



Network II Revision 1

1. Name the seven layers of the OSI model.
2. What is the main purpose(s) of Layer 7?
3. What is the main purpose(s) of Layer 6?
4. What is the main purpose(s) of Layer 5?
5. What is the main purpose(s) of Layer 4?
6. What is the main purpose(s) of Layer 3?
7. What is the main purpose(s) of Layer 2?
8. What is the main purpose(s) of Layer 1?
9. Describe the process of data encapsulation as data is processed from creation until it exits a physical interface to a network. Use the OSI model as an example.
10. Name three benefits to layering networking protocol specifications.
11. Which header or trailer does a router discard as a side effect of routing? And why?
12. What OSI layer typically encapsulates using both a header and a trailer?
13. What terms are used to describe the contents of the data encapsulated by the data link, network, and transport layers, respectively?
14. Explain the meaning of the term LSPDU.
15. Explain how Layer x on one computer communicates with Layer x on another computer.
16. List the terms behind the acronym TCP/IP.
17. List the terms behind the acronym OSI.
18. What does MAC stand for?
19. Name three terms popularly used as a synonym for *MAC address*.



20. Are MAC addresses defined by a Layer 2 or Layer 3 protocol?
21. How many bits are present in a MAC address?
22. Name the two main parts of a MAC address. Which part identifies which “group” this address is a member of?
23. What OSI layer typically encapsulates using both a header and a trailer?
24. If a Fast Ethernet NIC currently is receiving a frame, can it begin sending a frame?
25. What are the two key differences between a 10-Mbps NIC and a 10/100 NIC?
26. What is the distance limitation of a single cable for 10BASE-T? For 100 BASE-TX?
27. How many bytes long is a MAC address?
28. Explain the function of the loopback and collision-detection features of an Ethernet NIC in relation to half-duplex and full-duplex operations.