_\_\_\_\_. (Asynchronous Transfer Mode)
9. Bandwidth is measured in \_\_\_\_\_ or \_\_\_\_\_. (Cycles per second, Hertz)
10. Baud means \_\_\_\_\_. (Bits per second)
11. \_\_\_\_\_ connects to LAN segments and copies frames one to the other. (Bridge)
12. \_\_\_\_\_ and \_\_\_\_\_ values are used to verify that data is not corrupted during transmission.  
(CRC, Checksum)

***Question Bank -DCN (Solved)***

13. Full form of ping is \_\_\_\_\_. (Packet Inter-Net Groper)
14. Ethernet uses the \_\_\_\_\_ topology and \_\_\_\_\_ access. (Bus, CSMA/CD)
15. Internet uses the \_\_\_\_\_ protocol. (TCP/IP)
16. Network Interface Card is also called as \_\_\_\_\_. (Network Adapter).
17. NFS stands for \_\_\_\_\_. (Network File System).
18. \_\_\_\_\_ protocol technique is used to change data by inserting additional bytes to distinguish data values and packet control fields. (Byte Stuffing)
19. Dotted decimal IP addresses range from \_\_\_\_\_ through \_\_\_\_\_. (0.0.0.0 , 255.255.255.255).
20. IP address for loopback address is \_\_\_\_\_. (127.0.0.1)
21. The two general parts of a Layer 3 address are \_\_\_\_\_ part and a \_\_\_\_\_ part. (NETWORK, HOST or NODE)

**Select True or False:**

1. US Government runs the Internet. (F)
2. MAC Layer LAN addresses are assigned through Internet. (T)
3. IP addresses are originally designed to identify network and hosts. (T)
4. Address mapping is a layer 3 and layer 7 function (T)
5. The DSU is deployed on analog links (F)
6. Ethernet address is 48 bits long. (T)
7. The IP header is transported end-to-end (F)
8. LAN nodes have both MAC and IP addresses (T)
9. Reverse ARP (RARP) starts with layer 2 address. (T)
10. Internet domain names are hierarchical in their structure (T)
11. The IP header is fixed in length (F)
12. UDP is used for sequential datagram delivery (F)
13. TCP connections are managed with timers (T).
14. FDDI uses two counter-rotating rings. (T)
15. FTP protocol uses separate connections for control and data. (T).
16. Ethernet is a multiprotocol solution (T)
17. TCP socket can be shared by multiple processes (T)
18. Data portion of IP datagram is not included while calculating IP checksum. (T)
19. UDP is connection oriented (F)
20. OSPF is a vector distance routing protocol. (F)
21. Network core is a mesh of interconnected routers. (T)
22. DNS uses UDP as well as TCP. (T)
23. Category-3 cable is used for 16 MBPS Token Ring networks. (F)
24. Fibre Optic Cable can be used for bus topology wiring.. (F)
25. IP ensures that each packet sent is delivered in sequence to the destination. (F)
26. Transport services allow users to segment and reassemble several upper-layer applications onto one transport layer data stream. (T)
27. Transport layer uses network addressing to find best path for packet delivery. (F)
28. Transport layer allows users to request reliable data transport. (T)
29. Transport layer establishes an end-to-end connection. (T)
30. Transport layer takes care of data integrity and flow control. (T)
31. Internet uses Hyper Text Transport Protocol for data transfer. (T)
32. Private networks employing Internet technologies are called Intranets. (T)
33. Internet technologies are independent of client platform. (T)
34. Java uses server side scripting. (F)
35. ICMP is only an error reporting system (T)
36. IP addresses are 32 byte numbers (F)
37. Since TCP is connection oriented, a TCP protocol port can be used for several connections at the same time. (T)
38. The Hyper Text Transport Protocol is connection oriented protocol (F)
39. RSVP actually transmits the data and provides the requested quality of service. (F)
40. The High-performance Parallel Interface is a point-to-point connection technology. (T)
41. By definition, CT implies integrating computer applications with the telephone system. (T)

**Match the Following:**

**Question Bank -DCN (Solved)****I.** Identify the functions of each layer of the ISO/OSI model.

- |                     |  |
|---------------------|--|
| 1. Application (d)  | a. Defines network addressing and best path. |
| 2. Presentation (g) | b. Provides end-to-end connection.           |
| 3. Session (e)      | c. Send and receive binary information       |
| 4. Transport (b)    | d. Network applications                      |
| 5. Network (a)      | e. Inter host communication.                 |
| 6. Data Link (f)    | f. Controls access to media.                 |
| 7. Physical (c)     | g. Data representation                       |

**II.** The first column lists SNMP messages and second column describes the SNMP message. Identify the correct pairs.

- |                       |  |
|-----------------------|--|
| 1. GetRequest (f)     | a. Sent by agent to notify occurrence of an event. |
| 2. GetNextRequest (e) | b. Sent by an agent in response to SetRequest.     |
| 3. SetRequest (d)     | c. Sent by an agent in response to GetRequest.     |
| 4. GetResponse (c)    | d. Sent by manager to modify an agent's MIB.       |
| 5. SetResponse (b)    | e. Sent by manager to get next MIB variable.       |
| 6. Trap (a)           | f. Sent by manager to request variable values      |

**III.** Match the IP addresses in second column to the best description in first column

- |                                |                |
|--------------------------------|----------------|
| A) Class A Network address (4) | 1) 127.0.0.1   |
| B) Multicast Address (2)       | 2) 224.0.0.0   |
| C) Class C Network Address (5) | 3) 130.21.47.0 |
| D) Class B Subnet Address (3)  | 4) 91.91.91.91 |
| E) Loop back Address (1)       | 5) 202.41.81.0 |

**IV.** Match the protocols listed in second column with the layers in first column

- |                                   |                           |
|-----------------------------------|---------------------------|
| A) Media Access Control Layer (2) | 1) SMTP                   |
| B) Logical Link Control Layer (4) | 2) IEEE 802.3 (Ethernet)  |
| C) Network Layer (5)              | 3) User Datagram Protocol |
| D) Transport Layer (3)            | 4) IEEE 802.2 (LLC)       |
| E) Application Layer (1)          | 5) Internet Protocol      |

**V.** Match the following:

- |  |                       |
|--|-----------------------|
| 1) Novell NetWare (J)                      | A) Physical layer     |
| 2) Routing (C)                             | B) Data Link Layer    |
| 3) Asynchronous Transfer Mode (I)          | C) Network Layer      |
| 4) Encoding of bits (A)                    | D) Transport Layer    |
| 5) Error Detection (B)                     | E) Session Layer      |
| 6) Remote File Transfer (G)                | F) Presentation Layer |
| 7) Integrated Services Digital Network (H) | G) Application Layer  |
| 8) Error free end-to-end delivery (D)      | H) ISDN               |
| 9) Translation (F)                         | I) ATM                |
| 10) Session management (E)                 | J) NOS                |

**VI.** For each statement in the table below, write the name of the protocol being described. Place a mark 'T' or 'N' in the Type column if the protocol is Transport-layer protocol or Network-layer protocol respectively.

**Question Bank -DCN (Solved)**

<b>Statement</b>	<b>Protocol</b>	<b>Type</b>
Maps known IP address to a MAC sublayer address		
Includes Layer 4 protocol ID in header		
Used to send destination unreachable message		
Breaks messages into datagrams		
Provides no software checking		
Uses sequence numbers		
Relies on application-layer reliability		
Uses table entry to respond to address requests		
Provides best effort delivery		
Reassembles datagrams into messages		
Handshakes with receiving device		
Used to send error and control messages		
Consults subnet mask to determine if the nodes are on the same subnet		
Provides connectionless transmission		
Sends acknowledgements		
Uses no windowing		

Ans:

<b>Statement</b>	<b>Protocol</b>	<b>Type</b>
Maps known IP address to a MAC sublayer address	ARP	N
Includes Layer 4 protocol ID in header	IP	N
Used to send destination unreachable message	ICMP	N
Breaks messages into datagrams	TCP	T
Provides no software checking	UDP	T
Uses sequence numbers	TCP	T
Relies on application-layer reliability	UDP	T
Uses table entry to respond to address requests	RARP	N
Provides best effort delivery	IP	N
Reassembles datagrams into messages	TCP	T
Handshakes with receiving device	TCP	T
Used to send error and control messages	ICMP	N
Consults subnet mask to determine if the nodes are on the same subnet	ARP	N
Provides connectionless transmission	UDP	T
Sends acknowledgements	TCP	T
Uses no windowing	UDP	T

**Select the Best Choice(s):**

1. A set of rules, which enable orderly exchange of information between two devices.
 

a) Topology      b) Protocol      c) Transmission Media      d) None of the above
2. ISO stands for
 

a) International Standards Organization  
  b) International Organization for Standardization  
  c) Both of above  
  d) None of above
3. Proposal for a new Internet standard is called
 

a) RFC      b) Internet draft      c) Draft Standard      d) Proposed Standard
4. The data sent between layers is called
 

a) Protocol Data Unit    b) Datagram      c) Service Data Unit      d) Packet
5. The Private Automatic Branch Exchange is an example of
 

a) Bus Topology    b) Ring Topology    c) Tree Topology      d) Star Topology
6. Topology, which connects every single node in the network to every other node, is
 

a) Star      b) Ring      c) Mesh      d) Bus
7. Which of the following is not a hybrid topology
 

a) Tree      b) String      c) Bus      d) None of the above
8. The term 10Base2 indicates a network
 

a) 10 mbps speed, Base Band Signaling, 200 meters segment length  
  b) 10 mbps speed, Base Band Signaling, 200 meters maximum length  
  c) 10 mbps speed, Base Band Signaling, 185 meters segment length  
  d) None of the above
9. Coaxial cable, UTP cable, STP cable and fibre cables are popular network media today. Order these in increasing order of data security
 

a) Coaxial, UTP, STP, Fibre  
  b) UTP, Coaxial, STP, Fibre  
  c) UTP, STP, Coaxial, Fibre  
  d) None of the above
10. Bridges are simple devices that are used to connect LANs of
 

a) Different Architecture (eg. Ethernet to Token Ring)  
  b) Same architecture (eg. Ethernet to Ethernet)  
  c) Architecture does not matter  
  e) None of the above
11. Which application uses existing CSMA/VD over existing twisted-pair cable with bandwidths of 100 mbps?
 

a) 10BaseF      b) 100BaseX      c) 100VG-AnyLAN      d) 10BaseFD
12. What model divides the network communication process into seven layers?

***Question Bank -DCN (Solved)***

- a) Layered Model      b) TCP/IP      c) OSI      d) X.25

13. B-ISDN uses fiber as a transmission medium and \_\_\_\_\_ as the switching infrastructure

- a) Ethernet      b) FDDI      c) ATM      d) None of the above

14. \_\_\_\_\_ is the only standards based technology that has been designed from the beginning to accommodate the simultaneous transmission of voice, video and data

- a) Home cable network      b) Satellite TV      c) ATM      d) All of the above

15. Which of the following common LAN protocols extend to OSI network layer.

- a) NetBIOS      b) NetBEUI      c) TCP/IP      d) All of the above

16. Portability standards are discussed widely in four areas, which of the following is not one of them.

- a) Operating Systems  
 b) Data Management  
 c) Programming Languages  
d) Hardware

17. Which of the following is not an essential feature of Data Link Layer protocols as defined by ISO/OSI model

- a) Message orientation  
 b) Error Detection  
c) Error correction by re-transmission  
 d) None of the above

18. Which of the following describes the OSI Class 3 transport (TP3)

- a) Do nothing  
 b) Signaled Error Recovery  
 c) Multiplexing  
d) Signalled error recovery and multiplexing

19. The issue of checkpointing and synchronization is handled by which layer

- a) Session Layer      b) Transport Layer      c) Pressentation layer      d) Application Layer

20. In the OSI model, the responsibility for negotiating the encodings to be used in any particular connection is entrusted upon

- a) Application Layer      b) Session Layer      c) Presentation Layer      d) None of the above

21. TCP/IP is built on \_\_\_\_\_ technology

- a) Connection oriented      b) Connection less      c) Datagram      d) Ethernet

22. IP addresses are \_\_\_\_\_ bit long

- a) 4      b) 64      c) 48      d) 32

23. Which of the following is not a network operating system

- a) Windows for Workgroup over MSDOS  
 b) Novell Netware  
 c) Windows 95  
d) None of the above

**Question Bank -DCN (Solved)**

24. Fiber optic token ring networks operate at the speed of  
 a) 16 mbps      b) 100 mbps      c) 1000 mbps      d) 10 mbps

25. The Synchronous Optical Network is an ANSI standard. A similar standard established in Europe is  
 a) Synchronous Digital Hierarchy  
 b) SONET  
 c) Switched Multi megabit Data Service  
 d) Distributed Queue Dual Bus

26. In the TCP/IP protocol family \_\_\_\_\_ provides reliable transport service.  
 a) Transport Protocol      b) Transport Layer      c) TCP      d) All of above

27. IP address is a \_\_\_\_\_ address.  
 a) Network Layer Address      b) Layer 2 address      c) Hardware Address      d) None of above

28. An IP address when logically ANDed with netmask, the result is \_\_\_\_\_.  
 a) Host Address      b) Network Address      c) Broadcast Address      d) None of the above

29. Remote boot uses \_\_\_\_\_ protocol to discover IP address of diskless machine.  
 a) ICMP      b) SNMP      c) ARP      d) RARP

30. Once a datagram is fragmented in a IP network it is reassembled only at \_\_\_\_\_.  
 a) Next hope      b) Next Router      c) Final Destination      d) Never

31. The source quench \_\_\_\_\_ message is used to control the rate at which datagrams are transmitted.  
 a) IP      b) ICMP      c) SNMP      d) TCP

32. TCP establishes an end to end \_\_\_\_\_ between the sender and receiver.  
 a) Connection      b) Virtual Circuit      c) Path      d) None of above

33. UDP is used with \_\_\_\_\_ Protocol.  
 a) Trivial File Transfer      b) ICMP      c) LDAP      d) All of above

34. IP is a \_\_\_\_\_ protocol  
 a) Routing Protocol      b) Routed Protocol      c) Both of above      d) None of above

35. \_\_\_\_\_ is a complex data structure that contains details about a connection  
 a) Socket      b) Port      c) TCB      d) None of above

36. The **bind** socket call is used to \_\_\_\_\_  
 a) Bind a local application to a remote application  
 b) Bind a socket to local port  
 c) Bind a socket to a remote port  
 d) Bind a local port to a remote port

37. Each SNMP managed object belongs to a \_\_\_\_\_

***Question Bank -DCN (Solved)***

a) Community      b) Network      c) Organization      D) SNMP Group

38. RTCP is the \_\_\_\_\_ protocol designed to work with RTP

a) Application      b) Control      c) Network      d) Transport

39. For block devices all I/O occurs through the \_\_\_\_\_

a) Blocks      b) Device      c) Buffer cache      d) None of above

40. \_\_\_\_\_ is a international standard file format for describing interactive 3D multimedia on the Internet.

a) DHTML      b) XML      c) VRML      d) None of above

41. \_\_\_\_\_ is a distance-vector routing protocol

a) RIP      b) IGRP      c) OSPF      d) All of above

42. IPng provides security through Authentication Headers and the default encryption method is \_\_\_\_\_

a) SSL      b) Public Key      c) MD5      d) None of above

43. RTSP is a \_\_\_\_\_ protocol similar to HTTP

a) Network Layer      b) Internet      c) Application Layer      d) None of above

44. OSPF features include \_\_\_\_\_.

- a) Multi-Path routing
- b) Equal-cost
- c) Routing based on upper-layer TOS request
- d) All of above

45. IP address is assigned to a \_\_\_\_\_.

a) Network      b) Host      c) Interface      d) All of above

46. Token Ring network operate at a speed of

a) 10 mbps      b) 100 mbps      c) 20 mbps      d) 16 mbps

47. Ethernet is an access method that strictly adheres to the

a) CSMA/CD      b) Token Passing      c) SPX/IPS      d) TCP/IP

48. 100Baset4 operates at 100 mbps using base band signaling and the media is

- a) Two stands of fiber
- b) Two pairs of data grade UTP
- c) Four pairs of telephone grade UTP
- d) None of the above

49. Length of Ethernet address is

a) 24 bit      b) 12 bit      c) 48 bit      d) 32 bit

50. Frame Relay protocol is used for

a) WAN      b) LAN      c) Token Ring networks      d) None of the above

***Question Bank -DCN (Solved)***

51. Distance of a Radio Link is limited by

- a) Line of site      b) Capacity of the HUB device    c) Both A and B      d) None of the above

52. Basic Rate ISDN service provides

- a) 23B+1D Channels      b) 2B+1D Channels      c) 30B + 1D Channel    d) None of the above

53. X.25 networks work at the maximum speed of

- a) 33.6 kbps    b) 128 kbps    c) 64 kbps    d) 2.1 mbps

54. Unit for data at Transport layer is

- a) Segment    b) Packet    c) Frame    d) Bits

55. A physical layer address of a node is

- a) Always fixed  
 b) Changes if the NIC hardware is changed  
 c) Assigned by the administrator of the node  
 d) None of the above

56. Path determination occurs at

- a) Data Link Layer      b) Session Layer      c) Transport Layer      d) Network Layer

57. One of the following is not a function of Transport Layer.

- a) Windowing      b) Addressing      c) Multiplexing      d) Flow control

58. Network layer communicates path information using

- a) ICMP      b) SNMP      c) Some form of routing information protocol      d) None of the above

59. Applications running on a single host are identified by service access points at Transport layer and Session layer interface. These SAPs are known as

- a) Ports      b) Sockets      c) Both A and B      d) None of the above

60. Route poisoning technique is used to avoid

- a) Congestion problem      b) Count to infinity problem      c) Traffic shaping      d) None of the above

61. The Transport Layer provide

- a) Best effort end to end packet delivery service  
 b) Connection oriented end to end packet delivery service  
 c) Connection oriented, reliable, end to end packet delivery service  
 d) None of the above

62. Application data is converted in a form suitable for transmission on the network by

- a) Network Layer      b) MAC Layer      c) Session Layer      d) Presentation Layer

63. Version 4 Internet Protocol uses

- a) 32 bit flat address scheme  
 b) 32 bit hierarchical address scheme

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- c) 64 bit address  
d) 128 bit address

64. Mapping between Internet Protocol address and MAC layer address are resolved using

- a) RARP                  b) RIP                  c) ARP                  d) TCP/IP

65. UDP is faster than TCP because

- a) UDP runs on faster networks  
b) UDP does not provide reliability  
c) Both A and B  
d) None of the above

66. Digital Signatures use

- a) Public Key Algorithm  
b) Private Key Algoritham  
c) Secrete Key Algoritham  
d) None of the above

67. Domain Name Service provides an easy and fast mechanism to extract

- a) Network address from an IP address  
b) IP address corresponding to a host name  
c) MAC layer address corresponding to a given IP address  
d) All of above

68. Most popular transfer agent to transfer electronic mail on Internet is

- a) X.400                  b) SMTP                  c) TCP                  d) FTP

69. Java Script is

- a) Server side scripting                  b) Client side scripting                  c) Both of above                  d) None of above

70. Real life Token Ring Networks use

- a) Ring Topology                  b) Tree Topology                  c) Star wired ring Topology                  d) Bus Topology

71. TCP provides connection oriented service on top of ....

- a) Circuit Switched Network  
b) Packet Switched Network  
c) Connection less service  
d) None of the above.

72. Ethernet address is ... bits wide.

- a) 24                  b) 32                  c) 48                  d) None of the above

73. The network model in which only two hosts are connected to each other is called...

- a) Point-to-Point                  b) Peer-to-peer                  c) Intranet                  d) None of the above

74. A Private Automatic Branch Exchange (APBX) is an example of .....

- a) Bus Topology                  b) Tree Topology                  c) Star Topology                  d) None of the above

75. The protocol used for discovering Ethernet address corresponding to an IP address is

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- a) ARP      b) RARP      c) ICMP      d) None of the above

76. T-Connectors are used in ..... networks.

- a) UTP      b) STP      c) Fiber Optic      d) None of the above

77. \_\_\_\_\_ Technology requires proper termination of segments.

- a) 10BaseT      b) 10Base5      c) 10Base2      d) None of the above

78. \_\_\_\_\_ is not a responsibility of OSI Presentation layer

- a) Data Compression      b) Data Recovery      c) Data Encryption      d) All of the above

79. \_\_\_\_\_ layer of OSI does not have a corresponding layer in TCP/IP stack.

- a) Physical Layer      b) Link Layer      c) Session Layer      d) All of the above.

80. HTTP is a \_\_\_\_\_ application layer protocol.

- a) Connectionless      b) Stateless      c) State full      d) None of the above

81. What Open Systems Interconnection (OSI) layer does IP belong to?

- a) session      b) transport      c) network      d) data link

82. Which of the following IP addresses is the loopback address?

- a) 0.0.0.0      b) 10.0.0.1      c) 127.0.0.1      d) 255.255.255.255

83. Personal computers configured with more than one IP address are called

- a) routers      b) bridges      c) multihomed      d) internetworked

84. Which utility program reports whether a networked computer is responding at a given IP address?

- a) traceroute      b) ping      c) ttcp      d) netstat

85. Can IP run over any other physical networks besides Ethernet?

- a) No (and IP does not run over Ethernet)  
 b) No  
 c) Yes (but IP does not run over Ethernet)  
d) Yes

86. What function does Address Resolution Protocol (ARP) perform?

- a) maps IP addresses to Ethernet addresses  
 b) automatically assigns IP addresses to computers  
 c) prevents two computers from using the same IP address  
 d) none of the above

87. What mechanism does ARP use to resolve IP addresses?

- a) mathematical formula  
b) lookup table  
 c) central Web site  
 d) random number generator

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88. Which of the following services manage the conversion between IP addresses and host names?
- a) WINS      b) DNS      c) NIS      d) all of the above
89. The IP checksum feature supports integrity checking for
- a) an IP packet (header and payload)  
 b) an IP header only  
 c) an IP payload only  
 d) none of the above - IP doesn't use checksums
90. The IP delivery service is
- a) reliable,      b) connection-oriented,      c) unreliable      d) connectionless
91. UDP \_\_\_\_\_ allow different applications to maintain their own "channels" for data
- a) connection      b) session      c) port      d) none of the above
92. The UDP header consists of four (4) fields of two bytes each: \_\_\_\_\_ is not one of them
- a) source port number      b) sequence number      c) datagram size      d) none of the above
93. \_\_\_\_\_ allow applications to communicate using standard mechanisms built into network hardware and operating systems.
- a) Sockets      b) Protocol      c) Ethernet      d) OSI Layers
94. A host has an IP address of 192.168.6.209 and a net mask of 255.255.255.0. Which one of the following statements is true?
- a) The subnet number is 192.168.6.0, and the host number is 209.  
 b) The subnet number is 192.168.6.192, and the host number is 17.  
 c) The subnet number is 192.168.6.200, and the host number is 9.  
 d) The subnet number is 192.168.6.208, and the host number is 1.
95. Which of the following protocols is used for network management and monitoring?
- a) X.500      b) SNMP      c) SMTP      d) X.400
96. Your network segment has a default gateway of 205.222.45.126 and a subnet mask of 255.255.255.192. Which of the following is true?
- a) The valid range for hosts is 205.222.1.126 through 205.222.44.126 and all the hosts must use the same subnet mask.  
 b) The valid range for hosts is 205.222.45.126 through 205.222.45.126 and all the hosts must increase the subnet mask by one.  
 c) The valid range for hosts is 205.222.45.65 through 205.222.45.125 and all the hosts must use the same subnet mask.  
 d) The valid range for hosts is 205.222.1.65 through 205.222.45.126 and all the hosts must use the same subnet mask.
97. When developers write TCP/IP software, they have two mechanisms for transporting data from applications: TCP and UDP. Why, in many cases, is UDP used as the protocol for communications?
- a) UDP has a smaller packet size, and thus can be sent around the network with more speed.  
 b) TCP has no mechanism to support short, choppy bursts of data, which some applications tend to produce.  
 c) UDP is never used for applications. It is simply a routing protocol.  
 d) UDP provides reliable delivery acknowledgements, which many applications need for success.
98. In a token-passing network, what can each and every device on the network be described as behaving like?
- a) A proxy.      b) A router.      c) A bridge.      d) Repeater

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99. You have become increasingly concerned with the activity at the Logical Link Layer of the IPX/SPX stack on a certain workstation. What data form should you be concentrating on at this level?

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

100. TCP/IP Protocol Architecture was designed to carry data over the ARPANET. What type of network is the ARPANET?

- a) Message switching network.  
 b) Packet switching network.  
c) Packet routing network.  
 d) A hybrid of a packet and message routing network.

101. Your company has been assigned a Class B IP address. You are administrating a country-wide network with 45 individual subnets. Over the next year, you will be adding 60 subnets. What subnet mask should you use that will allow the most hosts per subnet?

- a) 255.255.252.0      b) 255.255.254.0      c) 255.0.0.0      d) 255.255.0.0

102. What layer of the OSI model handles such issues as file access and transfer and virtual terminal emulation?

- a) Application      b) Network      c) Transport      d) Session

103. You have implemented RSA encryption technology on your network. It seems to be working well. However, one station always receives encrypted emails as garbled text, meaning the protocol stack is corrupted. What OSI layer above can be assumed to be faulty?

- a) Data Link Layer      b) Presentation Layer      c) Session Layer      d) Transport Layer

104. What is the maximum segment length for 10Broad36?

- a) 85 meters      b) 200 meters      c) 36 meters      d) 3600 meters

105. Which networking standard describes cabling requirements for Ethernet?

- a) 802.2      b) 802.3      c) 802.4      d) 802.5

106. You have been given the Class C address of 205.222.5.0. What size subnet mask will give you the greatest possible number of hosts?

- a) An 8-bit mask of 255.255.255.255 for 254 hosts.  
b) An 8-bit mask of 255.255.255.0 for 254 hosts.  
 c) An 8-bit mask of 255.255.0.0 for 65,534 hosts.  
 d) An 8-bit mask of 255.255.0.0 for 8190 hosts.

107. Describe a fully-meshed star network.

- a) A network with a central router that has a unique path to each end-point router and some of the end-point routers have links to one another.  
 b) A network with a central router that feeds a number of smaller routers that in turn feed a number of end-point routers.  
 c) A network with a central router that has a unique path to each end-point router.  
d) A network in which all the routers have unique paths to one another

108. Why is SNMP considered lacking in security?

- a) SNMP devices send messages about their failing conditions.  
 b) The SNMP manager broadcasts sensitive information to the managed devices.  
c) The SNMP passwords are clear ASCII text.  
 d) SNMP passwords cannot be changed.

109. Which one of the following statements correctly describes differences between a bridge and a layer two switch?

**Question Bank -DCN (Solved)**

- a) A layer two switch is a high speed, multi-port bridge.
- b) A layer two switch cannot use the Spanning Tree Protocol to learn a network's topology, while a bridge can.
- c) A layer two switch can support multiple network media types, such as twisted pair, fiber, and coax, while a bridge is limited to supporting a single network media type.
- d) A layer two switch is than an Ethernet hub that supports different speeds on different ports, while a bridge requires all ports to have the same speed.

110. How are packet forwarding decisions made in an OSI reference model layer three device?

- a) The device compares the destination MAC address to an internal table that associates MAC addresses to particular ports.
- b) In a layer three device, every packet is sent out of every port.
- c) In a layer three device, packets are forwarded based on node name.
- d) The device compares the destination network address to an internal table that associates network addresses to particular ports.

111. Which one of the following describes the IP address 192.4.2.4?

- a) A Class A address that is 32 bits in length
- b) A Class B address that is 16 bits in length
- c) A Class B address that is 32 bits in length
- d) A Class C address that is 32 bits in length

112. What is the main function of a router?

- a) Setting up communications between networks that use dissimilar IP segments but the same Subnet Masks
- b) Connecting logically separate network segments.
- c) Providing IP configuration to computers using DHCP
- d) Authenticating users to the network
- e) Connecting to the Internet.

113. Network cards in computers communicate with each other using unique MAC addresses, similar to street addresses. Where do these unique addresses come from?

- a) The network administrator makes up addresses to use and then programs them into the software.
- b) The manufacturer publishes a range of addresses in the manual that you choose from.
- c) The network card searches the network and then assigns itself a unique address from an elaborate algorithm using the already-allocated addresses.
- d) The IEEE assigns every manufacturer a prefix and a block of address range, typically expressed in hexadecimal notation.

**Question Bank -DCN (Solved)****Answers the followings in brief:**

1. What are the mail standards?
2. Suppose a TCP connection is made, used, and terminated. Then suppose a segment arrives for the connection. Will the extra segment confuse TCP? Explain your answer.
3. What is the difference between IP and UDP? Is it correct to assert that they both relate to connectionless communication?
4. How big can an IP datagram be? Justify your answer.
5. When writing a server, how does one know which port is available?
6. What's the difference between a hardware address and IP address?
7. Why is fragmentation needed on an Internet?
8. Can a user's computer (i.e. a host) have connections to two different networks? What's the difference between such a host and a router?
9. Why is 10Base-T called so?
10. In UTP network - we refer to the logical topology as a BUS but the physical topology is Star - why?
11. What is NAT?
12. What are the 3 ways routers learn paths to destination networks?
13. What are the digital telephony standards used in US and Europe?
14. What is the difference between OC-3 and OC-3C?
15. Which protocols are used for mailbox access?
16. State names of any two object oriented middleware.
17. TCP is called an end-to-end protocol. Why?
18. Define MTU.
19. State the difference between ADSL and SDSL in terms of bit-rate offered.
20. State the difference between FDDI and CDDI in terms of physical media used.
21. State the locality of reference principle

**Answer the following in details:**

1. How can TCP be connection oriented, if its segments are encapsulated in IP datagrams, which are a connectionless service?
2. What homogeneous and heterogeneous networks mean? Do bridges connect homogeneous or heterogeneous networks? And switches?
3. Clarify the difference between a port and a socket.
4. What is network byte ordering, and why is it needed?
5. State the various stapes to be followed in order of implementation when implementing a UDP server.
6. State various timers used in TCP and explain function of each.
7. Write a note on IP routing.
8. Compare Circuit switching and Packet Switching
9. Write a note on CSMA/CD
10. Write a note on Token Passing networks.
11. State names of basic LAN topologies. Illustrate using neat and labeled diagrams. State LAN protocols most suited for each topology.
12. What is the significance of TYPE field in layer two frames? What are different techniques to communicate TYPE information?
13. State seven layers of OSI model and the services provided by each layer.
14. Write a note of IP addressing.
15. Write a note on IP routing.
16. State major features of service offered by TCP as seen by the application layer.
17. Write a note on flow control in TCP.
18. Electronic Mail Message Format
19. Explain File permissions, file types and transfer modes in FTP.
20. Explain different aspects of security.
21. Explain operation of DHCP.