Mid-Term Review

1. What is the worldwide network of networks called? _____
2. What is the part of the worldwide network that uses HTTP protocol called? _____
3. What does HTTP stands for? _____
4. What is the theoretical model that divides data communication into 7 layers called? _____
5. What is the agreement that ISP's make to exchange data called? _____
6. What is the protocol used to send email? _____
7. What is the protocol used to transfer files? _____
8. What is the protocol that provides the addressing scheme for the Internet? _____
9. What email client protocol allows messages to remain saved on a remote email server and accessed from several devices? _____
10. What is the term for the ability of a system to keep running even when components fail? _____
11. What is the rate of data transfer, bit rate or throughput, measured in bits per second called? _____
12. What is the data storage technology that combines multiple disk drive components into a logical unit for the purposes of data redundancy and performance improvement called? _____
13. What is the backup method that backs up all files that are new or changed since the last full backup called? _____
14. What is the backup method that backs up only the data that has changed since the last incremental backup is called? _____
15. How many bits are used in the IPv4 addressing scheme? _____

16. How many bits are used in the IPv6 addressing scheme? _____

17. How many classes are there in the IPv4 classful addressing system? _____

18. What class has the most hosts? _____

19. What class has the most networks? _____

Class	First Octet in IP address		Usable # of Network bits	Number of Networks	Number of Hosts
Class A	1 – 127	0xxx xxxx	8-1 = 7	2^7-2 = 126**	>16,000,000*
Class B	128 – 191	10xx xxxx	16-2 = 14	2^{14} > 16,000	>65,000*
Class C	192 – 223	110x xxxx	24-3 = 21	2^{21} > 2,000,000	254*

Using the table above and the IP address:**157.107.63.205**

20. What is the class? _____

21. What is the network id? _____

22. What is the host id? _____

Using the table above and the IP address: **193.61.221.25**

23. What is the class? _____

24. What is the network id? _____

25. What is the host id? _____

26. What is the main disadvantage of the classful addressing system? _____

27. What is an advantage of the classless addressing system? _____

28. What does the 22 mean in the classless addressing scheme for the following IP address: 192.164.232.10/22? _____

29. What does NAT stand for? _____

30. What is the purpose of NAT? _____

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31. What is the name for the primary DNS server that maintains the database for the domain? _____

32. What does the nslookup command do? _____

33. What ports do web servers typically listen on? _____

34. What is a difference between server and consumer hardware? _____

35. Name two types of server hardware. _____

36. List two advantages of virtual machines. _____

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37. Voice communication on the internet would use TCP or UDP? _____

38. At which layer of the OSI model do routers operate? _____

39. True/False: RAID 0 provides data redundancy. _____

40. List one application layer protocol. _____

41. List one type of network topology. _____

42. List one of the frequencies used in Wi-Fi communication. _____

43. What is a fault domain? _____

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44. Convert the following IP address from binary, and identify the network and host bits. Show your work.

    10010010.10110010.11001100.00000001/00010000