Networked AV Systems
Pretest

Instructions

- Choose the best answer for each question.
- Score your pretest using the key on the last page.
- **If you miss three or more out of questions 1 – 11**, consider taking *Essentials of AV Technology* to learn more about AV signals, devices, and systems before taking *Networked AV Systems.*
- **If you miss three or more out of questions 12 – 20**, consider taking *CTS Prep* to learn more about AV design and project management before taking *Networked AV Systems.*
- **If you miss five or more out of questions 21 – 40,** consider taking *Networking Technology* to learn more about the basics of IP networking before taking *Networked AV Systems.*

_____

1) _____ determine(s) the range of frequencies that can pass through a circuit.
   a) Bandwidth
   b) Compression algorithms
   c) kHz and MHz
   d) Low pass and high pass settings

2) A two conductor circuit is said to be balanced if _____.
   a) its bandwidth is divided equally among all signal types
   b) the conductors' impedances are the same with respect to ground and each other
   c) the conductors' input and output circuitry are exactly opposite
   d) the signals on the conductors are mirror images of each other

3) In order to accurately capture an analog signal, the minimum sampling rate must be _____ the frequency being sampled.
   a) equal to
   b) at least twice
   c) at least four time
   d) at least ten times

4) The digital waveform is represented by a _____.
   a) complex waveform
   b) sawtooth wave
   c) sine wave
   d) square wave

5) Bit rate is a measurement of the quantity of information _____ in a digital signal stream and quantified in bits per second.
   a) over a given distance
   b) over time
   c) per frame
   d) per packet

6) Bit depth is defined as the number of states you have in which to describe the sampled signal's _____
   a) intensity
   b) phase relationship
   c) voltage level
   d) wave form

7) In the program phase, what must be determined to assure that a functional AV system scope will be created?
   a) Considerations regarding access to loading dock facilities
   b) The goals of equipment supplier sales representatives
   c) The specific tasks, functions, and applications of the end users
   d) What technology will be available for the audiovisual system

8) A _____ is a piece of equipment or software that uses an algorithm to decode or encode a signal.
   a) codec
   b) digital signal processor
   c) high pass filters
   d) limiter

9) MP3 and MPEG-4 files are examples of files using _____ compression
   a) 4:1
   b) 4:4:2
   c) Lossless
   d) Lossy

10) HDCP is a protocol supported by _____
   a) Digital Rights Management
   b) DisplayPort, DVI, and HDMI
   c) HD-15
   d) HDMI exclusively

11) _____ conferencing uses a switched telephone network to simultaneously share voice, video, and data among participants.
   a) H.264
   b) ISDN
   c) POTS
   d) SVC

12) How can you address ambient noise issues in a room?
   a) Use acoustically absorptive materials in the room.
   b) Use hard surface materials such as gypsum board.
   c) Use marble floors and wood paneling.
   d) Use materials with strong reverberating qualities.

13) Ambient light can be described as _____.
   a) display light that is present but inconsequential to the presentation
   b) environment and display light that is necessary for the presentation environment and display
   c) light in the presentation environment other than the displayed light
   d) light which enhances the presentation environment

14) The required height of a display should be based upon _____.
   a) brightness required and screen resolution
   b) closest viewer distance and viewing angles
   c) farthest viewer distance and viewer task
   d) largest available size and customer budget

15) If text will be displayed during a presentation, the farthest viewer distance should be no more than _____.
   a) the diagonal of the screen
   b) the width of the screen
   c) eight times the height of the screen
   d) 150 times the height of the text

16) Which signal processor best compensates for the sound pressure level differences between loud and soft-spoken presenters?
   a) Acoustic echo canceller
   b) Automatic gain controller
   c) Downward expander
   d) Limiter

17) Audioconferencing equipment includes either line or acoustic echo _____ technology.
   a) cancellation
   b) enhancement
   c) filtering
   d) propagation

18) What type of wiring do both of the images below illustrate?
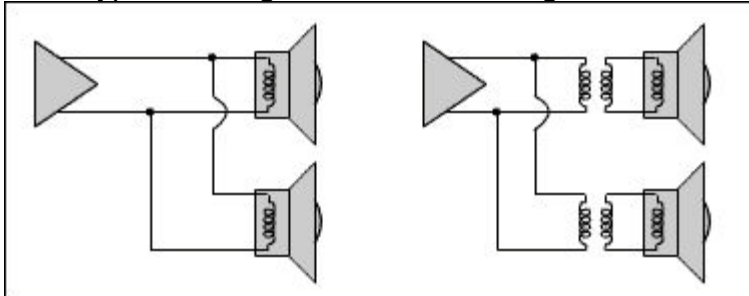
    a) Combination parallel/series circuit
    b) Parallel circuit
    c) Series circuit
    d) Stereo pair circuit

19) The use of an RCA connector, or phono connector, indicates a(n) _____ circuit.
    a) balanced
    b) shielded
    c) unbalanced
    d) unprocessed

20) What is a logic network diagram used for in AV management activities?
    a) Allows display of financial information in chronological form
    b) Allows tracking of quality for tasks and sub-tasks
    c) Helps avoid dependencies
    d) Helps in sequencing project milestones

21) Which of the following statements accurately describes IPv6?
    a) IPv6 has larger IP headers than IPv4 to simplify routing.
    b) IPv6 is backward compatible with IPv4.
    c) IPv6 uses a 64-bit address space.
    d) IPv6 uses three types of addresses: unicast, multicast, and anycast.

22) Which of the following best describes the function of Address Resolution Protocol (ARP)?
    a) ARP ensures that all addresses within a subnet fall into the same address range.
    b) ARP identifies the transport protocols that may be delivered to a particular address.
    c) ARP matches domain names to IP addresses in a Domain Name System (DNS).
    d) ARP matches IP addresses to the appropriate link layer addresses.

23) Domain Name System (DNS) is used to convert a _____ to an IP address.
    a) Fully Qualified Domain Name (FQDN)
    b) Logical address
    c) Media Access Control (MAC) address
    d) Network Interface Card (NIC)

24) Fault tolerance is best addressed by which network topology?
    a) Bus
    b) Mesh
    c) Ring
    d) Star

25) _____ transport is preferable for live streaming video applications.
    a) MPLS (MultiProtocol Layer Switching)
    b) PSIP (Program and System Information Protocol)
    c) TCP (Transmission Control Protocol)
    d) UDP (User Datagram Protocol)

26) In order to securely connect to a remote host to execute command line commands, a network administrator would use _____.
    a) HTTPS
    b) Ports 20 and 21
    c) SSH
    d) Telnet

27) A _____ examines the contents of a physical layer payload and then forwards packets to the appropriate address using the best available path.
    a) bridge
    b) gatekeeper
    c) router
    d) switch

28) Telnet and Secure Shell (SSH) operate at which layer of the OSI Model?
    a) Data Link layer
    b) Network layer
    c) Presentation layer
    d) Application layer

29) A multilayer switch is so named because it ___.
    a) can operate both wired and wirelessly
    b) can perform functions at OSI Model Layer 3 and Layer 4
    c) can perform functions at OSI Model Layers 2, 3 and sometimes higher
    d) operates only as a switcher and not a router

30) If supported by the equipment, VLANs allow _____.
    a) bridges to maintain multiple redundant paths between devices
    b) broadcast traffic across multiple LANs
    c) communication between separate Layer 2 switches without the use of a router
    d) multiple separate broadcast domains to be defined on the same equipment.

31) Which of the following statements best describes the function of a proxy server?
   a) A proxy server acts as an additional network situated between a public network and a private network.
   b) A proxy server examines HTTP traffic, blocking client access to sites it deems inappropriate.
   c) A proxy server grants remote permission to view event logs on clients without granting any unnecessary administrative rights.
   d) A proxy server replaces a client's address and other identifying information with its own before forwarding the client's requests to a remote host.

32) _____ is a bandwidth optimization method that allows a network administrator to assign classes to certain types of traffic to ensure that bandwidth is available for high priority traffic.
   a) High availability
   b) Load balancing
   c) Quality of Service (QoS)
   d) Domain Host Control Protocol (DHCP)

33) A _____ is hardware or software that is designed to divide network activity between multiple hosts.
   a) high availability network
   b) load balancer
   c) QoS
   d) traffic shaper

34) _____ is a general term for all the protocols, policies, software, and hardware that manage access to a network.
   a) Media Access Control (MAC) filtering
   b) Network Access Control (NAC)
   c) Network administration
   d) Network Interface Card (NIC) authorization

35) IPsec and SSL/TLS can be used for _____.
   a) port security
   b) secure VPN connections
   c) secure wireless traffic
   d) securing LAN traffic

36) Which of the following statements accurately describes L2TP?
   a) L2TP is a Cisco tunneling protocol that provides Layer 2 tunneling, but no encryption.
   b) L2TP is a Layer 5 protocol that allows remote users to establish a VPN tunnel using only a web browser.
   c) L2TP is a Microsoft tunneling protocol for virtual private networks that has been largely replaced by interoperable standards.

d) L2TP is an IETF defined protocol that allows Layer 2 tunneling between networks for virtual private networks.

37)_____ firewalls monitor addresses, ports, and connection data to determine if a packet is part of an existing communication stream or a new stream.
   a) Stateless
   b) Stateful
   c) Application
   d) Internet content filter

38)_____ is/are a common firewall feature and/or security device that can block restricted websites or content.
   a) Content filtering
   b) Scanning services
   c) Signature identification
   d) Security zones

39)Configuring a firewall for security may involve _____
   a) manually allowing and denying services and ports
   b) publishing only open ports
   c) rotating open ports in a random fashion
   d) all of the above

40)Which of the following best describes a function of Network Address Translation (NAT)?
   a) NAT allows multiple computers on a network to connect to the Internet using a single IP address
   b) NAT converts IPv4 addresses to IPv6 addresses
   c) NAT enables devices with unregistered IP addresses to connect to the Internet
   d) All of the above

Networked AV Systems Pretest Key

Question	Answer	Prerequisite
1	A	• **If you miss three or more out of questions 1 – 11**, consider taking *Essentials of AV Technology*, available as a classroom, virtual classroom, or online course*.*
2	B	
3	B	
4	D	
5	B	
6	C	
7	C	
8	A	
9	D	
10	B	
11	B	
12	A	• **If you miss three or more out of questions 12 – 20**, consider taking *CTS Prep*, available as an online, classroom or virtual classroom course.
13	C	
14	C	
15	D	
16	B	
17	A	
18	B	
19	C	
20	D	
21	D	• **If you miss five or more out of questions 21 – 40,** consider taking *Networking Technology*, available as a classroom or online course*.*
22	D	
23	A	
24	B	
25	D	
26	C	
27	C	
28	D	
29	C	
30	D	
31	D	
32	C	
33	B	
34	B	
35	B	
36	D	
37	B	
38	A	
39	A	
40	D	