

COMPUTER NETWORK TECHNOLOGY (300)

REGIONAL – 2015

Multiple Choice:

Multiple Choice (50 @ 10 points each) _____ (500 points)

TOTAL POINTS _____ (500)

Failure to adhere to any of the following rules will result in disqualification:

- 1. Contestant must hand in this test booklet and all printouts. Failure to do so will result in disqualification.**
- 2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests or facsimile (handwritten, photocopied, or keyed) are allowed in the testing area.**
- 3. Electronic devices will be monitored according to ACT standards.**

No more than 60 minutes testing time

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Workplace Skills Assessment Program competition.

Answer the multiple choice questions using the Scantron scoring form provided. Write your contestant name, along with the contest number on the Scantron form.

If you finish before the end of the 60 minutes of testing, notify the proctor. Time may be a factor in determining the winner in the event of a tie.

1. How many layers does the OSI model contain?
 - a. 3
 - b. 5
 - c. 7
 - d. 9

2. Which layer of the OSI model adds the IP address to the packets?
 - a. Data Link
 - b. Physical
 - c. Network
 - d. Transport

3. Routers operate at the ____ level of the OSI model.
 - a. Physical
 - b. Data Link
 - c. Network
 - d. Transport

4. Which of the following kinds of adapter expansion slots is the most common on today's PCs for NICs?
 - a. ISA
 - b. VESA
 - c. PCI
 - d. MCA

5. What is the real key to identifying the correct driver for your NIC?
 - a. the manufacturer
 - b. the driver
 - c. the cost
 - d. the model number

6. What does LED stand for?
 - a. Light Exchange Diagnostics
 - b. Light Emitting Diode
 - c. Low Ethernet Distance
 - d. Later Ethernet Development

7. If a port is labeled as 10/100/1000, it will support all of the following *except* ____.
 - a. 10BaseT Ethernet
 - b. Gigabit Ethernet
 - c. Fast Ethernet
 - d. Token Ring

8. How many wire pairs are defined by the EIA/TIA standard for CAT5e and CAT6 cabling?
 - a. 2
 - b. 4
 - c. 2 or 4
 - d. 8

9. The original data transfer rate of Ethernet was ____.
 - a. 3 Mbps
 - b. 16 Mbps
 - c. 10 Mbps
 - d. 56 Kbps

10. Which network topology offers the greatest level of fault tolerance?
 - a. bus
 - b. ring
 - c. star
 - d. mesh

11. If your network runs at 100 Mbps, what category of UTP cabling would you need?
 - a. CAT1
 - b. CAT2
 - c. CAT3
 - d. CAT5

12. How many pins does an RJ-45 connector have?
 - a. 2
 - b. 4
 - c. 6
 - d. 8

13. What is the maximum distance between the hub and the computer on a 10BaseT network?
 - a. 30 meters
 - b. 100 meters
 - c. 100 feet
 - d. 1000 meters

14. What is the de facto protocol standard of the Internet?
 - a. NetBEUI
 - b. IPX/SPX
 - c. TCP/IP
 - d. UNIX

15. How many binary digits are in an IPv4 IP address?
 - a. 8
 - b. 16
 - c. 32
 - d. 48

16. Each of the four groups of an IP address will have decimal values ranging from _____.
 - a. 1 to 256
 - b. 0 to 255
 - c. 1 to 1024
 - d. 0 to 1023

17. What is the broadcast address that is sent to all systems on the network?
 - a. 0.0.0.0
 - b. 127.0.0.1
 - c. FFFFFFFF
 - d. 1.1.1.1

18. What function is being used if a packet goes to port 80?
 - a. FTP
 - b. web browsing
 - c. Telnet
 - d. e-mail

19. What is the length of addresses in IPv6?
 - a. 32 bits
 - b. 64 bits
 - c. 128 bits
 - d. 256 bits

20. Which of the following characters is *not* permitted in a DNS domain or host name?
 - a. upper- and lowercase letters
 - b. spaces
 - c. numbers
 - d. hyphens

21. If you think your NIC has a problem, what should you do next?
 - a. Check the NIC's driver
 - b. Replace the NIC
 - c. Reinstall the operating system
 - d. Reconfigure the DNS settings

22. On a TCP/IP network, what do routers use to determine where incoming packets should go?
 - a. MAC addresses
 - b. IP addresses
 - c. Domain names
 - d. NetBIOS names

23. At which layer of the OSI model do routers belong?
 - a. Transport
 - b. Session
 - c. Data Link
 - d. Network

24. The number of local networks that a packet must move through is referred to as the number of _____.
 - a. hops
 - b. routers
 - c. jumps
 - d. gateways

25. Which of the following is *not* an Internet browser used by a client to read web pages and interact with the Internet?
 - a. Mozilla's Firefox
 - b. Active Server Pages
 - c. Microsoft's Internet Explorer
 - d. Netscape's Netscape Navigator

26. What protocol is used for sending e-mail?
 - a. SMTP
 - b. SNMP
 - c. POP3
 - d. IMAP

27. How do you tell a web browser to find a document on the Internet and display it on your system?
- With HTML codes
 - With the port number
 - With the URL
 - With EIGRP
28. How much data does a serial connection transport at a time?
- 1 bit
 - 8 bits
 - 1 byte
 - 32 bits
29. Once a provider has a DSLAM device to connect multiple customers to the Internet, the company can offer which of the following services to its customers?
- T1
 - ISDN
 - Cable modem
 - DSL
30. Where on a PC does the cable modem connect?
- the serial port
 - the parallel port
 - the IEEE 1394 port
 - an Ethernet port on the NIC
31. SONET is the primary standard for connecting WAN systems that use what cabling?
- fiber optic
 - STP
 - UTP
 - coax
32. What should you do to provide protection against system crashes and hardware failure?
- install ICF
 - provide redundancy for devices that are likely to fail
 - limit Administrator/Supervisor permissions
 - Use an antivirus program
33. Today, in what way are most viruses transferred?
- from floppy disks
 - from writeable CDs
 - from USB drives
 - from the Internet

34. The widespread adoption of which protocol makes today's world of interoperability.
- IPX/SPX
 - NetBUIE/NetBIOS
 - TCP/IP
 - DHCP
35. What terminal emulation program has been around since pre-GUI days?
- FTP
 - Telnet
 - POP3
 - NFS
36. What hardware tool allows you to determine if a particular cable is bad?
- protocol analyzer
 - cable tester
 - loopback device
 - toner
37. Which of the following is an example of a packet sniffer?
- Event Viewer
 - Performance Monitor
 - Wireshark
 - SMS
38. What is the purpose of the subnet mask?
- To indicate which protocols a particular network uses
 - To further subdivide a network
 - To mask, or prevent access to, portions of a network
 - To limit the protocols used in a particular network
39. Assuming that it has the default subnet mask, why can't you assign the IP address 192.168.54.255 to a host?
- This address is reserved for multicast
 - This address is reserved for experimental uses
 - This address describes the network
 - This address is the broadcast address
40. Which of the following connector types would a network technician use to connect a serial cable?
- RJ-11
 - BNC
 - LC
 - DB-9

41. What layer of the OSI model does the Bridge operate under?
- Session
 - Network
 - Data Link
 - Transport
42. You have a group of employees who visit the same web page on the Internet. They utilize a T-1 connection that goes through a proxy server. What is a possible way to speed up performance?
- Using a IP proxy
 - Using a FTP proxy
 - Using a HTTP proxy
 - None of the above
43. Which TCP/IP utility determines the number of routers an IP packet passes through on its way from source to destination?
- FTP
 - Telnet
 - Tracert
 - Ping
44. Your server stores sensitive data such as employee salary histories. You need to share this data with the accounting department at Headquarters in a different city across the company WAN. How can you best ensure the data remains confidential during transmission?
- Set share level security on the headquarters accounting data store before transmission
 - Encrypt the data before transmission
 - Reformat the data to include unnecessary accounting information to confuse unauthorized users
 - Unicode the data before transmission
45. Which cable is the best against wire-tapping or EMI?
- UTP
 - Coaxial
 - STP
 - Fiber Optic

46. IEE 802.5 maps to ____.
- Token Ring
 - Fast Ethernet
 - VG-AnyLAN
 - Ethernet
47. What layer of the OSI model ensures packets are delivered error free, in sequence, without losses?
- Transport
 - Data Link
 - Physical
 - Network
48. What IP address is in the B class?
- 191.23.21.54
 - 192.128.32.56
 - 125.123.123.2
 - 200.20.2.3
49. What is one security function of a firewall?
- Allows people on the Internet to see just one IP address
 - Does not allow any connections to the server
 - Restricts unauthorized users from accessing sensitive data
 - Manages password functions
50. What can be used to transfer a file from a UNIX server to yours?
- NBTSTAT
 - Telnet
 - Netstat
 - FTP