PPSC Network Engineer — GUESS PAPER 2026 (Set 1 of 2) · Predicted Questions

Body: Punjab Public Service Commission (PPSC) · **Post:** Network Engineer · **Set:** 1 of 2 · **Questions:** 100 predicted — 0 repeated questions, 97 verified facts predicted to recur, 3 syllabus anchors · **Price:** Free

GUESS PAPER — predicted questions for the upcoming exam, NOT a past paper. Every question below is a prediction: it is here because the same question, the same fact, or the same topic appeared in verified PPSC Network Engineer past papers. **No pass guarantee.** A guess paper raises the odds; it does not promise a result. Answers are the best-supported answers, not exam keys.

> **How to use this paper:** study the basis under each question, not just the answer — the real paper will ask the same topics in different words. Revise the underlying topic, not only the four options. Do not quote any item as "asked in the 2026 exam" — nothing here has been asked yet.

Question 1 Networking (Tcp/Ip)

A ping sent to 127.0.0.1 never reaches the wire. How is it handled inside the machine?

- A. It is sent out onto the network
- B. It travels down through the local IP layers and back up again ✓ **Predicted answer**
- C. It crosses the wire to another host
- D. It passes through a loopback dongle

Why this answer? The loopback address 127.0.0.1 is processed down through the local IP stack and back up again; the packet never leaves the host.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-

Q20 (loopback ping goes down the local stack and back up).

Question 2 Networking (Tcp/Ip)

Which of these TCP/IP protocols carries electronic mail from one machine to another?

- A. FTP
- B. SNMP
- C. RPC
- D. None of the options ✓ **Predicted answer**

Why this answer? FTP transfers files, SNMP manages devices and RPC invokes remote procedures; the mail protocol SMTP is not among the options.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q21 (mail protocol is SMTP, which is not listed).

Question 3 Networking (Tcp/Ip)

An application wants to send a single datagram to an application on another machine, with no connection set up first. Which protocol does it use?

- A. UDP ✓ **Predicted answer**
- B. VMTP
- C. X.25
- D. SMTP

Why this answer? UDP sends connectionless datagrams between applications.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q23 (UDP sends a datagram to an application on another machine).

Question 4 Networking (Tcp/Ip)

TCP sets up a connection before sending data. Which transport-layer protocol skips that

st sends datagrams?

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

Why this answer? UDP is connectionless; TCP is connection-oriented, while FTP and SMTP are application-layer protocols that run over TCP.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q26 (UDP is the connectionless transport protocol).

Question 5 Networking (Tcp/Ip)

Secure web traffic uses HTTPS. Which port does it use by default?

- A. 99
- B. 80
- C. 443 ✓ **Predicted answer**
- D. 400

Why this answer? 443 is the well-known port for HTTPS; 80 is plain HTTP.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q29 (default HTTPS port is 443).

Question 6 Networking (Tcp/Ip)

The Internet, intranets and extranets all run on the same standard protocol suite. Which one is it?

- A. TCP/IP ✓ **Predicted answer**
- B. Protocol
- C. Open system

ernet work processor

Why this answer? TCP/IP is the standard protocol suite of the Internet.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q33 (TCP/IP is the standard suite of the Internet).

Question 7 Networking (Tcp/Ip)

On a network where every machine needs an address and settings by hand, what can greatly reduce those TCP/IP configuration problems?

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

Why this answer? A DHCP server assigns addresses and TCP/IP configuration automatically.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q34 (DHCP server reduces TCP/IP configuration problems).

Question 8 Networking (Tcp/Ip)

DNS can turn a domain name into an address, and an address back into a name. Which address does it give you?

- A. Station address
- B. IP address ✓ **Predicted answer**
- C. Port address
- D. Checksum

Why this answer? DNS resolves a domain name to an IP address and back.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-

Q37 (DNS obtains the IP address of a host from its domain name).

Question 9 Networking (Tcp/Ip)

Three OSI layers — application, presentation and session — are covered by a single TCP/IP layer. Which one?

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

Why this answer? The TCP/IP application layer covers the OSI application, presentation and session layers.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q42 (TCP/IP application layer covers three OSI layers).

Question 10 Networking (Tcp/Ip)

A user needs to open and change files that live on a remote machine, without actually transferring them. Which application makes that possible?

- A. DNS
- B. FTP
- C. Telnet
- D. NFS ✓ **Predicted answer**

Why this answer? The Network File System lets a user access and change remote files in place.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q43 (NFS allows access to remote files without transfer).

11 Networking (Tcp/Ip)

At the internet layer of the TCP/IP model, the data unit has a specific name. What is it called?

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

Why this answer? The data unit at the TCP/IP internet layer is a datagram.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q44 (data unit at the TCP/IP internet layer is a datagram).

Question 12 Networking (Tcp/Ip)

Expand the name of the network testing utility PING.

- A. Packet Internet Groper ✓ **Predicted answer**
- B. Protocol Internet Groper
- C. Packet Intranet Gateway
- D. Protocol Internet Gateway

Why this answer? PING stands for Packet Internet Groper.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q45 (full form of PING is Packet Internet Groper).

Question 13 Networking (Tcp/Ip)

As data moves down the stack it is wrapped at each layer. Which order of units is correct from top to bottom?

- A. Data, segment, packet, frame, bits ✓ **Predicted answer**
- B. Data, frame, packet, segment, bits

, data, packet, frame

- D. Bits, frame, data, packet

Why this answer? Application data becomes a transport segment, then a network packet, then a link frame, then physical bits.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q51 (encapsulation order is data, segment, packet, frame, bits).

Question 14 Networking (Tcp/Ip)

A web browser fetching an ordinary http:// page connects to which port?

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

Why this answer? 80 is the well-known port for HTTP; 21 is the FTP control port.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q57 (default HTTP port is 80).

Question 15 Networking (Tcp/Ip)

A frame is the layer 2 protocol data unit, formed by wrapping a packet. Which description captures both facts?

- A. A layer 2 PDU
- B. A layer 3 PDU
- C. An encapsulated packet
- D. Both a layer 2 PDU and an encapsulated packet ✓ **Predicted answer**

Why this answer? A frame is the layer 2 PDU, formed by encapsulating a packet.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-

Q61 (a frame is a layer 2 PDU and an encapsulated packet).

Question 16 Networking (Tcp/Ip)

Email attachments and non-text mail need an extension to the mail format. What does MIME stand for?

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

Why this answer? MIME stands for Multipurpose Internet Mail Extensions.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q69 (full form of MIME is Multipurpose Internet Mail Extension).

Question 17 Networking (Tcp/Ip)

An ARP request is a broadcast, but at which layer's address is it aimed?

- A. A broadcast IP address
- B. A broadcast MAC address ✓ **Predicted answer**
- C. The default gateway IP address
- D. The default gateway MAC address

Why this answer? An ARP request goes to FF:FF:FF:FF:FF:FF, the broadcast MAC address.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q96 (destination of an ARP request frame is a broadcast MAC address).

Question 18 Networking (Tcp/Ip)

The TCP/IP model has four layers, while OSI has seven. Which OSI layer has no counterpart in TCP/IP?

lication layer

- B. Physical layer
- C. Session layer ✓ **Predicted answer**
- D. Data link layer

Why this answer? The TCP/IP model has no session layer.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q99 (TCP/IP model does not consist of the session layer).

Question 19 Networking (Tcp/Ip)

SMTP, the protocol that sends mail between servers, normally uses which port?

- A. 21
- B. 22
- C. 25 ✓ **Predicted answer**
- D. 110

Why this answer? Port 25 is the well-known SMTP port.

Why predicted [C] — Syllabus anchor: syllabus anchor — Networking (TCP/IP): well-known port numbers recurs in every sitting of this post.

Question 20 Networking (Tcp/Ip)

DNS, the service that resolves names to addresses, normally uses which port?

- A. 53 ✓ **Predicted answer**
- B. 67
- C. 80
- D. 443

Why this answer? Port 53 is the well-known DNS port.

Why predicted [C] — Syllabus anchor: syllabus anchor — Networking (TCP/IP): well

numbers recurs in every sitting of this post.

Question 21 Networking (Access Methods)

Expand the abbreviation CSMA, the name of the Ethernet access method.

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

Why this answer? CSMA stands for Carrier Sense Multiple Access: stations sense the carrier before transmitting.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q16 (CSMA is Carrier Sense Multiple Access).

Question 22 Networking (Access Methods)

On a shared channel, several stations are all waiting for a chance to transmit. What is the name for this competition for the channel?

- A. A bus
- B. A carrier
- C. Contention ✓ **Predicted answer**
- D. A network

Why this answer? Contention is the condition when two or more stations attempt to use the same channel at the same time.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q17 (contention is stations attempting to use the same channel).

23 Networking (Access Methods)

Satellite-Switched TDMA adds something to ordinary TDMA. What is it?

- A. A way of deciding which device gets the medium
- B. A medium-access technique for shared media
- C. Circuit switching that changes channel assignments dynamically ✓ **Predicted answer**
- D. All of the options

Why this answer? SS/TDMA is a form of TDMA in which circuit switching is used to dynamically change the channel assignments.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q19 (SS/TDMA uses circuit switching to change channel assignments).

Question 24 Networking (Access Methods)

Eight stations share a channel using the adaptive tree walk protocol. Stations 7 and 8 both become ready at once — how many bit slots are needed to settle the contention?

- A. 7 slots ✓ **Predicted answer**
- B. 5 slots
- C. 10 slots
- D. 14 slots

Why this answer? The textbook figure for the adaptive tree walk with stations 7 and 8 contending is 7 slots.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q41 (adaptive tree walk with stations 7 and 8 needs 7 slots).

Question 25 Networking (Access Methods)

In a shared-medium network, two computers transmit at the same moment and their

lap. What has happened?

- A. Latency
- B. Dispersion
- C. Collision ✓ **Predicted answer**
- D. Obstruction

Why this answer? Two transmissions overlapping on a shared medium is a collision.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q53 (two bits on a shared medium at the same time is a collision).

Question 26 Networking (Access Methods)

Packets can run into each other anywhere inside a certain area of the network. What is that area called?

- A. Network segment
- B. Collision segment
- C. Network domain
- D. Collision domain ✓ **Predicted answer**

Why this answer? The collision domain is the network area within which packets originate and collide.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q54 (area where packets originate and collide is a collision domain).

Question 27 Networking (Access Methods)

On an Ethernet network, what event is described as a collision?

- A. The result of using protocols that do not follow the OSI model
- B. The effect of two nodes sharing one MAC address
- C. The result of two nodes transmitting at the same time ✓ **Predicted answer**

effect of having too many repeaters

Why this answer? An Ethernet collision is the result of two nodes transmitting at the same time.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q56 (collision in Ethernet is two nodes transmitting at the same time).

Question 28 Networking (Access Methods)

Which statements are true of Token Ring?

- A. It runs at 4 Mbps or 16 Mbps
- B. It can be wired in a physical star
- C. It only works over fibre
- D. Both the 4/16 Mbps rates and the physical star ✓ **Predicted answer**

Why this answer? Token Ring runs at 4 or 16 Mbps and can physically use a star topology; it also runs on twisted-pair copper.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q62 (Token Ring runs at 4 or 16 Mbps and can use a physical star).

Question 29 Networking (Access Methods)

A node on a Token Ring network has a frame to send. What must it do first?

- A. Wait for the free token to arrive ✓ **Predicted answer**
- B. Follow the IEEE 802.6 token-ring protocol
- C. Send the token in both directions
- D. Use a minimum data rate of 16 Mbps

Why this answer? A node wishing to send must wait for the free token; Token Ring is IEEE 802.5, the token travels one way, and 16 Mbps is the maximum rate.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-

Q84 (a Token Ring node waits for the free token before sending).

Question 30 Networking (Subnetting)

The address 192.168.10.51 uses the default class C mask. Which part of it identifies the network?

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

Why this answer? With the default class C mask 255.255.255.0, the first three octets are the network ID.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q25 (network ID of 192.168.10.51 is 192.168.10).

Question 31 Networking (Subnetting)

A class C network uses a default mask that leaves the last octet for hosts. What is that mask?

- A. 127.0.0.1
- B. 255.0.0.0
- C. 255.255.0.0
- D. 255.255.255.0 ✓ **Predicted answer**

Why this answer? The class C default mask is /24: the first three octets are the network part and the last octet is the host part.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q27 (default subnet mask for class C is 255.255.255.0).

32 Networking (Subnetting)

In a class B network, the broadcast address has all its host bits set to 1. Which of these addresses is in that form?

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

Why this answer? 123.255.255.255 is the only option in broadcast form; 2555 is not a valid octet, 123.13.0.0 is a network address and 123.1.1.1 is an ordinary host address.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q74 (broadcast address for a class B network is 123.255.255.255).

Question 33 Networking (Subnetting)

A class C network has 256 addresses in total, but two are reserved. How many hosts can it actually hold?

- A. 254 ✓ **Predicted answer**
- B. 255
- C. 256
- D. None of the options

Why this answer? 256 addresses minus the network and broadcast addresses leaves 254 usable hosts.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q75 (class C network has 254 host addresses).

Question 34 Networking (Subnetting)

If every host bit of a class C network is borrowed, how many subnets can it have at most?

- B. 26
- C. 256 ✓ **Predicted answer**
- D. None of the options

Why this answer? Borrowing all 8 host bits gives 2 to the power 8 = 256 subnets.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q76 (class C network can use 256 subnets).

Question 35 Networking (Subnetting)

A class C network has 8 host bits, but some must stay for host numbers. How many of them can be borrowed for subnetting at most?

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

Why this answer? At most 6 of the 8 host bits can be borrowed, leaving 2 host bits for hosts.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q77 (6 bits can be borrowed to subnet a class C network).

Question 36 Networking (Subnetting)

When a router receives a packet, it combines the destination address with the subnet mask using AND. What does that tell it?

- A. The host numbers, so it knows where to send the packet
- B. The subnet mask, to compare with the routing table
- C. Which network and subnet the packet is for ✓ **Predicted answer**
- D. None of the options

swer? ANDing the destination address with the mask gives the destination network and subnet.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q78 (router ANDs the mask to derive the network and subnet).

Question 37 Networking (Subnetting)

The mask 255.255.255.224 is applied to a class C address. How many subnet bits does that mask represent?

- A. 1
- B. 2
- C. 3 ✓ **Predicted answer**
- D. None of the options

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

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q79 (mask 255.255.255.224 means 3 bits borrowed).

Question 38 Networking (Subnetting)

What is the smallest number of bits that can be borrowed to make a subnet?

- A. 1 ✓ **Predicted answer**
- B. 2
- C. 4
- D. None of the options

Why this answer? Borrowing a single bit creates two subnets, the minimum.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q80 (minimum bits borrowed to form a subnet is 1).

39 Networking (Fundamentals)

A device that turns digital computer data into analogue signals for a phone line, and back again, is called what?

- A. Multiplexer
- B. Gateway
- C. Protocols
- D. Modem ✓ **Predicted answer**

Why this answer? A modem modulates digital data onto an analogue carrier and demodulates it back.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q1 (modem is used for modulation and demodulation).

Question 40 Networking (Fundamentals)

On a 4800 bps telephone line the chance of one bit going wrong is 1 in 1000. With no error detection, roughly what fraction of 9-bit frames will still contain an error?

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

Why this answer? 1 minus (1 minus 10 to the power -3) to the power 9 is approximately 9 times 10 to the power -3 = 0.009.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q2 (residual error rate for 9-bit frames is 0.009).

Question 41 Networking (Fundamentals)

In full-duplex transmission, what can the sender and the receiver do?

:her can talk while the other talks

- B. Both can send and receive at the same time ✓ **Predicted answer**
- C. Each must take turns, one at a time
- D. Data can flow in one direction only

Why this answer? In full duplex both sender and receiver can send and receive simultaneously.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q11 (in full duplex both can send and receive simultaneously).

Question 42 Networking (Fundamentals)

Data flows one way only, into a central computer for remote batch processing. What kind of line does that job need?

- A. Telegraph line
- B. Simplex lines ✓ **Predicted answer**
- C. Mixed-band channel
- D. All of the options

Why this answer? Data flowing one way only, into the central computer, needs simplex lines.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q24 (one-way input to a central computer needs simplex lines).

Question 43 Networking (Fundamentals)

A noiseless 3 kHz channel using binary signals can carry at most what data rate?

- A. 3 Kbps
- B. 6 Kbps ✓ **Predicted answer**
- C. 12 Kbps
- D. 24 Kbps

swer? Nyquist gives 2 times 3000 times log base 2 of 2 = 6000 bps.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q31 (noiseless 3 kHz channel maximum rate is 6 Kbps).

Question 44 Networking (Fundamentals)

In communications, what is a carrier?

- A. One or more conductors serving as a common connection for a group of devices
- B. A continuous frequency that can be modulated by a second signal ✓ **Predicted answer**
- C. Two stations trying to use one channel at the same time
- D. A set of interconnected units providing a data service

Why this answer? A carrier is a continuous frequency capable of being modulated or impressed with a second signal.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q32 (carrier is a continuous frequency that can be modulated).

Question 45 Networking (Fundamentals)

In asynchronous transmission, how is each character framed on the line?

- A. Each character is wrapped in a start bit and a parity bit
- B. Each character is wrapped in a start bit and one or more stop bits ✓ **Predicted answer**
- C. No communication control characters are used
- D. The start bit is essential but the stop bit is optional

Why this answer? In asynchronous transmission each character is encapsulated within a start bit and one or more stop bits.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-

Q86 (async framing is a start bit and one or more stop bits).

Question 46 Networking (Fundamentals)

Any electronic device connected to a network is called what?

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

Why this answer? Any device on a network is a node.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q91 (any electronic device on a network is a node).

Question 47 Networking (Devices)

Frames need to travel from one LAN to another LAN. Which device carries them across?

- A. Router
- B. Bridge ✓ **Predicted answer**
- C. Repeater
- D. Switch

Why this answer? A bridge forwards frames between LAN segments.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q3 (frames pass between LANs via a bridge).

Question 48 Networking (Devices)

A company has a LAN downtown and another at its suburban plant, and everyone must share data between them. What is needed to connect the two LANs?

- A. Modem

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

Why this answer? A router forwards traffic between the two separate LANs.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q9 (two LANs are connected by a router).

Question 49 Networking (Devices)

Two systems need to be connected, but they speak different protocols. Which device can join them?

- A. Hub
- B. Bridge
- C. Gateway ✓ **Predicted answer**
- D. Repeater

Why this answer? A gateway connects systems that use different protocols.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q22 (gateway connects systems using different protocols).

Question 50 Networking (Devices)

A minicomputer sits in front of a mainframe and takes over all its communications work. What is it called?

- A. A user computer system
- B. A processor that runs operating-system instructions
- C. A front-end processor ✓ **Predicted answer**
- D. None of the options

Why this answer? A front-end processor is a minicomputer that relieves mainframe

f communications control functions.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q38 (front-end processor relieves the mainframe of communications work).

Question 51 Networking (Devices)

Several I/O devices must share one communication line. What combines their transmissions onto it?

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

Why this answer? A multiplexer combines transmissions from several I/O devices into one line.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q40 (multiplexer combines I/O transmissions into one line).

Question 52 Networking (Devices)

A layer 3 switch works with addresses from two layers. Which two?

- A. MAC address only
- B. IP address only
- C. Both MAC address and IP address ✓ **Predicted answer**
- D. None of the options

Why this answer? A layer 3 switch switches on MAC addresses and routes on IP addresses.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q58 (layer 3 switch recognises MAC and IP addresses).

53 Networking (Devices)

A PC needs a piece of hardware installed in it before it can connect to a network. What is that hardware?

- A. Hub
- B. Access Router
- C. Graphic Accelerator Card
- D. Network Interface Card ✓ **Predicted answer**

Why this answer? The network interface card connects the PC to the network.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q92 (NIC installed in a PC connects it to the network).

Question 54 Networking (Osi Model)

Packets are the data unit handled by which OSI layer?

- A. Physical layer
- B. Data link layer
- C. Network layer ✓ **Predicted answer**
- D. Transport layer

Why this answer? The network layer moves packets between networks; bits belong to the physical layer and frames to the data link layer.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q6 (network layer concerns with packets).

Question 55 Networking (Osi Model)

A student lists routing, inter-networking and congestion control as network-layer functions. What is wrong with the list?

- A. Routing is not a network-layer function

- C. Congestion control is not a network-layer function
- D. Nothing is wrong — all three belong to the network layer ✓ **Predicted answer**

Why this answer? Routing, inter-networking and congestion control are all genuine network-layer functions.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q10 (routing, inter-networking and congestion control are all network-layer functions).

Question 56 Networking (Osi Model)

The user interacts with the network through which OSI layer?

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

Why this answer? The application layer is the user's interface to the network.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q28 (application layer is the user interface layer).

Question 57 Networking (Osi Model)

The TCP/IP application layer does the work of three OSI layers. Which three are they?

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

Why this answer? The OSI application, presentation and session layers all map onto the

› application layer.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q46 (application, presentation and session map to the TCP/IP application layer).

Question 58 Networking (Osi Model)

Routing decisions — choosing the path a packet takes between networks — are made at which OSI layer?

- A. Network layer ✓ **Predicted answer**
- B. Data link layer
- C. Transport layer
- D. Session layer

Why this answer? Routing is performed by the network layer.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q98 (routing is performed by the network layer).

Question 59 Networking (Osi Model)

How many layers does the OSI reference model have?

- A. 4
- B. 5
- C. 6
- D. 7 ✓ **Predicted answer**

Why this answer? The OSI reference model has seven layers: physical, data link, network, transport, session, presentation and application.

Why predicted [C] — Syllabus anchor: syllabus anchor — Networking (OSI Model): the seven layers recurs in every sitting of this post.

60 Networking (Fibre Optics)

An avalanche photodiode receiver can pick up a signal from as few as how many photons?

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

Why this answer? The textbook figure for the avalanche photodiode receiver is 200 photons.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q18 (avalanche photodiode receiver detects 200 photons).

Question 61 Networking (Fibre Optics)

FDDI has two rings. On which one does data normally travel?

- A. The primary ring ✓ **Predicted answer**
- B. The secondary ring
- C. Both primary ring and secondary ring
- D. Neither primary ring nor secondary ring

Why this answer? FDDI traffic normally travels on the primary ring; the secondary ring is a standby.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q48 (FDDI data normally travels on the primary ring).

Question 62 Networking (Fibre Optics)

FDDI keeps working even if a cable breaks. Which feature gives it that reliability?

- A. Its dual-ring design ✓ **Predicted answer**

a CSMA/CD network

- C. Stations are guaranteed a turn to transmit
- D. Both its dual-ring design and CSMA/CD

Why this answer? The second ring takes over if the primary ring breaks, which is what makes FDDI reliable.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q64 (FDDI is reliable because of its dual-ring design).

Question 63 Networking (Fibre Optics)

To run FDDI between two buildings, which kind of fibre should you use?

- A. Inter mode
- B. Intra mode
- C. Multi mode
- D. Single mode ✓ **Predicted answer**

Why this answer? Single-mode fibre carries signals over the long distances between buildings.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q65 (FDDI between buildings uses single-mode fibre).

Question 64 Networking (Fibre Optics)

Which statement about fibre-optic cables is correct?

- A. They are not suitable for short-distance connections
- B. In multimode fibre the light beam bounces off the cladding as it travels down the core ✓ **Predicted answer**
- C. Data over fibre is affected by electromagnetic interference
- D. Single-mode fibre has a lower bandwidth than multimode fibre

swer? In multimode fibres the transmitted light is reflected by total internal reflection at the core-cladding boundary; fibre is immune to electromagnetic interference and single-mode has the higher bandwidth.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q82 (multimode fibre light bounces off the cladding).

Question 65 Networking (Cabling)

A rollover cable is also known by what name?

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

Why this answer? A rollover cable is used as a console cable to a device's console port.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q55 (another name for a rollover cable is a console cable).

Question 66 Networking (Cabling)

In a multi-storey building with an extended-star LAN, where should the main distribution facility (MDF) go?

- A. On the first floor
- B. Next to the point of presence (POP) ✓ **Predicted answer**
- C. On one of the middle floors
- D. In the basement

Why this answer? The MDF sits beside the point of presence where the carrier service enters the building.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-

Q67 (MDF is located next to the POP).

Question 67 Networking (Cabling)

Which cabling links wiring closets to each other, to the POP, and between buildings on the same LAN?

- A. Token-ring cabling
- B. Backbone cabling ✓ **Predicted answer**
- C. Coaxial cabling
- D. Horizontal cabling

Why this answer? Backbone cabling provides interconnections between wiring closets, the POP and buildings.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q68 (backbone cabling links wiring closets, the POP and buildings).

Question 68 Networking (Cabling)

What is the maximum backbone-cabling distance when single-mode fibre joins the horizontal cross-connect to the main cross-connect?

- A. 500 meters
- B. 1000 meters
- C. 2500 meters
- D. 3000 meters ✓ **Predicted answer**

Why this answer? The limit for single-mode backbone fibre between cross-connects is 3000 m.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q73 (maximum backbone distance on single-mode fibre is 3000 meters).

69 Networking (Cabling)

Two workstations with RJ45 ports must join a 10Base-T hub. Workstation A is 75 m away and B is 160 m away. How should they be connected?

- A. Coaxial cable to A and a wireless link to B
- B. UTP cable to A and fibre cable to B with media converters ✓ **Predicted answer**
- C. UTP cables to A and B
- D. UTP cable to A and a wireless link to B

Why this answer? A is within the 100 m UTP limit for 10Base-T; B at 160 m needs fibre with media converters to reach the hub's RJ45 ports.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q83 (A on UTP and B on fibre with media converters).

Question 70 Networking (Standards)

The IEEE 802.11 family of standards covers which technology?

- A. Wireless LAN ✓ **Predicted answer**
- B. Wired LAN
- C. Bluetooth technology
- D. WiMAX

Why this answer? 802.11 is the wireless LAN standard family; wired LAN is 802.3, Bluetooth is 802.15 and WiMAX is 802.16.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q14 (IEEE 802.11 stands for wireless LAN).

Question 71 Networking (Standards)

Which of these correctly describes an Ethernet variety?

- A. 10Base-T uses Cat5 cable and transmits at 10 Mbps ✓ **Predicted answer**

Base-FX is multimode fibre transmitting at 10 Mbps

- C. Both descriptions are correct
- D. None of the options

Why this answer? 10Base-T runs at 10 Mbps over twisted-pair cable; 100Base-FX runs at 100 Mbps, not 10 Mbps.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q66 (10Base-T uses Cat5 cable at 10 Mbps).

Question 72 Networking (Standards)

802.11i, the security standard behind WPA2, works at which layer of the OSI model?

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

Why this answer? 802.11i (WPA2) security operates at the data link layer.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q70 (802.11i is implemented at layer 2).

Question 73 Networking (Standards)

The X.25 standard specifies a serial interface gateway. How many protocol layers does it have there?

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

Why this answer? X.25 specifies three layers: physical, link and packet.

ed [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q97 (X.25 specifies 3 protocol layers).

Question 74 Networking (Protocols)

What is the main job of the Internet Control Message Protocol (ICMP)?

- A. To let gateways send error and control messages to other gateways or hosts
- B. To carry data between IP software on different machines
- C. To report error conditions back to the original source ✓ **Predicted answer**
- D. All of the options

Why this answer? ICMP's defining job is reporting error conditions back to the original source, which must relate errors to application programs and act on them.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q8 (ICMP reports error conditions to the original source).

Question 75 Networking (Protocols)

What do the letters RIP stand for in routing?

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

Why this answer? RIP is the Routing Information Protocol, the distance-vector routing protocol.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q12 (RIP is Routing Information Protocol).

76 Networking (Protocols)

Expand the abbreviation BGP.

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

Why this answer? BGP is the Border Gateway Protocol, the inter-domain routing protocol of the Internet.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q13 (BGP is Border Gateway Protocol).

Question 77 Networking (Error Control)

After a CRC check at the receiver, what value of the remainder means the data arrived without error?

- A. Equal to the remainder at the sender
- B. Zero ✓ **Predicted answer**
- C. Nonzero
- D. The quotient at the sender

Why this answer? A zero remainder means the received data divides cleanly, so no error is detected.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q35 (CRC remainder of zero means no error).

Question 78 Networking (Error Control)

On a simplex line there is no way to ask for a repeat, so errors must be fixed at the receiver. Which code can do that?

ic Redundancy Check (CRC) code

- B. A Hamming code ✓ **Predicted answer**
- C. An RSA code
- D. A Huffman code

Why this answer? A Hamming code corrects errors at the receiver with no return channel, so it works on a simplex line; CRC only detects errors.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q88 (Hamming code works on a simplex line).

Question 79 Networking (Error Control)

On a full-duplex link, which error-recovery technique is most widely used?

- A. Backward Error Correction (BEC)
- B. Forward Error Correction (FEC)
- C. Automatic Repeat Request (ARQ) ✓ **Predicted answer**
- D. Huffman error correction technique

Why this answer? ARQ is the standard error recovery technique on a full-duplex link.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q89 (ARQ is the most used error recovery on a full-duplex link).

Question 80 Networking (Databases)

A company keeps its whole database in one place. What is the main advantage of that arrangement?

- A. It is best for security and management ✓ **Predicted answer**
- B. All or part of the database is copied at two or more computers
- C. It is dispersed among multiple computer systems
- D. It struggles to keep all copies up to date

swer? One central copy is easiest to secure and manage.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q93 (centralised database is best for security and management).

Question 81 Networking (Databases)

Keeping a copy of the whole database on several machines has one big drawback. What is it?

- A. Contention among processors trying to access data at once
- B. Slow response time
- C. High storage cost ✓ **Predicted answer**
- D. All processors lose access to data during a disk failure

Why this answer? Every copy of the data needs storage, so replication costs more storage.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q94 (disadvantage of a replicated database is high storage cost).

Question 82 Networking (Databases)

When designing or improving a distributed data-processing system, which requirement is critical above the others?

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

Why this answer? Without connectivity between the distributed parts, the system cannot work at all.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-

Q93 (connectivity is critical for distributed data processing).

Question 83 Networking (Vpn)

At the main office, which device ends the VPN tunnels coming in from remote sites?

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

Why this answer? The head-end device (VPN concentrator) terminates tunnels at the central site.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q4 (head-end device terminates VPNs at a primary location).

Question 84 Networking (Vpn)

In Cisco SDM, which wizard helps you pick the right kind of VPN?

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

Why this answer? The VPN Design Guide wizard in SDM assists in choosing a VPN.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q5 (VPN Design Guide wizard in SDM assists in choosing a VPN).

Question 85 Networking (Wireless)

Which of the following are all genuine drawbacks of a wireless LAN?

- A. Slower data transmission

- C. Interference of transmissions from different computers
- D. All of the options ✓ **Predicted answer**

Why this answer? Slower transmission, a higher error rate and interference between computers are all real disadvantages of a wireless LAN.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q7 (slower transmission, higher error rate and interference are all wireless LAN disadvantages).

Question 86 Networking (Wireless)

A wireless network broadcasts an SSID. What does that name do?

- A. To secure the WLAN
- B. To manage the WLAN settings
- C. To identify the WLAN ✓ **Predicted answer**
- D. To configure the WLAN access point

Why this answer? The SSID is the network's name, identifying it to clients.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q49 (SSID identifies the WLAN).

Question 87 Networking (History)

At the University of Hawaii, Norman Abramson pioneered which early wireless access method?

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

swer? Abramson created the ALOHAnet random-access protocol at Hawaii.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q15 (Abramson discovered Aloha at the University of Hawaii).

Question 88 Networking (History)

Nat Borenstein is credited with creating which Internet mail extension?

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

Why this answer? Nathaniel Borenstein created MIME.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q71 (Borenstein discovered MIME).

Question 89 Networking (Switching)

Why can a packet-switched network keep working when a link fails or gets congested?

- A. Because packets are individually addressed and can take alternative routes
- B. Because the network adds intelligence for error and link control
- C. Because wide-bandwidth trunks share capacity economically
- D. All of the options ✓ **Predicted answer**

Why this answer? Packet switching reroutes around failures, applies error and link control in the nodes, and shares trunk capacity economically.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q36 (packet switching reroutes, adds control intelligence and shares trunk capacity).

90 Networking (Switching)

Frame Relay is a packet-switching technology with one notable feature. Which of these is true of it?

- A. It allows the use of variable-length packets ✓ **Predicted answer**
- B. It performs extensive error checking
- C. It acknowledges each frame transmitted
- D. It can be considered a broadband packet-switching technology

Why this answer? Frame Relay uses variable-length frames; it does only minimal error detection and does not acknowledge frames.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q85 (Frame Relay allows variable-length packets).

Question 91 Networking (Topologies)

A network has n devices, and each one has n-1 ports for cables. Which topology is that?

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

Why this answer? In a full mesh each device connects to every other device, needing n-1 ports.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q50 (mesh topology gives each device n-1 ports).

Question 92 Networking (Topologies)

How is a token-ring topology different from an Ethernet topology?

- A. Token ring is deterministic

- C. Neither of those statements is true
- D. Both of those statements are true ✓ **Predicted answer**

Why this answer? The token controls access, so access is deterministic and collisions do not occur.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q63 (token ring is deterministic and has no collisions).

Question 93 Networking (Safety)

For safety, the ground wire of a computer is attached to which part?

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

Why this answer? The safety ground connects to exposed metal parts so a fault cannot make them live.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q52 (safety ground is connected to exposed metal parts).

Question 94 Networking (Safety)

What does the one-hand rule say when you work on live equipment?

- A. Only touch devices with one hand, so any current cannot flow through the heart ✓ **Predicted answer**
- B. When setting up the network use one bare hand and wear a glove on the other
- C. Both of those rules
- D. None of the options

swer? The one-hand rule is to touch devices with one hand only, so any electrical current will not flow through the heart.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q72 (one-hand rule is to touch devices with one hand only).

Question 95 Networking (Number Systems)

What is decimal 24032 in hexadecimal?

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

Why this answer? 5 times 4096 + 13 times 256 + 14 times 16 + 0 = 20480 + 3328 + 224 = 24032.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q59 (decimal 24032 is 5DE0 in hex).

Question 96 Networking (Number Systems)

What is hexadecimal 3F4B in decimal?

- A. 26203
- B. 16204
- C. 16203 ✓ **Predicted answer**
- D. 12345

Why this answer? 3 times 4096 + 15 times 256 + 4 times 16 + 11 = 12288 + 3840 + 64 + 11 = 16203.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q60 (hex 3F4B is 16203 in decimal).

97 Networking (Media)

Of twisted-pair wire, coaxial cable, fibre-optic cable and copper cable, which transmits most slowly?

- A. Twisted-pair wire ✓ **Predicted answer**
- B. Coaxial cable
- C. Fibre-optic cable
- D. Copper cable

Why this answer? Twisted-pair is the slowest of the listed media; coaxial is faster and fibre is the fastest.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q30 (slowest transmission speeds are twisted-pair wire).

Question 98 Networking (Security)

In wireless security, which solution relies on one shared key for both encrypting data and authenticating users?

- A. WPA
- B. WPA2
- C. 802.11i
- D. WEP ✓ **Predicted answer**

Why this answer? WEP uses a single shared key for both encryption and authentication; WPA and WPA2 derive separate keys.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q39 (WEP uses the same key for encryption and authentication).

Question 99 Networking (Multiplexing)

Time-division multiplexing only works if the two ends do something in step. What is it?

- istical TDM makes poor use of bandwidth on probabilistic streams
- B. Transmitter and receiver stay synchronised periodically ✓ **Predicted answer**
- C. TDM performs efficiently on probabilistic streams
- D. Statistical TDM is efficient on deterministic streams

Why this answer? TDM slots only work if transmitter and receiver stay synchronised.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q87 (TDM requires transmitter and receiver to be synchronised).

Question 100 Networking (Broadband)

ADSL is called asymmetric for a reason. Which statement explains it?

- A. The phone line cannot carry voice calls at the same time
- B. It is a 64 Kbps leased line
- C. It needs special cabling infrastructure
- D. It has one data rate for incoming data and another for outgoing data ✓ **Predicted answer**

Why this answer? Asymmetric means faster downstream than upstream; ADSL runs over the existing phone line, which still carries voice calls.

Why predicted [B] — Verified fact, predicted to recur: PPSC-2014-NETWORK-ENGINEER-2014-06-21 Q90 (ADSL has different rates for incoming and outgoing connections).

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