

## Chapter 7: Network Reference Models and Standards Review Questions

Book Title: Guide to Networking Essentials

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## Chapter Review

### Review Questions

1. The original commercial version of Ethernet supported 10 Mbps bandwidth; the version introduced in the early 1990s supports 100 Mbps; and in 1998, Gigabit Ethernet was introduced. All versions use the same data frame formats, with the same maximum PDU sizes, so they can interoperate freely. Given this information and what you know of layered technologies, which of the following statements is true? (Choose all that apply.)

- ☒ a. Ethernet works at the Data Link and Physical layers of the OSI model, and upgrades to newer, faster versions of Ethernet can be made by changing only the components that work at these layers.
- ☐ b. Ethernet spans several layers and requires a new protocol stack to upgrade to new versions.
- ☒ c. Changes in technology at one layer of the OSI model don't usually affect the operation of other layers.
- ☐ d. Ethernet isn't considered a scalable technology.

2. The addition of information to a PDU as it's passed from one layer to the next is called which of the following?

- ☐ a. PDI transforming
- ☒ b. Encapsulation
- ☐ c. Deencapsulation
- ☐ d. Converting

3. Layers acting as though they communicate directly with each other across the network are called which of the following?

- ☐ a. Partners

b. Synchronous

c. Interchangeable

☒ d. Peers

4. Place the following letters in the correct order to represent the OSI model from Layer 7 to Layer 1:

a. Presentation

b. Data Link

c. Session

d. Physical

e. Application

f. Transport

g. Network

5. Which OSI layer creates and processes frames?

Data link

6. Which OSI layer handles flow control, data segmentation, and reliability?

a. Application

b. Physical

☒ c. Transport

d. Data Link

7. Which OSI layer governs how a NIC is attached to the network medium?

Physical

8. Which OSI layer determines the route a packet takes from sender to receiver?

a. 7

b. 1

☒ c. 3

d. 4

9. Which OSI layer is responsible for setting up, maintaining, and ending ongoing information exchanges across a network?

a. 6

b. 3

c. 2

☒ d. 5

10. Which of the following elements might the Data Link layer add to its PDU?  
(Choose all that apply.)

☒ a. Physical addresses

b. Logical addresses

c. Data

☒ d. CRC

11. When and how many times is a CRC calculated?

a. Once, before transmission

b. Once, after receipt

c. Twice, once before transmission and again on receipt

☒ d. At the source and destination and at each intermediary device

12. Which layer of the OSI model does Project 802 divide into two sublayers?

a. Physical

☒ b. Data Link

c. Network

d. Session

13. What are the names of the sublayers specified as part of Project 802?  
(Choose all that apply.)

a. Data Link Control (DLC)

☒ b. Logical Link Control (LLC)

c. Carrier Sense Multiple Access/Collision Detection (CSMA/CD)

☒ d. Media Access Control (MAC)

14. Which term refers to stripping header information as a PDU is passed from one layer to a higher layer?

- ☒ a. Deencapsulation
- b. Encapsulation
- c. PDU stripping
- d. Packetization

15. Which IEEE 802 standard applies to Ethernet?

- a. 802.2
- ☒ b. 802.3
- c. 802.4
- d. 802.5
- e. 802.11

16. Which IEEE 802 standard applies to wireless LANs?

- a. 802.2
- b. 802.3
- c. 802.4
- d. 802.5
- ☒ e. 802.11

17. What's the name of the PDU at the Transport layer?

- a. Bit
- ☒ b. Packet
- c. Segment
- d. Data

18. At which OSI layer does the PDU contain sequence and acknowledgment numbers?

- a. Application

☒ b. 4

c. Data Link

d. 6

19. Which of the following is an example of software found at the Application layer? (Choose all that apply.)

☒ a. FTP

b. TCP

☒ c. HTTP

d. ICMP

20. At which Data Link sublayer does the physical address reside?

☒ a. Media Access Control (MAC)

b. Logical Link Control (LLC)

c. Data Access Control (DAC)

d. Network Access Control (NAC)

21. Which of the following problems can occur at the Physical layer?

a. NIC driver problems

b. Incorrect IP addresses

☒ c. Signal errors caused by noise

d. Incorrect segment size

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