

STUDY GUIDE  
CCNA 1 MODULE 1

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1. Explain the difference between a network and the Internet.
2. Identify and explain the three component parts of an Internet connection.
3. What is the design goal for ActiveX?
4. Why does a well-qualified network administrator need to recognize and name the major components of a PC?
5. What is the function of a LAN adapter?
6. List and define the computer resources needed by a LAN adapter.
7. Why is it important to select the right system bus when purchasing a NIC card?
8. Why are jumper pins rarely used on peripherals nowadays?
9. Match the letters and numbers:
  1. BBS access \_\_\_\_\_ a)9600 bps
  2. Web surfing \_\_\_\_\_ b)300 bps
  3. Dumb terminal access \_\_\_\_\_ c)Broadband
  4. Multimedia-based instant access \_\_\_ d)56Kbps
10. What software is used to configure networking protocols on a PC? (Any platform)
11. What is the *ping* test used for?
12. Why was the *ping* test named after sonar operations?
13. What is the special function of *ping 127.0.0.1*?
14. What is the difference between the *ping* command and the *tracert* command?
15. Why are web browsers available for free download?
16. List five plug-ins commonly used with browsers
17. Why is it so very important to follow all the steps in a troubleshooting process, including documentation?

18. Why do computers use binary math?
19. How are complex symbols such as letters, colors, and sounds represented in binary?
20. How do the terms bit and byte relate to the previous question?
21. All numbering systems are constructed alike. If the base is X, then the column values are:  
 $X^4$     $X^3$     $X^2$     $X^1$     $X^0$
- a) If a binary number is expressed as 1101, what is the decimal value?  
b) If a number using the base value of 8 ( $X=8$ ) is expressed as 27, what is the decimal value?
22. Why are Internet addresses expressed in dotted decimal format?
23. In hexadecimal numbering, the base is 16, and 15 number symbols are needed. What number symbols would you suggest for a numbering system based on 32 (follow the pattern used for hexadecimal symbols).
24. AND, OR, NOT are examples of Boolean logic, implemented by logic gates. If a zero is submitted to a NOT logic gate, what will be the output?
25. 32-bit binary IP addresses are composed of two classes of bits. Name these bits and explain their use.
26. Why is a subnet mask used in conjunction with an IP address?