1. Link- connectivity betwen two devices
2. Osi layer-Open system interconnect, PDNT SPA
3. Node- a point where connection takes place
4. Router- can connect two or more networks segments
5. Point point to link- direct connection between two computer devices
6. Anonymour FTP: access user to get files in public servers
7. Subnet mask- consists host address and network address, 32bit
8. UTP- unshielded twisted pair cable can extend upto 90 to 100 mtr, 100 ohms, and it extend by limiters and switches
9. Data encapsulation- is the process of breaking down information into small chunks before transmission and its header consists its source and destination addresses
10. VPN- Virtual private network which allows secure tunnel to be created across internet or network. establish secure dialup connection
11. NAT- Network address tanslation which allows multiple devices in a network to share single connection to internet
12. RIP- Routing information protocol- used by routers to send data from one network to other. by sharing routing table to other routers within the netowkr
13. NIC- Network interface card that is peripheral card attached to pc in order to connect to a network it consists of own MAC address
14. WAN wide area network that cover geographically dispersed in different regions and countries
15. TCP/IP-set of protocol that make data exchange in heterogeneuos network 4 layers Network layer, internet layer, transport layer, application layer
16. Proxy servers can make user as virtually invisible
17. 10Base-T 10 refer to data transfer rate 10mbps, base refer to baseband, T refer to twisted pair cable
18. NOS Network operating system
19. DoS denial of service attack is an attempt to prevent user from being able to acces internet
20. why using shielded, twisted pair cables- to avoid crosstalk which is em interference or noice
21. Address sharing- use to security benefit
22. MAC media access control, physical address, 6 bytes
23. Class A-begins with 0 B- begins with 10 C begins with 110
24. OSPF open shortest path first
25. Star topology- consists one central hub connect to all nodes, easiest topology
26. 192.168.0.0 with subnet mask 255.255.0.0
27. Tracert- windows utility program used to trace the route taken by data from router to destination
28. netstat- command line utitlity program provides useful information about current tcp/ip
29. ping- utility program that allow to chrck connectivity between network devices
30. Network admin- 1.installation 2. configuration 3.troubleshooting maintainence
31. Hybrid network- use both client-server and peer-to-peer architecture
32. DHCP- Dynamic host configuration protocol which automatically allocates ip address
33. ARP Address Resolution Protocol is to map ip address to a MAC address
34. Peer 2 peer- all pc act as individual workstation
35. Straight through- is connect computer to hub or router
36. Cross over- used to connect two similar devices pc to pc
37. Clustering support refer to ability of NOS to connect multiple servers in a fault tolerent group
38. SMTP- simple mail transfer protocol deals with mai delivery services on TCP/IP
39. RSA- Riverst shamir adelman algorithm, most commoly used public eky encryption
40. RTT round trip time- duration of time takes to send a message from one end to another
41. ICMP- internet control message protocol- messaging and communication for TCP/IP, also manage error messages
42. Pipelining- a task is begin before previous task ends
43. Simplex- unidirectional, one can transmit one can receive
44. Half duplex-bidirectional but not same time
45. Full deuplex- bidirectional occurs simultaneously
46. Multiplexing- dividing signal into various links for transmission it is 3types 1.wave dision multiplexing(anolog) 2.fdm(anolog) 3.tdm(digital)
47. Errors- single bit error and burst error
48. Redundancy- is sending extra bit for error detection 3 types- parity check, cyclic redundancy check (CRC), checksum
49. Parity check- it is added every data unit, simple parity check can detect all single bit errors, it can detect burst error if the number of bit is odd
50. Hamming code- is an error correction method using redundant bits
51. ARQ- automatic repeat request- send a frame wait for an acknowledgement before sending next frames
52. CSMA- carrier sense multiple access/CA/CD
53. Firewall- electronic downbridge that moniter incoming outgoing network traffic based on specific rules
54. TELNET- is a client server application
55. Baseband is entire bandwidth is consumed by single signal
56. Broadbrand is multiple signal frequencies passed
57. Topologies
58. point to point- fast reliable but small
59. Bus topology- main backbone cable, one act as server. low cost easy ot connect but hard to troble shoot not use for large nw
60. Star topology- central hub connection, low starup cost, easy to add nodes but expensive more cables
61. Ring topology- circular connection data transfer in one direction, easy to install, manage, handling traffic but if one fault everyother affects
62. mesh topology- each connected to each other,
63. Hybrid topology- is connection of two topologies
64. OSI layers-
65. application layer- browser software
66. presentation layer- os
67. session layer- user get only certain website page
68. Transport layer- how much information is sent back and forth
69. Network layer- where router operates, tcp/ip protocol, ip addresses
70. datalink layer- where switches operates, MAC
71. Physical layer- where cables, ethernet etc
72. 80/20 rule in networking- 80% of traffic should be in local and 20% towards remote network
73. WEP wired equivalent privacy 802.11- method of exploiting security vulnerabilities in wireless networks 2types active and passive cracking
74. Virus- vital information resource under siege