Network Engineer — 2014 · Solved Past Paper

Body: Punjab Public Service Commission (PPSC) · **Post:** Network Engineer · **Year:** 2014 · **Questions:** 100 in the original paper — **98 solved and verified**, 2 excluded as defective (Q81, Q100) · **Price:** Free

> **How to use this paper:** each question shows the stem, the four options, and the correct answer. Click “Why each option?” under a question to see all four options explained — one question teaches four topics. General Knowledge answers are as of the 2014 sitting.

Source note: Scribd reproduction, "PPSC Network Engineer Exam Paper 2014", question paper along with answer key (accessed 9 Nov 2026; 100 questions, four options each, printed key for every question). 20 printed keys corrected openly (Q8, Q13, Q17, Q21, Q44, Q59, Q60, Q64, Q65, Q66, Q68, Q69, Q71, Q72, Q73, Q75, Q79, Q80, Q82, Q85). Q7 and Q83 are PICK-ONEs and Q81 and Q100 are DEFECTIVE-excluded, decided by the assistant under the owner's 8 Nov 2026 delegation. The three Wave 59 gaps (Q27, Q74, Q79) were recovered by Wave 69 on 9 Nov 2026 from the same Scribd reproduction's own page text layer; Q25 option C was corrected from 192.168.10.51 to 0.0.0.5 from the same text layer. Answers verified independently against reference facts, worked derivations and targeted sources, never from the printed key alone.

Question 1 Networking (Fundamentals)

Which of the following is used for modulation and demodulation?

- A. Modem ✓ **Correct answer**
- B. Protocols
- C. Gateway

tiplexer.

A. Correct: a modem modulates digital data onto an analogue carrier and demodulates it back.

B. Wrong: protocols are rules for communication, not the modulating device.

C. Wrong: a gateway connects different networks or protocols.

D. Wrong: a multiplexer combines several signals onto one line.

Question 2 Networking (Fundamentals)

The probability that a single bit will be in error on a typical public telephone line using 4800 bps modem is 10 to the power -3. If no error detection mechanism is used, the residual error rate for a communication line using 9-bit frames is approximately equal to

- A. 0.099
- B. 0.009 ✓ **Correct answer**
- C. 0.991
- D. 0.999

A. Wrong: that is about ten times too large.

B. Correct: $1 - (1 - 10^{-3})^{9} \approx 9 \times 10^{-3} = 0.009$.

C. Wrong: that is roughly the probability a frame is error-free.

D. Wrong: that is roughly the probability a single bit is correct.

Question 3 Networking (Devices)

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

- A. Router
- B. Bridge ✓ **Correct answer**
- C. Repeater

A. Wrong: a router forwards packets between networks at layer 3, not frames between LANs at layer 2.

B. Correct: a bridge forwards frames between LAN segments.

C. Wrong: a repeater only regenerates the signal within one segment.

D. Wrong: a switch forwards frames within a LAN, not between LANs.

Question 4 Networking (VPN)

What terminates VPNs at a primary location?

- A. Router
- B. ASA
- C. Head-end device ✓ **Correct answer**
- D. Software client

A. Wrong: a plain router does not terminate VPN tunnels.

B. Wrong: an ASA is one kind of security appliance, not the general term.

C. Correct: the head-end device (VPN concentrator) terminates tunnels at the central site.

D. Wrong: the software client sits at the remote end, not the primary location.

Question 5 Networking (VPN)

What wizard in SDM can be used to assist in choosing a VPN?

- A. VPN Design Guide ✓ **Correct answer**
- B. IPSec Wizard
- C. VPN Recommendation Guide
- D. IPSec Guide

...he printed key and the SDM wizard name agree on this choice.

B. Wrong: the IPSec wizard configures a tunnel, it does not guide the choice of VPN type.

C. Wrong: no such SDM wizard name is used.

D. Wrong: a guide is documentation, not the SDM wizard.

Question 6 Networking (OSI Model)

The network layer concerns with

- A. bits
- B. frames
- C. packets ✓ **Correct answer**
- D. none of the options

A. Wrong: bits are the physical layer's unit.

B. Wrong: frames are the data link layer's unit.

C. Correct: the network layer moves packets between networks.

D. Wrong, since C is correct.

Question 7 Networking (Wireless)

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

- A. Slower data transmission
- B. higher error rate
- C. interference of transmissions from different computers
- D. All of the options ✓ **Correct answer**

A. A real disadvantage of wireless LANs, so it cannot be the "not a disadvantage" answer.

B. A real disadvantage of wireless LANs.

dvantage of wireless LANs.

D. Picked as the bank's intended answer: all three listed items are disadvantages, so D is the closest reading of the item as printed; the stem as worded is defective, recorded here rather than silently fixed. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 8 Networking (Protocols)

The Internet Control Message Protocol (ICMP)

- A. allows gateways to send error a control messages to other gateways or hosts
- B. provides communication between the Internet Protocol Software on one machine and the Internet Protocol Software on another
- C. reports error conditions to the original source, the source must relate errors to individual application programs and take action to correct the problem ✓ **Correct answer**
- D. All of the options

A. Partly true of ICMP, but it is not the defining function, and it cannot make D true.

B. Wrong: that describes IP itself, not ICMP.

C. Correct: ICMP's defining job is reporting errors back to the source.

D. Wrong: B is false, so "all" cannot hold; the printed key D is corrected to C. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 9 Networking (Devices)

Our company has a LAN in its downtown office and has now set up a LAN in the manufacturing plant in the suburbs. To enable everyone to share data and resources between the two LANs, what type of device(s) are needed to connect them? Choose the most correct answer.

- A. Modem

- C. Hub
- D. Router ✓ **Correct answer**

A. Wrong: a modem connects to a carrier line, it does not join two LANs.

B. Wrong: a cable alone cannot route traffic between two LANs.

C. Wrong: a hub only extends one LAN segment.

D. Correct: a router forwards traffic between the two separate LANs.

Question 10 Networking (OSI Model)

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

- A. routing
- B. inter-networking
- C. congestion control
- D. none of the options ✓ **Correct answer**

A. A genuine network-layer function, so it is not the answer.

B. A genuine network-layer function, so it is not the answer.

C. A genuine network-layer function, so it is not the answer.

D. Correct: none of A–C is a non-function of the network layer.

Question 11 Networking (Fundamentals)

The term 'duplex' refers to the ability of the data receiving stations to echo back a confirming message to the sender. In full duplex data transmission, both the sender and the receiver

- A. cannot talk at once
- B. can receive and send data simultaneously ✓ **Correct answer**

send or receive data one at a time

- D. can do one way data transmission only

A. Wrong: that describes half duplex.

B. Correct: that is the definition of full duplex.

C. Wrong: that describes half duplex.

D. Wrong: that describes simplex.

Question 12 Networking (Protocols)

RIP stands for :

- A. Routing Information Protocol ✓ **Correct answer**
- B. Route Internet Protocol
- C. Router Information Protocol
- D. Route Intranet Protocol

A. Correct: RIP is the distance-vector routing protocol.

B. Wrong: the middle word is "Routing", not "Route", and the last is "Information".

C. Wrong: the first word is "Routing", not "Router".

D. Wrong: RIP runs on the Internet, not only an intranet.

Question 13 Networking (Protocols)

BGP Stands for

- A. Bridged Gateway Protocol
- B. Border Gateway Protocol ✓ **Correct answer**
- C. Bridge Gateway Protocol
- D. Border Gone Protocol

ere is no such protocol, the printed key A is corrected.

B. Correct: BGP is the inter-domain routing protocol of the Internet.

C. Wrong: "Bridge" is not part of the name.

D. Wrong: a nonsense distractor. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 14 Networking (Standards)

IEEE 802.11 stands for :-

- A. Wireless LAN ✓ **Correct answer**
- B. Wired LAN
- C. Bluetooth technology
- D. Wi-MAX

A. Correct: 802.11 is the wireless LAN standard family.

B. Wrong: wired LAN is 802.3 (Ethernet).

C. Wrong: Bluetooth is 802.15.

D. Wrong: WiMAX is 802.16.

Question 15 Networking (History)

In University of Hawaii, Norman Abramson discovered :-

- A. Aloha ✓ **Correct answer**
- B. Repeaters
- C. Bridge
- D. Switch

A. Correct: Abramson created the ALOHAnet random-access protocol at Hawaii.

peaters predate ALOHAnet and were not his discovery.

C. Wrong: bridges came later and were not his discovery.

D. Wrong: switches came later and were not his discovery.

Question 16 Networking (Access Methods)

CSMA stands for :-

- A. Carrier Sense Multiple Access ✓ **Correct answer**
- B. Carrier Switch Multiple Access
- C. Carrier Switch Medium Access
- D. Control Sense Multiple Access.

A. Correct: stations sense the carrier before transmitting.

B. Wrong: "Sense", not "Switch".

C. Wrong: both "Switch" and "Medium" are wrong words.

D. Wrong: "Carrier", not "Control".

Question 17 Networking (Access Methods)

Contention is

- A. One or more conductors that serve as a common connection for a related group of devices
- B. a continuous frequency capable of being modulated or impressed with a second signal
- C. the condition when two or more stations attempt to use the same channel at the same time ✓ **Correct answer**
- D. a collection of interconnected functional units that provides a data communications service among stations attached to the network

at defines a bus (or common bus).

B. Wrong: that defines a carrier.

C. Correct: that is contention on a shared medium.

D. Wrong: that defines a network itself; the printed key D is corrected to C. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 18 Networking (Fibre Optics)

Avalanche photodiode receivers can detect hits of transmitted data by receiving

- A. 100 photons
- B. 200 photons ✓ **Correct answer**
- C. 300 photons
- D. 400 photons

A. Wrong: the textbook figure for the avalanche photodiode receiver is 200 photons, not 100.

B. Correct: the printed key agrees with the textbook figure.

C. Wrong: the textbook figure is 200, not 300.

D. Wrong: the textbook figure is 200, not 400.

Question 19 Networking (Access Methods)

Satellite-Switched Time-Division Multiple Access (SS/TDMA) is

- A. the method of determining which device has access to the transmission medium at any time.
- B. a medium access control technique for multiple access transmission media
- C. a form of TDMA in which circuit switching is used to dynamically change the channel assignments ✓ **Correct answer**

of the options

A. Wrong: that is a generic definition of medium access control, not SS/TDMA.

B. Wrong: that describes TDMA generally, not the satellite-switched form.

C. Correct: the satellite switch reassigns channels dynamically.

D. Wrong: A and B do not define SS/TDMA.

Question 20 Networking (TCP/IP)

When you ping the loopback address, a packet is sent where?

- A. On the network
- B. Down through the layers of the IP architecture and then up the layers again ✓ **Correct answer**
- C. Across the wire
- D. through the loopback dongle

A. Wrong: a loopback packet never leaves the host.

B. Correct: 127.0.0.1 is processed down and back up the local stack.

C. Wrong: no wire is involved in loopback.

D. Wrong: no hardware dongle is used.

Question 21 Networking (TCP/IP)

Which of the following TCP/IP protocol is used for transferring electronic mail messages from one machine to another?

- A. FTP
- B. SNMP
- C. RPC
- D. none of the options ✓ **Correct answer**

FTP transfers files, not mail.

B. Wrong: SNMP manages network devices, it does not carry mail.

C. Wrong: RPC invokes procedures remotely; it is not a mail protocol, and the printed key C is corrected.

D. Correct: the mail protocol SMTP is not listed. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 22 Networking (Devices)

Which of the following device is used to connect two systems, especially if the systems use different protocols?, Options: A) Hub, B) bridge, C) gateway, D) repeater

- A. Hub
- B. bridge
- C. gateway ✓ **Correct answer**
- D. repeater

A. Wrong: a hub only repeats signals within one network.

B. Wrong: a bridge joins similar LANs; it does not translate protocols.

C. Correct: a gateway connects systems that use different protocols.

D. Wrong: a repeater only regenerates the signal.

Question 23 Networking (TCP/IP)

Which of the following TCP/IP protocol allows an application program on one machine to send a datagram to an application program on another machine?

- A. UDP ✓ **Correct answer**
- B. VMTP
- C. X.25

A. Correct: UDP sends connectionless datagrams between applications.

B. Wrong: VMTP is a transaction protocol, not the general datagram protocol.

C. Wrong: X.25 is a packet-switched network protocol, not the TCP/IP datagram protocol.

D. Wrong: SMTP carries mail over TCP, not datagrams.

Question 24 Networking (Fundamentals)

A remote batch-processing operation in which data is solely input to a central computer would require a:

- A. telegraph line
- B. simplex lines ✓ **Correct answer**
- C. mixedband channel
- D. All of the options

A. Wrong: a telegraph line is a specific old medium, not the transmission mode required.

B. Correct: data flows one way only, into the central computer.

C. Wrong: the channel's bandwidth is not the issue; the direction is.

D. Wrong: only B describes the requirement.

Question 25 Networking (Subnetting)

What part of 192.168.10.51 is the Network ID, assuming a default subnet mask?

- A. 192
- B. 192.168.10 ✓ **Correct answer**
- C. 0.0.0.5
- D. 51

192 is only the first octet, not the whole network ID.

B. Correct: with the default class C mask 255.255.255.0, the first three octets are the network ID.

C. Wrong: 0.0.0.5 is not the network ID of 192.168.10.51; option C was served in the reproduction as an image link and Wave 59 wrote it as 192.168.10.51 by deduction — Wave 69 corrects it to 0.0.0.5 from the same reproduction's own page text layer (page 6). The answer B is unaffected. Decided by assistant under the owner's 8 Nov 2026 delegation.

D. Wrong: 51 is the host part, not the network ID.

Question 26 Networking (TCP/IP)

Which of the transport layer protocols is connectionless?

- A. UDP ✓ **Correct answer**
- B. TCP
- C. FTP
- D. SMTP

A. Correct: UDP sends datagrams without establishing a connection.

B. Wrong: TCP is connection-oriented.

C. Wrong: FTP is an application-layer protocol that runs over TCP.

D. Wrong: SMTP is an application-layer protocol that runs over TCP.

Question 27 Networking (Subnetting)

What is the default subnet mask for a class C network?

- A. 127.0.0.1
- B. 255.0.0.0

- D. 255.255.255.0 ✓ **Correct answer**

A. Wrong: 127.0.0.1 is the loopback address, not a subnet mask at all.

B. Wrong: 255.0.0.0 is the default mask for a class A network (/8).

C. Wrong: 255.255.0.0 is the default mask for a class B network (/16).

D. Correct: the class C default mask is /24, the first three octets network and the last octet host. The printed key D is confirmed. Option texts recovered by Wave 69 from the same Scribd reproduction's own page text layer (page 7), decided by assistant under the owner's 8 Nov 2026 delegation.

Question 28 Networking (OSI Model)

Which layers of the OSI determines the interface of the system with the user?

- A. Network
- B. Application ✓ **Correct answer**
- C. Data link
- D. Session

A. Wrong: the network layer routes packets between networks.

B. Correct: the application layer is the user's interface to the network.

C. Wrong: the data link layer moves frames on a link.

D. Wrong: the session layer manages dialogs between applications.

Question 29 Networking (TCP/IP)

The default port number for the HTTPS Protocol is :-

- A. 99
- B. 80

- D. 400

A. Wrong: no standard service uses port 99 for HTTPS.

B. Wrong: 80 is the default port for plain HTTP.

C. Correct: 443 is the well-known port for HTTPS.

D. Wrong: no standard service uses port 400 for HTTPS.

Question 30 Networking (Media)

The slowest transmission speeds are those of

- A. twisted-pair wire ✓ **Correct answer**
- B. coaxial cable
- C. fiber-optic cable
- D. Copper cable

A. Correct: twisted-pair is the slowest of the listed media.

B. Wrong: coaxial cable is faster than twisted-pair.

C. Wrong: fibre is the fastest of the listed media.

D. Wrong: copper cable as a category includes coaxial cable, which is faster than twisted-pair.

Question 31 Networking (Fundamentals)

A noiseless 3 KHz Channel transmits bits with binary level signals. What is the maximum data rate?

- A. 3 Kbps
- B. 6 Kbps ✓ **Correct answer**
- C. 12 Kbps

Kbps.

A. Wrong: that is the bandwidth, not the Nyquist rate.

B. Correct: Nyquist gives $2 \times 3000 \times \log_2 2 = 6000$ bps.

C. Wrong: that would need four signal levels.

D. Wrong: that would need sixteen signal levels.

Question 32 Networking (Fundamentals)

Carrier is

- A. One or devices more conductors that serve as a common connection for a related group of
- B. a continuous frequency capable of being modulated or impressed with a second signal ✓ **Correct answer**
- C. the condition when two or more sections attempt to use the same channel at the same time
- D. that provides a data stations attached to the network

A. Wrong: that is a garbled definition of a bus.

B. Correct: that is the definition of a carrier wave.

C. Wrong: that defines contention.

D. Wrong: a garbled fragment, not a definition of a carrier.

Question 33 Networking (TCP/IP)

.The standard suit of protocols used by the Internet, Intranets, extranets and some other networks.

- A. TCP/IP ✓ **Correct answer**
- B. Protocol

- D. Internet work processor

A. Correct: TCP/IP is the standard protocol suite of the Internet.

B. Wrong: "protocol" is a generic word, not the suite's name.

C. Wrong: open systems (OSI) is a different model.

D. Wrong: no such protocol suite exists.

Question 34 Networking (TCP/IP)

What can greatly reduce TCP/IP configuration problems?

- A. WINS Server
- B. WINS Proxy
- C. DHCP Server ✓ **Correct answer**
- D. PDC

A. Wrong: WINS resolves NetBIOS names; it does not assign TCP/IP configuration.

B. Wrong: a WINS proxy only forwards name queries.

C. Correct: DHCP assigns addresses and configuration automatically.

D. Wrong: a primary domain controller authenticates users; it does not assign TCP/IP configuration.

Question 35 Networking (Error Control)

In CRC there is no error if the remainder at the receiver is _____.

- A. equal to the remainder at the sender
- B. Zero ✓ **Correct answer**
- C. Nonzero
- D. the quotient at the sender

RC does not compare remainders this way.

B. Correct: a zero remainder means the received data divides cleanly, so no error is detected.

C. Wrong: a nonzero remainder signals an error.

D. Wrong: the quotient plays no part in the CRC check.

Question 36 Networking (Switching)

Which of the following statements is correct for the use of packet switching?

- A. the subdivision of information into individually addressed packets in conjunction with alternative routing arrangement enabled the transmission path to be altered in the event of congestion or individual link failure
- B. the employment of additional intelligence within the network enabled more sophisticated error control and link control procedures to be applied
- C. by employing wide bandwidth circuits for the trunk networks substantial economies through extensive sharing of capacity could be achieved.
- D. All of the options ✓ **Correct answer**

A. True: packet switching reroutes around failures.

B. True: packet networks apply error and link control in the nodes.

C. True: sharing trunk capacity is an economy of packet switching.

D. Correct: all three statements are true.

Question 37 Networking (TCP/IP)

DNS can obtain the ..... of host if its domain name is known and vice versa.

- A. Station address
- B. IP address ✓ **Correct answer**

- t address
- D. Checksum

A. Wrong: DNS does not map names to station addresses.

B. Correct: DNS resolves a domain name to an IP address and back.

C. Wrong: ports identify services, not hosts, and DNS does not resolve them.

D. Wrong: a checksum is an error-detection value, not an address.

Question 38 Networking (Devices)

A front-end processor is

- A. a user computer system
- B. a processor in a large-scale computer that executes operating system instructions
- C. a minicomputer that relieves main-frame computers at a computer centre of communications control functions ✓ **Correct answer**
- D. None of the options

A. Wrong: a front-end processor is not a user's machine.

B. Wrong: that describes a main processor, not a front-end processor.

C. Correct: that is the textbook definition.

D. Wrong, since C is correct.

Question 39 Networking (Security)

Which of the following security solutions uses the same key for both encryption and authentication?, Options: A) wpa, B) wpa 2, C) WEP, D) 802.11i

- A. wpa
- B. wpa 2

- D. 802.11i

A. Wrong: WPA uses a per-session key hierarchy, not one shared key for both jobs.

B. Wrong: WPA2 likewise derives separate keys for encryption and integrity.

C. Correct: WEP uses a single shared key for both encryption and authentication.

D. Wrong: 802.11i is the standard behind WPA2, not a single-key scheme.

Question 40 Networking (Devices)

A communication device that combines transmissions from several I/O devices into one line is a

- A. Concentrator
- B. Modifier
- C. Multiplexer ✓ **Correct answer**
- D. Adder

A. Wrong: a concentrator gathers lines but the combining device named here is the multiplexer; in this bank the intended answer is the multiplexer.

B. Wrong: no such communications device exists.

C. Correct: a multiplexer combines several inputs onto one line.

D. Wrong: an adder is an arithmetic circuit, not a communications device.

Question 41 Networking (Access Methods)

Eight stations are competing for the use of a shared channel using the 'Adaptive tree Walk Protocol'. If the stations 7 and 8 are suddenly become ready at once, how many bit slots are needed to resolve the contention?

- A. 7 slots ✓ **Correct answer**

- C. 10 slots
- D. 14 slots

A. Correct: the printed key agrees with the textbook figure for the adaptive tree walk with stations 7 and 8 contending.

B. Wrong: the textbook figure is 7, not 5.

C. Wrong: the textbook figure is 7, not 10.

D. Wrong: the textbook figure is 7, not 14.

Question 42 Networking (TCP/IP)

TCP/IP ..... layer corresponds to the OSI models to three layers.

- A. Application ✓ **Correct answer**
- B. Presentation
- C. Session
- D. Transport

A. Correct: the TCP/IP application layer covers the OSI application, presentation and session layers.

B. Wrong: presentation is one of the three OSI layers covered, not the TCP/IP layer itself.

C. Wrong: session is one of the three OSI layers covered, not the TCP/IP layer itself.

D. Wrong: the TCP/IP transport layer matches the OSI transport layer alone.

Question 43 Networking (TCP/IP)

. Which of the following applications allows a user to access and change remote files without actual transfer?, Options: A) DNS, B) FTP, C) NFS, D) Telnet

- A. DNS

- C. NFS ✓ **Correct answer**
- D. Telnet

A. Wrong: DNS resolves names; it does not access files.

B. Wrong: FTP transfers files to the local machine.

C. Correct: the Network File System lets a user access and change remote files in place.

D. Wrong: Telnet gives a remote terminal session, not file access.

Question 44 Networking (TCP/IP)

The data unit in the TCP/IP layer called a .....

- A. Message
- B. Segment
- C. Datagram ✓ **Correct answer**
- D. Frame

A. Wrong: a message is the application-layer data unit.

B. Wrong: a segment is the transport-layer data unit.

C. Correct: the data unit at the TCP/IP internet layer is a datagram; the printed key D is corrected.

D. Wrong: a frame is the network-access (data link) layer's unit. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 45 Networking (TCP/IP)

What is the full form of PING ?

- A. Packet Internet Groper. ✓ **Correct answer**
- B. Protocol Internet Groper

- D. Protocol Internet Gateway

A. Correct: PING stands for Packet Internet Groper.

B. Wrong: the first word is "Packet", not "Protocol".

C. Wrong: "Internet Groper", not "Intranet Gateway".

D. Wrong: both the first and last words are wrong.

Question 46 Networking (OSI Model)

Which of the following OSI layers correspond to TCP/IP's application layer?

- A. Application
- B. Presentation
- C. Session
- D. All of the options ✓ **Correct answer**

A. True: the OSI application layer maps to the TCP/IP application layer.

B. True: the OSI presentation layer also maps to it.

C. True: the OSI session layer also maps to it.

D. Correct: all three OSI layers correspond to the single TCP/IP application layer.

Question 47 Networking (Devices)

Devices on one network can communicate with devices on another network via a .....

- A. File Server
- B. Router
- C. Printer Server
- D. Gateway ✓ **Correct answer**

file server stores files, it does not join networks.

B. The modern term for the device that forwards packets between networks; recorded here as the rival reading, since in current usage a router is the standard answer.

C. Wrong: a print server shares printers; it does not join networks.

D. Correct as printed: in the older textbook terminology used by this paper, a gateway is the device that connects one network to another. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 48 Networking (Fibre Optics)

In FDDI(Fiber Distributed Data Interface), data normally travel on .....

- A. The primary ring ✓ **Correct answer**
- B. The Secondary ring
- C. Both Primary Rings & Secondary Ring
- D. Neither Primary Ring NOR Secondary Ring

A. Correct: FDDI traffic normally travels on the primary ring.

B. Wrong: the secondary ring is a standby, used only when the primary fails.

C. Wrong: normal traffic uses the primary ring alone.

D. Wrong: traffic does travel on a ring — the primary one.

Question 49 Networking (Wireless)

What is an SSID used for on a WLAN?

- A. To secure the WLAN
- B. To manage the WLAN settings
- C. To identify the WLAN ✓ **Correct answer**
- D. To configure the WLAN AP

curity is the job of encryption and authentication, not the SSID.

B. Wrong: management is done through the access point's interface.

C. Correct: the SSID is the network's name, identifying it to clients.

D. Wrong: the SSID does not configure the access point.

Question 50 Networking (Topologies)

In a .....topology, if there are n devices in a network, each device has n-1 ports for cables.

- A. Mesh ✓ **Correct answer**
- B. Star
- C. Bus
- D. Ring

A. Correct: in a full mesh each device connects to every other device, needing n−1 ports.

B. Wrong: in a star each device has one link, to the hub.

C. Wrong: in a bus each device has one connection to the shared cable.

D. Wrong: in a ring each device has two connections, to its neighbours.

Question 51 Networking (TCP/IP)

what is the correct order of encapsulation?

- A. Data, segment, packet, frame, bits ✓ **Correct answer**
- B. Data, frame, packet, segment, bits
- C. Bits, data, packet, frame
- D. Bits, frame, data, packet

A. Correct: application data → transport segment → network packet → link frame → physical bits.

e frame comes after the packet, not before the segment.

C. Wrong: the order is reversed and the segment is missing.

D. Wrong: the order is reversed.

Question 52 Networking (Safety)

where is the safety ground connected for computer?

- A. Exposed metal parts ✓ **Correct answer**
- B. The monitor
- C. The mouse
- D. The network connection

A. Correct: the safety ground connects to exposed metal parts so a fault cannot make them live.

B. Wrong: the monitor is only one device, not the grounding point.

C. Wrong: a mouse is a low-voltage peripheral.

D. Wrong: the network connection is not the safety ground.

Question 53 Networking (Access Methods)

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 ✓ **Correct answer**
- D. Obstruction

A. Wrong: latency is delay, not simultaneous transmission.

B. Wrong: dispersion is signal spreading, not simultaneous transmission.

vo transmissions overlapping on a shared medium is a collision.

D. Wrong: obstruction is a physical blockage, not a transmission event.

Question 54 Networking (Access Methods)

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 ✓ **Correct answer**

A. Wrong: a segment is a part of a network, not the collision area.

B. Wrong: no such standard term exists.

C. Wrong: a domain is an administrative boundary, not the collision area.

D. Correct: the collision domain is the area where packets can collide.

Question 55 Networking (Cabling)

What is another name for a rollover cable?

- A. An inverted cable
- B. A console cable ✓ **Correct answer**
- C. A cross connect cable
- D. A patch cable

A. Wrong: "inverted" is not the standard name for a rollover cable.

B. Correct: a rollover cable is used as a console cable to a device's console port.

C. Wrong: a cross-connect joins patch panels, it is not a rollover cable.

D. Wrong: a patch cable is a straight-through cable, not a rollover cable.

56 Networking (Access Methods)

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 ✓ **Correct answer**
- D. The effects of having too many repeaters in a network

A. Wrong: protocol compliance has nothing to do with collisions.

B. Wrong: a duplicate MAC address causes delivery errors, not collisions.

C. Correct: that is exactly an Ethernet collision.

D. Wrong: too many repeaters cause timing problems, not collisions as such.

Question 57 Networking (TCP/IP)

The default port number for the HTTP Protocol is :-

- A. 440
- B. 80 ✓ **Correct answer**
- C. 90
- D. 21

A. Wrong: no standard service uses port 440 for HTTP.

B. Correct: 80 is the well-known port for HTTP.

C. Wrong: no standard service uses port 90 for HTTP.

D. Wrong: 21 is the FTP control port.

Question 58 Networking (Devices)

Layer 3 switch recognizes

- C. address
- B. IP address
- C. Both MAC address & IP address ✓ **Correct answer**
- D. None of the options

A. True but incomplete: a layer 3 switch also works with IP addresses.

B. True but incomplete: a layer 3 switch also works with MAC addresses.

C. Correct: a layer 3 switch switches on MAC addresses and routes on IP addresses.

D. Wrong, since C is correct.

Question 59 Networking (Number Systems)

Convert the decimal number 24032 to hex?

- A. ABCD
- B. ADE3
- C. 6DE0
- D. 5DE0 ✓ **Correct answer**

A. Wrong: ABCD hex = 43981 decimal.

B. Wrong: ADE3 hex = 44515 decimal.

C. Wrong: 6DE0 hex = 28128 decimal; the printed key C is corrected.

D. Correct: 5×4096 + 13×256 + 14×16 + 0 = 20480 + 3328 + 224 = 24032. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 60 Networking (Number Systems)

Convert the hex number 3F4B to a decimal number?

- A. 26203
- B. 16204

03 ✓ Correct answer

- D. 12345

A. Wrong: that is 10000 too large.

B. Wrong: that is 1 too large.

C. Correct: 3×4096 + 15×256 + 4×16 + 11 = 12288 + 3840 + 64 + 11 = 16203; the printed key D is corrected.

D. Wrong: 12345 decimal = 3039 hex, not 3F4B. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 61 Networking (TCP/IP)

a frame is a _____

- A. layer 2 PDU
- B. layer 3 PDU
- C. an encapsulated packet
- D. both layer 2 PDU and an encapsulated packet ✓ **Correct answer**

A. True but incomplete: a frame is also an encapsulated packet.

B. Wrong: the layer 3 PDU is a packet.

C. True but incomplete: a frame is also the layer 2 PDU.

D. Correct: a frame is the layer 2 protocol data unit, formed by encapsulating a packet.

Question 62 Networking (Access Methods)

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

h Data transfer rates of 4 mbps or 16 mbps and can physically use a star topology ✓ **Correct answer**

A. True but incomplete: Token Ring also uses a physical star.

B. True but incomplete: Token Ring also runs at 4 or 16 Mbps.

C. Wrong: Token Ring runs on twisted-pair copper as well as fibre.

D. Correct: both statements are true.

Question 63 Networking (Topologies)

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 "token ring is deterministic" nor "token ring networks do not face problems with collisions"
- D. both "token ring is deterministic" and "token ring networks do not face problems with collisions" ✓ **Correct answer**

A. True but incomplete: Token Ring also avoids collisions.

B. True but incomplete: Token Ring is also deterministic.

C. Wrong: both statements are true.

D. Correct: the token controls access, so access is deterministic and collisions do not occur.

Question 64 Networking (Fibre Optics)

one of the primary reasons FDDI is extremely reliable is because_____?

- A. of its dual ring design ✓ **Correct answer**
- B. it is a CSMA/CD network

ions are guaranteed their turn to transmit

- D. both of its dual ring design and it is a CSMA/CD network

A. Correct: the second ring takes over if the primary ring breaks, which is what makes FDDI reliable.

B. Wrong: FDDI uses token passing, not CSMA/CD.

C. True of token passing, but it is not the primary reason for FDDI's reliability.

D. Wrong: B is false, so "both" cannot hold; the printed key D is corrected to A. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 65 Networking (Fibre Optics)

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 ✓ **Correct answer**

A. Wrong: there is no "inter mode" of fibre; the printed key A is corrected.

B. Wrong: there is no "intra mode" of fibre.

C. Wrong: multimode fibre suits short in-building runs, not links between buildings.

D. Correct: single-mode fibre carries signals over the long distances between buildings. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 66 Networking (Standards)

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

- A. 10Base-T uses cat5 cable and transmits at 10 Mbps ✓ **Correct answer**
- B. 100Base-Fx is multi-mode fiber that transmits at 10 Mbps

n 10Base-T uses cat5 cable and transmits at 10 Mbps and 100Base-Fx is multi-mode fiber that transmits at 10 Mbps are correct

- D. none of the options

A. Correct: 10Base-T runs at 10 Mbps over twisted-pair cable.

B. Wrong: 100Base-FX runs at 100 Mbps, not 10 Mbps.

C. Wrong: B is false, so "both" cannot hold; the printed key C is corrected to A.

D. Wrong, since A is correct. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 67 Networking (Cabling)

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. on the first floor
- B. next to the POP. ✓ **Correct answer**
- C. on one of the middle floors
- D. in the basement

A. Wrong: the MDF is placed at the building entrance, next to the point of presence, not simply on the first floor.

B. Correct: the MDF sits beside the point of presence where the carrier service enters the building.

C. Wrong: intermediate distribution facilities go on the floors, not the MDF.

D. Wrong: the MDF is at the entrance facility, not necessarily in the basement.

Question 68 Networking (Cabling)

what type of cabling provides interconnections between wiring closets, wiring closets

nd between buildings that are part of the same LAN?

- A. token ring cabling.
- B. backbone cabling. ✓ **Correct answer**
- C. coaxial cabling
- D. horizontal cabling.

A. Wrong: there is no cabling type called "token ring cabling"; the printed key A is corrected.

B. Correct: backbone cabling links wiring closets, the POP and buildings.

C. Wrong: coaxial is a cable medium, not the cabling subsystem.

D. Wrong: horizontal cabling runs from the wiring closet to the work area, not between closets. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 69 Networking (TCP/IP)

What is the full form of MIME ?

- A. Multipurpose Internet Mail Extension ✓ **Correct answer**
- B. Multimedia Intranet Mail Extension
- C. Multipurpose Intranet Mail Extension
- D. Multimedia Internet Mail Extension

A. Correct: MIME stands for Multipurpose Internet Mail Extensions; the printed key B is corrected.

B. Wrong: "Multimedia" and "Intranet" are both wrong words.

C. Wrong: "Internet", not "Intranet".

D. Wrong: "Multipurpose", not "Multimedia". Decided by assistant under the owner's 8 Nov 2026 delegation.

70 Networking (Standards)

802.11i is implemented at which layer of the OSI model?

- A. Layer 1
- B. Layer 2 ✓ **Correct answer**
- C. Layer 3
- D. Layer 7

A. Wrong: layer 1 is the physical layer; 802.11i is not a physical-layer mechanism.

B. Correct: 802.11i (WPA2) security operates at the data link layer.

C. Wrong: layer 3 is the network layer.

D. Wrong: layer 7 is the application layer.

Question 71 Networking (History)

Nat Borenstein discovered which internet mailing extension ?

- A. SMTP
- B. MIME ✓ **Correct answer**
- C. DNS
- D. PPP

A. Wrong: SMTP is the mail transfer protocol, not Borenstein's extension; the printed key A is corrected.

B. Correct: Nathaniel Borenstein created MIME.

C. Wrong: DNS was not created by Borenstein.

D. Wrong: PPP is a link protocol, not Borenstein's work. Decided by assistant under the owner's 8 Nov 2026 delegation.

72 Networking (Safety)

what is the one-hand rule?

- A. only touch devices with one hand so any electrical current will not flow through the heart ✓ **Correct answer**
- B. when setting up the network only use one bare hand-always wear a glove on at least one hand.
- C. both "only touch devices with one hand so any electrical current will not flow through the heart" & "when setting up the network only use one bare hand-always wear a glove on at least one hand."
- D. none of the options

A. Correct: that is the one-hand rule.

B. Wrong: wearing a glove is not part of the one-hand rule.

C. Wrong: B is false, so "both" cannot hold; the printed key C is corrected to A.

D. Wrong, since A is correct. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 73 Networking (Cabling)

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 ✓ **Correct answer**

A. Wrong: the TIA/EIA-568 limit for single-mode backbone fibre is 3000 m, not 500 m.

B. Wrong: the limit is 3000 m, not 1000 m; the printed key B is corrected.

e limit is 3000 m, not 2500 m.

D. Correct: single-mode backbone fibre is allowed up to 3000 m between cross-connects. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 74 Networking (Subnetting)

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

- A. 123.255.255.255 ✓ **Correct answer**
- B. 123.14.2555.255
- C. 123.13.0.0
- D. 123.1.1.1

A. Correct: a broadcast address has all host bits set to 1, and 123.255.255.255 is the only option in broadcast form; the printed key A is confirmed.

B. Wrong: 2555 is not a valid octet (maximum 255), so this is not a valid address at all.

C. Wrong: with the host bits all 0 this is a network address, not a broadcast address.

D. Wrong: this is an ordinary host address, not a broadcast address. Note: the stem's "class B" label is loose — 123.x lies in the class A range (1–126) — but A is still the only broadcast-form option, so the answer is unaffected. Option texts recovered by Wave 69 from the same Scribd reproduction's own page text layer (page 16), decided by assistant under the owner's 8 Nov 2026 delegation.

Question 75 Networking (Subnetting)

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

- A. 254 ✓ **Correct answer**
- B. 255
- C. 256
- D. none of the options

class C network has 256 addresses minus the network and broadcast addresses = 254 usable hosts; the printed key D is corrected.

B. Wrong: 255 counts the broadcast address as a host.

C. Wrong: 256 counts both the network and broadcast addresses as hosts.

D. Wrong: 254 IS offered. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 76 Networking (Subnetting)

how many subnets can a class C network use?

- A. 245
- B. 26
- C. 256 ✓ **Correct answer**
- D. none of the options

A. Wrong: the textbook maximum for a class C network is 256 subnets, not 245.

B. Wrong: 26 is not the number of subnets a class C network can use.

C. Correct: borrowing all 8 host bits gives 2^8 = 256 subnets, the printed key.

D. Wrong, since C is correct.

Question 77 Networking (Subnetting)

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

- A. 2
- B. 4
- C. 6 ✓ **Correct answer**
- D. 8

A. Wrong: the printed key for this textbook item is 6 bits.

e printed key for this textbook item is 6 bits.

C. Correct: the printed key; a class C network leaves 2 host bits for hosts, so at most 6 of its 8 host bits are borrowed for subnets.

D. Wrong: borrowing all 8 bits would leave no host bits at all.

Question 78 Networking (Subnetting)

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 ✓ **Correct answer**
- D. none of the options

A. Wrong: ANDing with the mask yields the network/subnet, not the host numbers.

B. Wrong: the mask is already known; ANDing derives the network address to look up.

C. Correct: ANDing the destination address with the mask gives the destination network and subnet.

D. Wrong, since C is correct.

Question 79 Networking (Subnetting)

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 ✓ **Correct answer**
- D. none of the options

A. Wrong: 1 bit borrowed gives mask 255.255.255.128 (/25), not 224.

bits borrowed gives mask 255.255.255.192 (/26), not 224; the printed key B is wrong.

C. Correct: 224 = 11100000, three 1-bits beyond the class C default /24, so the mask is /27 and 3 bits have been borrowed.

D. Wrong: 3 IS offered. Stem data (197.15.22.31; 255.255.255.224) recovered by Wave 69 from the same Scribd reproduction's own page text layer (page 17); the 224 → 3-bits rule confirmed against two independent subnetting references (Cisco subnetting tutorial: "if a subnet mask of 255.255.255.224 has been applied, then 3 bits (224 = 11100000) would have been borrowed"; /27 reference table: 255.255.255.224 = 3 borrowed bits). PRINTED-KEY CORRECTION B → C, decided by assistant under the owner's 8 Nov 2026 delegation.

Question 80 Networking (Subnetting)

what is the minimum number of bits can be borrowed to form a subnet?

- A. 1 ✓ **Correct answer**
- B. 2
- C. 4
- D. none of the options

A. Correct: borrowing a single bit creates two subnets, the minimum; the printed key D is corrected.

B. Wrong: 2 bits is not the minimum.

C. Wrong: 4 bits is not the minimum.

D. Wrong: 1 IS offered. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 81 Networking (Security) — DEFECTIVE

Which of the following is not a factor in choosing a firewall?

- A. The applications that your network uses

rmation in your security policy

- C. How much traffic will pass through the firewall
- D. Security audit measures in place

No answer is given for this question, and none is taught. NO CORRECT OPTION — DEFECTIVE-excluded (the printed key B is wrong: all four listed items ARE factors in choosing a firewall — the applications in use, the security policy, the traffic volume and the audit measures all shape the choice — so no option is "not a factor". Kept in the file, marked excluded, never taught as having an answer. Decided by assistant under the owner's 8 Nov 2026 delegation.)

Question 82 Networking (Fibre Optics)

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. ✓ **Correct answer**
- C. Data transmitted over fibre is susceptible for electromagnetic interferences.
- D. Single mode fibres have not a higher bandwidth than multimode fibres.

A. Wrong: fibre works over short distances too; it is only more expensive there.

B. Correct: the light is reflected by total internal reflection at the core-cladding boundary; the printed key C is corrected.

C. Wrong: fibre is immune to electromagnetic interference — that is one of its main advantages.

D. Wrong: single-mode fibre has a HIGHER bandwidth than multimode fibre. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 83 Networking (Cabling)

Two workstations A and B each have an RJ45 port need to be connected to a 10Base-T

o 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. ✓ **Correct answer**
- D. UTP cable to A and wire-less link to B.

A. Wrong: coaxial cable cannot connect to the hub's RJ45 ports; the printed key A is corrected.

B. Wrong: B is 160 m from the hub, beyond the 100 m UTP limit for 10Base-T.

C. Picked: A is within the 100 m UTP limit and fibre with media converters covers B's 160 m to the RJ45 hub.

D. Recorded rival: a wireless link could also reach B, but the textbook answer for a cabled 10Base-T installation is the fibre-plus-converters solution. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 84 Networking (Access Methods)

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. ✓ **Correct answer**
- 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.

A. Correct: that is how token passing works.

oken Ring is IEEE 802.5, 802.6 is DQDB.

C. Wrong: the token travels in one direction only.

D. Wrong: Token Ring runs at 4 or 16 Mbps; 16 Mbps is the maximum, not the minimum.

Question 85 Networking (Switching)

Which of the following is correct with regard to Frame Relay?

- A. Allows the use of variable length packets. ✓ **Correct answer**
- B. Performs extensive error checking.
- C. Acknowledges each frame transmitted.
- D. Can be considered as a broadband packet switching technology.

A. Correct: Frame Relay uses variable-length frames; the printed key B is corrected.

B. Wrong: Frame Relay does only minimal error detection (CRC) and no error correction.

C. Wrong: Frame Relay does not acknowledge frames.

D. Wrong: Frame Relay is a packet-switching technology, but it is not classed as broadband. Decided by assistant under the owner's 8 Nov 2026 delegation.

Question 86 Networking (Fundamentals)

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. ✓ **Correct answer**
- 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.

A. Wrong: the parity bit is optional and is not what frames the character.

hat is the asynchronous framing format.

C. Wrong: control characters can be used in asynchronous transmission.

D. Wrong: the stop bit is required to mark the end of the character.

Question 87 Networking (Multiplexing)

Which of the following statements is correct with regard to Time Division Multiplexing?

- A. Statistical TDM can not makes efficient use of the bandwidth if the data stream is probabilistic.
- B. TDM requires the transmitter and receiver to be synchronized periodically ✓ **Correct answer**
- C. TDM performs efficiently if the data stream is probabilistic.
- D. Statistical TDM is efficient if the data stream is deterministic.

A. Wrong: statistical TDM is efficient precisely when the data stream is probabilistic (bursty).

B. Correct: TDM slots only work if both ends stay in step.

C. Wrong: plain synchronous TDM wastes slots on bursty (probabilistic) streams.

D. Wrong: statistical TDM gains nothing on a steady deterministic stream.

Question 88 Networking (Error Control)

Which of the following error correction methods can be successfully employed on a simplex communication line?

- A. Cyclic Redundancy Check (CRC) code.
- B. A Hamming code. ✓ **Correct answer**
- C. A RSA code.
- D. A Huffman code.

RC only detects errors, on a simplex line there is no return path to request a retransmission.

B. Correct: a Hamming code corrects errors at the receiver with no return channel, so it works on a simplex line.

C. Wrong: RSA is an encryption algorithm, not an error-correction code.

D. Wrong: Huffman coding compresses data; it does not correct errors.

Question 89 Networking (Error Control)

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). ✓ **Correct answer**
- D. Huffman error correction technique.

A. Wrong: BEC is another name for ARQ-style retransmission, but the standard term used here is ARQ.

B. Wrong: FEC is used where retransmission is impossible, not as the standard full-duplex technique.

C. Correct: ARQ is the standard error recovery on a full-duplex link.

D. Wrong: Huffman coding is compression, not error recovery.

Question 90 Networking (Broadband)

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. ✓ **Correct answer**

- C. ADSL needs special cabling infrastructure.
- D. The same domestic telephone connection can not be shared for normal telephony as well as for ADSL.

A. Correct: "asymmetric" means faster downstream than upstream.

B. Wrong: ADSL runs at megabits per second over a phone line, not 64 Kbps.

C. Wrong: ADSL uses the existing telephone line.

D. Wrong: the same line carries both voice and ADSL at once.

Question 91 Networking (Fundamentals)

Any electronic device on a network is called a:

- A. Node. ✓ **Correct answer**
- B. Hub.
- C. Router.
- D. Cable.

A. Correct: any device on a network is a node.

B. Wrong: a hub is one specific kind of device.

C. Wrong: a router is one specific kind of device.

D. Wrong: a cable is a medium, not a device.

Question 92 Networking (Devices)

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.

work Interface Card. ✓ **Correct answer**

A. Wrong: a hub is a separate network device, not installed in a PC.

B. Wrong: a router is a separate network device.

C. Wrong: a graphics card drives a display, not a network.

D. Correct: the NIC connects the PC to the network.

Question 93 Networking (Databases)

Centralized database:

- A. Is best for security and management. ✓ **Correct answer**
- 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.

A. Correct: one central copy is easiest to secure and manage.

B. Wrong: that describes a replicated or distributed database.

C. Wrong: that describes a distributed database.

D. Wrong: keeping copies up to date is a replicated database's problem.

Question 94 Networking (Databases)

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. ✓ **Correct answer**
- D. All processors loose access to data during disk failure.

A. Wrong: contention is a concurrency problem, not the defining disadvantage of

B. Wrong: replication usually improves response time by placing data nearby.

C. Correct: every copy of the data needs storage, so replication costs more storage.

D. Wrong: replication protects against a single disk failure, since other copies remain.

Question 95 Networking (Databases)

What requirement of distributed data processing is critical for the design and enhancement of the system?

- A. Availability.
- B. Performance.
- C. Connectivity. ✓ **Correct answer**
- D. All of the options

A. A real requirement of distributed processing, but the printed key names connectivity as the critical one.

B. A real requirement of distributed processing, but the printed key names connectivity as the critical one.

C. Correct: without connectivity between the distributed parts, the system cannot work at all.

D. Wrong: the printed key is C alone, and connectivity is the single critical requirement named.

Question 96 Networking (TCP/IP)

What is the destination address of a frame containing an ARP request?

- A. A broadcast IP address.
- B. A broadcast MAC address. ✓ **Correct answer**

default getaway IP address.?

- D. The default getaway MAC address.

A. Wrong: an ARP request is a layer 2 broadcast, addressed to a MAC address.

B. Correct: an ARP request goes to FF:FF:FF:FF:FF:FF, the broadcast MAC address.

C. Wrong: the gateway's IP address is not the destination of an ARP request.

D. Wrong: the request is broadcast, not sent to the gateway's MAC address.

Question 97 Networking (Standards)

What is the number of separate protocol layers at the serial interface gateway specified by the X.25 standard?, Options: A) 4, B) 2, C) 6, D) 3

- A. 4
- B. 2
- C. 6
- D. 3 ✓ **Correct answer**

A. Wrong: X.25 has three layers, not four.

B. Wrong: X.25 has three layers, not two.

C. Wrong: X.25 has three layers, not six.

D. Correct: X.25 specifies the physical, link and packet layers.

Question 98 Networking (OSI Model)

In OSI network architecture, the routing is performed by

- A. network layer ✓ **Correct answer**
- B. data link layer
- C. transport layer
- D. session layer

outing is a network-layer function.

B. Wrong: the data link layer moves frames on one link.

C. Wrong: the transport layer provides end-to-end delivery.

D. Wrong: the session layer manages dialogs.

Question 99 Networking (TCP/IP)

TCP-IP Model does not consist of following layers :-

- A. Application layer
- B. Physical layer
- C. Session layer ✓ **Correct answer**
- D. Data link layer.

A. Wrong: the TCP/IP model does have an application layer.

B. Wrong: the TCP/IP model does have a physical (network access) layer.

C. Correct: the TCP/IP model has no session layer.

D. Wrong: the TCP/IP model does have a data link (network access) layer.

Question 100 Networking (Routing) — DEFECTIVE

BGP Routing Protocol is uses following algorithm during it's execution :

- A. Bellman Ford Algorithm
- B. Insertion Sort Algorithm
- C. Dijkstra Algorithm
- D. Kruskal Algorithm

No answer is given for this question, and none is taught. NO CORRECT OPTION — DEFECTIVE-excluded (BGP uses a path-vector algorithm, which is in none of the options: Dijkstra is the link-state algorithm used by OSPF, Bellman-Ford is the distance-vector

ed by RIP, and insertion sort and Kruskal's algorithm are not routing algorithms at all. The printed key C (Dijkstra) is wrong. Kept in the file, marked excluded, never taught as having an answer. Decided by assistant under the owner's 8 Nov 2026 delegation.)

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