IPv6 Pop Quiz
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Think you know IPv6? An IPv6 address is now automatically configured in Windows Vista, Windows 7 and Server 2008. You may want to review my article **"Introduction to IPv6"** located at www.rmroberts.com before taking this quiz. If you have not studied IPv6, I would not recommend taking the pop quiz. The results could disappoint you.

1. Which set of characters are used in an IPv6 address?

   A. 0-9

   B. 0-9 and A-C

   C. 0-9 and A-F

   D. 0-9 and A-G

2. How many bits are in an IPv6 address?

   A. 24

   B. 68

   C. 128

   D. 1024

3. Which character(s) are used to express a string of zeros inside of a IPv6 address?

   A. #

   B. ::

   C. &

   D. //

4. What are the three types of unicast IPv6 addresses?

   A. Global, Link-Local, Unique-local

   B. Global, Internet, Subnet.

   C. Internet, Subnet, Superset

   D. Global, Internet, Site

5. How are link-local IPv6 addresses created?

    A. A combination of the local-link prefix FE80 and the 64-bit IPv6 identifier.

    B. They are randomly generated and then prefixed with FFCC.

    C. They are randomly generated and then prefixed with F808.

    D. They use the device MAC address with a prefix of FF00.

6. What is the purpose of 6to4 technology?

    A. To carry IPv4 packets inside IPv6 packets.

    B. To convert IPv4 port numbers to IPv6 port numbers.

    C. To convert IPv4 addresses to IPv6 addresses.

    D. To automatically assign IPv6 address to a network adapter when no DNS server can be reached.

7. Which type of IPv6 address fills the subnet portion of the address with all zeros?

    A. Global

    B. Global unicast

    C. Site-local

    D. Link-local

8. Which operating systems configure IPv6 by default? (Select all that are correct.)

    A. Windows XP.

    B. Windows 2000

    C. Windows Vista

    D. Windows 7

9. What is a small section of a local area network limited by a router referred to in IPv6 terminology?

      A. Local-link

      B. Omni-link

      C. Subnet-link

      D. Uni-link

10. Which type of IPv6 address is the equivalent to an IPv4 Internet public address?

      A. Link-local

      B. Site-local

      C. Global

      D. Universal

11. What is the prefix for an IPv6 link-local address?

      A. fe80

      B. 254

      C. ff00

      D. 2002

12. Which operating systems first randomly generate the interface identifier used in IPv6?

      A. Windows XP

      B. Windows Vista

      C. Windows 7

      D. Windows Server 2003

13. What is the loopback for IPv6?

      A. ::127

      B. ::1

      C. ::255

      D. ::FF

14. What is the purpose of LLMNR?

      A. To match MAC address to IPv6 addresses on the local-link.

      B. To resolve MAC addresses to IPv6 addresses on the local link.

      C. To resolve only IPv4 address to computer names on the local-link.

      D. To resolve both IPv4 and IPv6 addresses to computer names on the local-link.

15. What is the LLMNR multicast destination addresses for IPv6?

      A. fe80::01

      B. ff00:ffff

      C. ffff::0001

      D. ff01::3:1

16. What is the LLMNR multicast destination address for IPv4?

      A. 224.0.0.252

      B. 255.0.0.127

      C. 127.0.0.255

      D. 255.255.255.255

17. What will happen if you disable IPv6?

      A. There will be no effect to the local network.

      B. The amount of network traffic will increase.

      C. Network Discovery will stop working.

      D. You cannot disable IPv6.

18. What is the prefix for a unique-local IPv6 address?

 A. fe80

 B. fc00

 C. fffe

 D. 2000

19. Which IPv6 type of address has no subnet ID?

 A. Global

 B. Site-local

 C. Unique-local

 D. Link-local

20. Which is the correct format for a IPv6 global address?

 A. 48-bit global routing prefix; 16-bit subnet ID; 64-bit interface ID.

 B. 64-bit global routing prefix; no subnet ID; 64-bit interface ID

 C. 32-bit global routing prefix; 32-bit subnet ID; 64-bit interface ID

 D. 64-bit global routing prefix; 32-bit subnet ID; 64-bit interface ID.

Pop Quiz Answers

1. C. 0-9 and A-F

2. C. 128

3. B. ::

4. A. Global, Link-Local, Unique-local

5. A. A combination of the local-link prefix FE80 and the 64-bit IPv6 identifier.

6. C. To convert IPv4 addresses to IPv6 addresses.

7. D. Link-local

8. A. Windows XP; C. Windows Vista; and D. Windows 7

9. A. Local-link

10. C. Global

11. A. fe80.

12. B. Windows Vista

13. B. ::1

14. D. To resolve both IPv4 and IPv6 addresses to computer names on the local-link.

15. D. ff01::3:1

16. A. 224.0.0.252

17. C. Network Discovery will stop working.

18. A. fe80

19. D. Link-local

20. A. 48-bit global routing prefix; 16-bit subnet ID; 64-bit Interface ID.

(Do you need help with IPv6? If so, check out this article for help)

Introducing the IPv6 Standard, by Richard M. Roberts