

COMPUTER NETWORK TECHNOLOGY (300)

REGIONAL – 2014

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 sheet provided. Write your contestant name, along with the contest number on the scantron sheet. (10 pts. each)

1. You have a network that uses a logical ring topology. How do messages travel through the network?
 - a. Messages are sent to a central device which then forwards the message to the destination device.
 - b. Messages are sent directly to the destination device only.
 - c. Messages are sent to all devices connected to the network.
 - d. Messages travel from one device to the next until they reached the destination device.

2. Which of the following protocols allows hosts to exchange messages to indicate problems with packet delivery?
 - a. IGMP
 - b. ICMP
 - c. IP
 - d. DHCP

3. Which protocol is used on the World Wide Web to transmit Web pages to Web browsers?
 - a. HTML
 - b. FTP
 - c. HTTP
 - d. SFTP

4. What is the default port for DNS?
 - a. 80
 - b. 20
 - c. 63
 - d. 53

5. Which of the following is a valid MAC address?
 - a. 192.168.0.1
 - b. 83-09-5A-8E-FF-0B-F1-31
 - c. C0-34-FF-15-01-8E
 - d. 255.255.255.0

6. Which windows utility is useful in identifying a program that is hogging the processor?
 - a. Task Manager
 - b. System Information
 - c. Device Manager
 - d. Netstat

7. Which of the following applications is more likely to justify the investment in Category 6 cable?
 - a. Instant Messaging
 - b. Printing
 - c. Streaming video
 - d. E-Mail

8. Which of the following is a file transfer protocol that uses UDP?
 - a. FTP
 - b. TFTP
 - c. HTTP
 - d. SMTP

9. You are building network cables and attaching RJ-45 connectors to each end. Which tool do you need for this task?
 - a. Punch down tool
 - b. Vampire taps
 - c. Crimping tool
 - d. Needle nose pliers

10. How many devices can USB support?
 - a. 140
 - b. 63
 - c. 48
 - d. 127

11. Which of the following is the best device to deploy to protect your private network from a public untrusted network?
 - a. Router
 - b. Hub
 - c. Firewall
 - d. Switch

12. Which of the following protocols stores e-mail on the mail server and gives users a choice to download mail or keep it on the server?
 - a. SMTP
 - b. IMAP4
 - c. NTP
 - d. POP3

13. Which of the following is a valid public IP address?
 - a. 10.1.20.254
 - b. 172.16.30.20
 - c. 68.12.16.30
 - d. 192.168.30.10

14. Which of the following connectors would you use to terminate a Category 6 network cable?
 - a. RJ-45
 - b. RJ-11
 - c. RJ-14
 - d. RJ-22

15. What does VoIP stand for?
 - a. Virtual online Internet Protocol
 - b. Voice over Internet Protocol
 - c. Virtual omni-directional Internet Protocol
 - d. Voice online Internet Protocol

16. What is the agency that is responsible for maintaining the official assignments of port numbers for specific uses on a network and the Internet?
 - a. IANA
 - b. Cisco
 - c. NCP
 - d. DCCP

17. Which of the following ports is reserved for File Transfer Protocol?
 - a. 21
 - b. 42
 - c. 10
 - d. 27

18. Which of the following ports is reserved for Post Office Protocol v3?
- 104
 - 156
 - 110
 - 179
19. Which of the following is the correct name for TCP?
- Transmission Control Protocol
 - Transmission Catering Protocol
 - Transit Control Protocol
 - Transport Control Protocol
20. Which of the following measures are you most likely to implement in order to protect against a worm or Trojan horse?
- Firewall
 - Password Policy
 - IPSec
 - Anti-Virus software
21. A VPN is used primarily for what purpose?
- Support secured communications over an untrusted network.
 - Support the distribution of public Web documents.
 - Allow the use of network-attached printers.
 - Allow remote systems to save documents, avoiding overage charges on cellular data plans.
22. Which protocol is used for securely browsing a Web site?
- SSH
 - ARP
 - HTTPS
 - SIP
23. How many layers are there in the OSI model?
- 4
 - 5
 - 7
 - 9

24. Which command would you use to view the path taken by an Ethernet packet?
- ipconfig
 - ping
 - nslookup
 - tracert
25. At which layer of the OSI model is routing performed?
- Physical
 - Transport
 - Network
 - Data Link
26. Which of the following communication modes supports two-way traffic, but will only allow it in one direction at a time?
- Half-duplex
 - Full-duplex
 - Single User Mode
 - Simplex
27. How many IP addresses are available in a Class B network?
- 256
 - 32,506
 - 65,536
 - 128,580
28. Which of the following is an example of a Class A IP address?
- 10.1.0.15
 - 129.1.72.5
 - 192.168.1.5
 - 172.168.15.72
29. Which of the following is an example of a Class B IP address?
- 10.0.1.5
 - 191.168.0.52
 - 192.128.254.5
 - 223.255.254.56

30. Which of the following is considered a network broadcast address?
- 192.168.0.1
 - 192.168.0.254
 - 192.168.0.255
 - 192.168.0.0
31. What is the term given to a machine that has its address assigned by a DHCP server?
- Static Address
 - Dynamic Address
 - Sticky address
 - Unicast address
32. Which type of cable would you use to connect a router to another router?
- Straight-through
 - Loopback
 - Rollover
 - Crossover
33. Security is always a concern of a Network administrator. Just recently, almost 85% of your end users are receiving e-mails requesting that they need to change their password. What type of security concern is this?
- Spear phishing
 - Phishing
 - Pharming
 - Mail bombing
34. All of the 802.11 standards for wireless networking support which type of communication path sharing technology?
- CSMA/CD
 - Polling
 - CSMA/CA
 - Token passing
35. The loopback address is used to send a packet from the _____ to _____.
- Host; all other hosts
 - Router; all other hosts
 - Host; a specific host
 - Host; itself

36. Which of the following best describes the purpose of using subnets?
- Subnets divide an IP network address into multiple network addresses.
 - Subnets place each device within its own collision domain.
 - Subnets combine multiple IP network addresses into one network address.
 - Subnets let you connect a private network on to the Internet.
37. Which network service would you use to get the IP address from the FQDN hostname?
- NAT
 - FTP
 - DNS
 - DHCP
38. An IP address has:
- A portion of the address which identifies the network to which the individual belongs.
 - A portion of the address which identifies the individual host on a destination network.
 - A 32 bit addressing schema.
 - All of the above.
39. The medium that supports the fastest transmission rate is:
- Shielded twisted pair
 - Coaxial cable
 - Type 3 unshielded twisted pair
 - Fiber optics
40. Which of the following describes the most common implementation of a Local Area Network?
- Fast packet network used to connect PCs to mainframes in an SNA environment
 - A moderate to high speed data network confined to a limited geographic area
 - A high speed data network used to connect PCs in different geographic regions of the country
 - A local network used primarily to connect PCs to Unix servers
41. Repeater operates in which layer of the OSI model?
- Physical layer
 - Network later
 - Transport layer
 - Data Link layer

42. The Internet is an example of which type of network?
- Cell switched
 - Circuit switched
 - Packet switched
 - All of the above
43. What does a router do in a network?
- Forwards a packet to all outgoing links
 - Forwards a packet to the next free outgoing link
 - Determines on which outgoing link a packet is to be forwarded
 - Forwards a packet to all outgoing links except the originated link
44. One security method is encryption. But encryption does nothing to keep hackers out. To accomplish this goal, which device is best to implement?
- Firewall
 - Bridge
 - Router
 - Hubs
45. Which of the following should you setup on the Wi-Fi router to make it most secure?
- WEP
 - NTFS
 - WAP2
 - WAP
46. Which of the following is not a type of computer network?
- Local Area Network (LAN)
 - Personal Area Network (PAN)
 - Remote Area Network (RAN)
 - Metropolitan Area Network (MAN)
47. Sending a file from your personal computer's primary memory or disk to another computer is called?
- Downloading
 - Uploading
 - Saving
 - Networking

48. You are troubleshooting a network connection issue for a customer. You discover that the computer's IP address is 169.254.5.50. What would this indicate?
- The PC is configured with a private IP address.
 - The PC is unable to contact the DHCP server.
 - The PC is configured with a public IP address.
 - The PC is configured with a static IP address.
49. Which Ethernet standard specifies a data transfer rate of 1 Gigabit per second (Gbps)?
- 10BaseT
 - 100BaseFX
 - 10Base5
 - 1000BaseT
50. How many hosts can successfully send data simultaneously on Ethernet?
- 1
 - 2
 - 3
 - Unlimited