

The Internet model consists of _____ layers.

- ☐ Three
- ☒ **A) Five**
- ☐ **B) Seven**
- ☐ **C) Eight**
- ☐ **D)**

2

The process-to-process delivery of the entire message is the responsibility of the _____ layer.

- ☐ Network
- ☒ **A) Transport**
- ☐ **B) Application**
- ☐ **C) Physical**
- ☐ **D)**

3

The _____ layer is the layer closest to the transmission medium.

- ☐ Physical
- ☒ **A) Data link**
- ☐ **B) Network**
- ☐ **C) Transport**
- ☐ **D)**

4

Mail services are available to network users through the _____ layer.

- ☐ Data link
- ☒ **A) Physical**
- ☐ **B) Transport**
- ☐ **C) Application**
- ☐ **D)**

5

As the data packet moves from the upper to the lower layers, headers are _____.

- ☐ Added
- ☒ **A) Removed**
- ☐ **B) Rearranged**
- ☐ **C) Modified**
- ☐ **D)**

6

The _____ layer lies between the network layer and the application layer.

- ☐ Physical
- ☒ **A) Data link**
- ☐ **B) Transport**
- ☐ **C) None of the above**
- ☐ **D)**

7 Layer 2 lies between the physical layer and the _____ layer.

- ☐ Network
- ☒ A) Data link
- ☐ B) Transport
- ☐ C) None of the above
- ☐ D)

8 When data are transmitted from device A to device B, the header from A's layer 4 is read by B's _____ layer.

- ☐ Physical
- ☒ A) Transport
- ☐ B) Application
- ☐ C) None of the above
- ☐ D)

9 The _____ layer changes bits into electromagnetic signals.

- ☐ Physical
- ☒ A) Data link
- ☐ B) Transport
- ☐ C) None of the above
- ☐ D)

10 Which of the following is an application layer service?

- ☐ Remote log-in
- ☒ A) File transfer and access
- ☐ B) Mail service
- ☐ C) All the above
- ☐ D)

11 Why was the OSI model developed?

- ☐ Manufacturers disliked the TCP/IP protocol suite.
- ☐ A) The rate of data transfer was increasing exponentially
- ☐ B) Standards were needed to allow any two systems to communicate
- ☐ C) None of the above
- ☐ D)

12 The _____ model shows how the network functions of a computer ought to be organized.

- ☐ CCITT
- ☒ A)

- ☐ OSI
- ☒ B) ISO
- ☐ C) ANSI
- ☐ D)

13 The physical layer is concerned with the movement of _____ over the physical medium.

- ☐ programs
- ☒ A) dialogs
- ☐ B) protocols
- ☐ C) bits
- ☐ D)

14 The OSI model consists of _____ layers.

- ☐ three
- ☒ A) five
- ☐ B) seven
- ☐ C) eight
- ☐ D)

15 In the OSI model, as a data packet moves from the lower to the upper layers, headers are _____.

- ☐ added
- ☒ A) removed
- ☐ B) rearranged
- ☐ C) modified
- ☐ D)

16 In the OSI model, when data is transmitted from device A to device B, the header from A's layer 5 is read by B's _____ layer.

- ☐ physical
- ☒ A) transport
- ☐ B) session
- ☐ C) presentation
- ☐ D)

17 In the OSI model, what is the main function of the transport layer?

- ☐ node-to-node delivery
 - ☒ A) process-to-process message delivery
 - ☐ B) synchronization
 - ☐ C) updating and maintenance of routing tables
 - ☐ D)
-

18

In the OSI model, encryption and decryption are functions of the _____ layer.

- ☐ A) transport
- ☐ B) session
- ☐ C) presentation
- ☐ D) application

19

When a host on network A sends a message to a host on network B, which address does the router look at?

- ☐ A) port
- ☐ B) logical
- ☐ C) physical
- ☐ D) none of the above

20

To deliver a message to the correct application program running on a host, the _____ address must be consulted.

- ☐ A) port
- ☐ B) IP
- ☐ C) physical
- ☐ D) none of the above

21

IPv6 has _____ -bit addresses.

- ☐ A) 32
- ☐ B) 64
- ☐ C) 128
- ☐ D) variable

22

ICMPv6 includes _____.

- ☐ A) IGMP
- ☐ B) ARP
- ☐ C) RARP
- ☐ D) a and b

23

The _____ layer is responsible for moving frames from one hop (node) to the next.

- ☐ A) physical
- ☐ B) data link
- ☐ C) transport
- ☐ D) none of the above

24

The _____ layer adds a header to the packet coming from the upper layer that includes the logical addresses of the sender and receiver.

- ☐ physical
- ☐ A) data link
- ☐ B) network
- ☐ C) none of the above
- ☐ D)

25

The _____ layer is responsible for the delivery of a message from one process to another.

- ☐ physical
- ☐ A) transport
- ☐ B) network
- ☐ C) none of the above
- ☐ D)

26

The Internetworking Protocol (IP) is a _____ protocol.

- ☐ reliable
- ☐ A) connection-oriented
- ☐ B) both a and b
- ☐ C) none of the above
- ☐ D)

27

_____ is a process-to-process protocol that adds only port addresses, checksum error control, and length information to the data from the upper layer.

- ☐ TCP
- ☐ A) UDP
- ☐ B) IP
- ☐ C) none of the above
- ☐ D)

28

_____ provides full transport layer services to applications.

- ☐ TCP
- ☐ A) UDP
- ☐ B) ARP
- ☐ C) none of the above
- ☐ D)

29

The _____ address, also known as the link address, is the address of a node as defined by its LAN or WAN.

- ☐ port
- ☐ A) physical
- ☐ B) logical
- ☐ C) none of the above
- ☐ D)

30

Ethernet uses a _____ physical address that is imprinted on the network interface card (NIC).

- ☐ 32-bit
- ☐ **A)** 64-bit
- ☐ **B)** 6-byte
- ☐ **C)** none of the above
- ☐ **D)**

31

A port address in TCP/IP is _____ bits long.

- ☐ 32
- ☐ **A)** 48
- ☐ **B)** 16
- ☐ **C)** none of the above
- ☐ **D)**

32

The _____ created a model called the Open Systems Interconnection, which allows diverse systems to communicate.

- ☐ OSI
- ☐ **A)** ISO
- ☐ **B)** IEEE
- ☐ **C)** none of the above
- ☐ **D)**

33

The seven-layer _____ model provides guidelines for the development of universally compatible networking protocols.

- ☐ OSI
- ☐ **A)** ISO
- ☐ **B)** IEEE
- ☐ **C)** none of the above
- ☐ **D)**

34

The physical, data link, and network layers are the _____ support layers.

- ☐ user
- ☐ **A)** network
- ☐ **B)** both (a) and (b)
- ☐ **C)** neither (a) nor (b)
- ☐ **D)**

35

The session, presentation, and application layers are the _____ support layers.

- ☐ user
- ☐ **A)** network
- ☐ **B)** both (a) and (b)
- ☐ **C)** neither (a) nor (b)
- ☐ **D)**

36

The _____ layer links the network support layers and the user support layers.

- ☐ A) transport
- ☐ B) network
- ☐ C) data link
- ☐ D) session

37

The _____ layer coordinates the functions required to transmit a bit stream over a physical medium.

- ☐ A) transport
- ☐ B) network
- ☐ C) data link
- ☐ D) physical

38

The _____ layer is responsible for delivering data units from one station to the next without errors.

- ☐ A) transport
- ☐ B) network
- ☐ C) data link
- ☐ D) physical

39

The _____ layer is responsible for the source-to-destination delivery of a packet across multiple network links.

- ☐ A) transport
- ☐ B) network
- ☐ C) data link
- ☐ D) physical

40

The _____ layer is responsible for the process-to-process delivery of the entire message.

- ☐ A) transport
- ☐ B) network
- ☐ C) data link
- ☐ D) physical

41

The _____ layer establishes, maintains, and synchronizes the interactions between communicating devices.

- ☐ A) transport
- ☐ B) network
- ☐ C) session
- ☐ D) physical

42

The _____ layer ensures interoperability between communicating devices through transformation of data into a mutually agreed upon format.

- ☐ transport
- ☒ A) network
- ☐ B) data link
- ☐ C) presentation
- ☐ D)

43

The _____ layer enables the users to access the network.

- ☐ transport
- ☒ A) application
- ☐ B) data link
- ☐ C) physical
- ☐ D)

44

TCP/IP is a _____ hierarchical protocol suite developed _____ the OSI model.

- ☐ seven-layer;
- ☒ A) before
- ☐ B) five-layer;
- ☐ C) before
- ☐ D) six-layer;
- ☐ before
- ☐ five-layer; after

45

The TCP/IP _____ layer is equivalent to the combined session, presentation, and application layers of the OSI model.

- ☐ application
- ☒ A) network
- ☐ B) data link
- ☐ C) physical
- ☐ D)

46

The _____ address, also known as the link address, is the address of a node as defined by its LAN or WAN.

- ☐ physical
- ☒ A) IP
- ☐ B) port
- ☐ C) specific
- ☐ D)

47

The _____ address uniquely defines a host on the Internet.

- ☐ physical
- ☒ A) IP
- ☐ B) port
- ☐ C) specific
- ☐ D)

The _____ address identifies a process on a host.

- ☐ A) physical
- ☐ B) IP
- ☐ C) port
- ☐ D) specific