

SIMULATION EXAM 18 — QUESTIONS 1-100

1. The AVIXA standard governing display image size for 2D content is:

- A. ANSI/AVIXA A102.01
- B. ISO 9001
- C. ANSI/AVIXA V202.01
- D. NFPA 70

2. The AVIXA standard governing audio coverage uniformity in listener areas is:

- A. ANSI/AVIXA A102.01
- B. ANSI/AVIXA V202.01
- C. ISO 27001
- D. NFPA 72

3. Which article of the National Electrical Code (NEC) addresses Class 2 and Class 3 remote-control, signaling, and power-limited circuits?

- A. NEC Article 300
- B. NEC Article 408
- C. NEC Article 520
- D. NEC Article 725

4. NEC Article 800 addresses:

- A. General wiring methods
- B. Communications circuits, including low-voltage AV cabling
- C. Residential lighting only
- D. Mechanical systems

5. The CTS Code of Ethics and Conduct principle of honest representation requires credential holders to:

- A. Accurately describe credentials, experience, and capabilities without exaggeration
- B. Maintain manufacturer certifications only
- C. Complete specific continuing education hours per year
- D. Disclose employer affiliations to every client

6. The Americans with Disabilities Act (ADA) applies to:

- A. Only residential installations
- B. Only government buildings
- C. Places of public accommodation and commercial facilities in the United States
- D. Only medical facilities

7. An assistive listening system (ALS) is required under ADA in spaces with:

- A. Fewer than 10 seats
- B. Assembly areas meeting specific size thresholds defined by ADA standards
- C. Any number of seats without restriction
- D. Only the lobby area

8. HIPAA compliance applies to AV systems when:

- A. Installations are in corporate conference rooms only
- B. Installations are in retail establishments only
- C. Installations are only in entertainment venues
- D. Systems may capture, transmit, or store Protected Health Information (PHI)

9. GDPR (General Data Protection Regulation) governs:

- A. Personal data protection of individuals in the European Union
- B. Tax reporting requirements
- C. Cable installation practices
- D. Audio frequency allocations

10. The CTS Code of Ethics prohibits:

- A. Continuing education
- B. Fair competition
- C. Conflicts of interest undisclosed to the client
- D. Use of standard industry terminology

11. A CTS holder discovers an error in a colleague's completed work that could affect safety. The most appropriate response is:

- A. Ignore the error to avoid conflict
- B. Report the concern through appropriate professional channels per the Code of Ethics
- C. Publicly criticize the colleague

D. Take no action at all

12. The CTS credential requires renewal every:

A. 6 months

B. 1 year

C. 2 years

D. 3 years

13. NFPA 70 (National Electrical Code) is:

A. The U.S. standard for electrical installation safety

B. A standard for fire alarm systems only

C. A standard for plumbing only

D. A voluntary consumer guideline

14. NFPA 72 addresses:

A. Residential plumbing

B. Mechanical HVAC systems

C. The National Fire Alarm and Signaling Code

D. Consumer electronics standards

15. OSHA regulations apply to AV installation work involving:

A. Only electrical work

B. Workplace safety for employees, including fall protection, electrical safety, and hazard communication

- C. Only broadcast facilities
- D. Only government facilities

16. HDCP (High-bandwidth Digital Content Protection) is primarily required for:

- A. Network security
- B. Audio signal protection only
- C. Color calibration
- D. Protected commercial digital video content distribution

17. A CTS holder providing services to a client has a business interest in a specific manufacturer's products. The most appropriate ethical response is:

- A. Disclose the interest to the client before providing recommendations involving that manufacturer
- B. Recommend only that manufacturer's products
- C. Avoid mentioning the manufacturer at all
- D. Provide the interest to competitors

18. The CTS Code of Ethics requires:

- A. Membership in trade associations beyond AVIXA
- B. Integrity in professional practice, including honest representation and fair dealing
- C. Use of specific manufacturer certifications only
- D. Residence in a specific geographic region

19. A CTS holder is asked by a client to back-date a commissioning certificate. The most appropriate response is:

- A. Comply with the client's request
- B. Back-date with a disclaimer
- C. Decline and explain that falsification violates professional ethics and potentially law
- D. Charge extra for the request

20. The ADA reach range for operable controls (such as touch panels) is generally:

- A. Unlimited height
- B. Only 3 feet high
- C. Only 6 feet high
- D. Between approximately 15 inches and 48 inches above the floor for forward reach

21. Copyright law generally protects:

- A. Original creative works including audio, video, and written materials
- B. Only government publications
- C. Only ideas without expression
- D. Only physical objects

22. A CTS holder is asked to reproduce copyrighted content in an AV installation without permission. The most appropriate response is:

- A. Reproduce without concern
- B. Decline and explain that reproduction without appropriate license violates copyright law
- C. Reproduce with consumer-grade equipment

D. Hide the reproduction from the client

23. CCPA (California Consumer Privacy Act) governs:

A. Only federal government data

B. Only small businesses

C. Personal information of California residents, imposing specific rights and obligations on businesses

D. Only criminal records

24. A CTS holder discovers that a client's system inadvertently captures PHI without proper controls. The most appropriate response is:

A. Ignore the situation

B. Continue operations without addressing the issue

C. Profit from the situation

D. Report the finding to the client's compliance team and recommend appropriate remediation to ensure HIPAA compliance

25. NEC Article 760 addresses:

A. Fire alarm circuits and systems

B. Residential lighting only

C. Consumer electronics

D. Industrial machinery

26. Professional liability insurance for AV integrators typically covers:

A. Consumer goods warranties

- B. Errors or omissions in professional services that result in client financial harm
- C. Personal vehicle insurance
- D. Residential health coverage

27. A CTS holder is engaged in a project where the client requests a practice that violates local building code. The most appropriate response is:

- A. Comply with the client's request
- B. Secretly deviate from code
- C. Document compliance falsely
- D. Explain that code compliance is not negotiable and present compliant alternatives

28. ANSI (American National Standards Institute) is:

- A. The U.S. member body of ISO and coordinator of voluntary standards
- B. A regulatory agency of the federal government
- C. A manufacturer trade association only
- D. A consumer advocacy group

29. The IEEE (Institute of Electrical and Electronics Engineers) publishes standards for:

- A. Only consumer products
- B. Only medical devices
- C. Electrical, electronic, and computing technologies
- D. Only broadcast applications

30. Manufacturer warranty terms typically include:

- A. Specific duration, coverage scope, exclusions, and claim procedures
- B. Only marketing promises
- C. Only aesthetic guarantees
- D. Only verbal commitments

31. OSHA regulations regarding fall protection require fall arrest systems for work at heights above:

- A. 2 feet in all situations
- B. Only 20 feet for all workers
- C. Any height at all times
- D. Generally 6 feet for construction work, with variations by specific regulation

32. A CTS holder must avoid conflict of interest by:

- A. Accepting gifts from all vendors
- B. Disclosing potential conflicts and managing them per the Code of Ethics
- C. Selecting only the most expensive equipment
- D. Never taking any action

33. A CTS holder has signed a non-disclosure agreement (NDA) with a client. Subsequently, a competitor asks about the client's project. The most appropriate response is:

- A. Share publicly available information only
- B. Share all information for competitive advantage
- C. Respect the NDA and decline to discuss confidential information

D. Share information if the client is unaware

34. The AVIXA standard addressing professional rack building practices is:

- A. Only addressed by manufacturer documentation
- B. Only addressed by residential contractors
- C. Only addressed by consumer standards
- D. ANSI/AVIXA F502.01 or related rack and cabling standards

35. NEC Chapter 9 Table 12 specifies:

- A. Only color coding requirements
- B. Maximum conduit fill ratios based on wire type and size
- C. Only residential requirements
- D. Only consumer installations

36. A CTS holder is asked to sign a certification that the system complies with ADA accessibility requirements. The CTS holder is not an accessibility specialist. The most appropriate response is:

- A. Sign the certification without concern
- B. Sign with a disclaimer
- C. Coordinate with a qualified accessibility professional to confirm compliance before signing, if within the CTS holder's role
- D. Ignore the accessibility question

37. The CTS Code of Ethics addresses:

- A. Personal integrity, professional competence, service to clients, and the AV profession as a whole

- B. Only technical standards
- C. Only pricing requirements
- D. Only continuing education

38. SOC 2 compliance for a cloud service provider is:

- A. Only a marketing claim
- B. Only relevant to hardware manufacturers
- C. Only a consumer certification
- D. A certification of security practices, especially for service providers handling client data

39. A CTS holder with a financial interest in a product line recommends that product to a client without disclosure. This is:

- A. Best practice
- B. A violation of professional ethics requiring disclosure of conflicts of interest
- C. Required by AVIXA
- D. Only acceptable with manufacturer approval

40. NEC Article 250 addresses:

- A. Grounding and bonding requirements
- B. Only residential electrical panels
- C. Only consumer appliances
- D. Only AV equipment

41. A CTS holder is asked to share client data with a third party without client consent. The most appropriate response is:

- A. Share the data freely
- B. Share only with select parties
- C. Respect client confidentiality and decline without appropriate client authorization
- D. Share if the third party pays

42. The term "professional license" in the context of AV typically refers to:

- A. A permit to drive vehicles
- B. A state or jurisdictional license for certain types of work (e.g., electrical, general contracting) where required by law
- C. A permit to sell food
- D. A consumer membership

43. NEC Article 300 addresses:

- A. Only fire alarm systems
- B. Only residential lighting
- C. Only consumer electronics
- D. General wiring methods and material requirements

44. The CTS Code of Ethics requires members to:

- A. Maintain competence through ongoing learning
- B. Report violations of ethics only when personally affected
- C. Only use specific manufacturers

D. Limit continuing education to certifications

45. Breach of fiduciary duty occurs when a CTS holder:

- A. Provides honest service
- B. Maintains professional boundaries
- C. Fails to act in the client's best interest despite a duty to do so
- D. Completes training requirements

46. The Privacy Act of 1974 (U.S.) applies to:

- A. Only state governments
- B. Only consumer transactions
- C. Only financial records
- D. Federal agencies' handling of personal records

47. Intellectual property (IP) protection includes:

- A. Copyright, trademark, patent, and trade secret protections for creative and innovative works
- B. Only patents
- C. Only copyright
- D. Only trademarks

48. A CTS holder is working on a project with potential safety implications. The most appropriate ethical action is:

- A. Ignore safety concerns

B. Identify and address the safety issue through appropriate channels, consistent with the Code of Ethics obligation to protect public welfare

C. Blame others

D. Delay the safety discussion

49. FCC (Federal Communications Commission) regulations relevant to AV include:

A. Only residential regulations

B. Only broadcast television

C. Wireless microphone frequency allocations, unlicensed device regulations, and equipment authorization

D. Only consumer radio

50. The CTS renewal cycle requires accumulating:

A. Specific continuing education credits within the renewal period

B. Only one manufacturer certification

C. Only one exam pass

D. Only payment of renewal fee

51. A CTS holder has been asked to provide services in a jurisdiction where a state license is required for such work and the CTS holder does not hold the license. The most appropriate response is:

A. Decline or coordinate with a qualified licensed professional to handle the regulated work

B. Proceed without concern

C. Falsify licensure

D. Charge extra

52. The ISO 27001 standard addresses:

- A. Only physical building requirements
- B. Only consumer electronics
- C. Information security management systems
- D. Only medical device regulations

53. Accessibility standards beyond ADA in the United States include:

- A. ISO accessibility requirements exclusively
- B. State-specific accessibility standards and Section 508 for federal technology accessibility
- C. Only manufacturer guidelines
- D. Only consumer recommendations

54. Fair dealing in the CTS Code of Ethics requires:

- A. Use of unfair practices
- B. Taking advantage of inexperienced clients
- C. Only legal compliance
- D. Honest, transparent, and equitable treatment of clients, competitors, and other stakeholders

55. A data breach involving client information requires:

- A. Hiding the breach
- B. Prompt notification to affected parties per applicable regulations and client contracts, with appropriate response
- C. Ignoring the breach

D. Blaming vendors

56. The CTS holder's responsibility for public welfare extends to:

- A. Identifying and reporting safety or ethical concerns consistent with the Code of Ethics
- B. Only the immediate client
- C. Only personal professional goals
- D. Only the CTS holder's employer

57. NFPA 101 is known as:

- A. The Residential Code
- B. The Plumbing Code
- C. The Life Safety Code, addressing building safety requirements
- D. A consumer guideline

58. A CTS holder is asked by a client to design a system that bypasses security controls for personal convenience. The most appropriate response is:

- A. Bypass the controls as requested
- B. Decline and explain the security implications, proposing alternatives that maintain security while addressing the client's actual need
- C. Provide consumer-grade substitutes
- D. Document the bypass for future use

59. The AVIXA CTS-I specialty certification addresses:

- A. Only theoretical AV knowledge

- B. Only sales practices
- C. Only design without installation
- D. Installation expertise building on the base CTS

60. AVIXA's governing organization:

- A. Is an international association for audiovisual technology professionals
- B. Is a government agency
- C. Is a consumer advocacy group
- D. Is a manufacturer trade group only

61. The CTS-D specialty certification focuses on:

- A. Retail sales
- B. AV design expertise building on the base CTS
- C. Only implementation work
- D. Only administrative management

62. A CTS holder discovers that a fellow CTS holder has been violating the Code of Ethics. The most appropriate response is:

- A. Ignore the violations
- B. Take credit for any improvements
- C. Punish the violator personally
- D. Report through appropriate AVIXA channels per the Code of Ethics

63. Due diligence in AV professional practice refers to:

- A. Hasty decision-making
- B. Cost minimization only
- C. Appropriate investigation, verification, and documentation before committing to action
- D. Avoiding documentation

64. A CTS holder is asked to share a client's proprietary design with another client. The most appropriate response is:

- A. Respect the original client's intellectual property and confidentiality, declining to share without appropriate authorization
- B. Share freely
- C. Share for competitive advantage
- D. Charge for the shared information

65. The professional standard of care for a CTS holder requires:

- A. Inadequate skill
- B. Manufacturer marketing alignment
- C. Only the cheapest service possible
- D. Competence comparable to other similarly qualified AV professionals in good standing

66. The CTS Code of Ethics applies to:

- A. Only in-person conversations
- B. All professional conduct of credential holders, including digital communications and documentation
- C. Only written contracts

D. Only publicly visible actions

67. NEC Article 830 addresses:

- A. Only fire alarm systems
- B. Only consumer electronics
- C. Network-powered broadband communications systems
- D. Only residential lighting

68. A CTS holder is asked to install surveillance equipment in a way that would violate wiretapping laws. The most appropriate response is:

- A. Decline and explain the legal concerns, proposing lawful alternatives that meet the client's legitimate needs
- B. Install with consumer-grade equipment
- C. Install without concern for law
- D. Hide the installation from the client

69. Workplace safety requires:

- A. Following OSHA and applicable safety regulations, with appropriate PPE and hazard mitigation
- B. Only the client's specific requirements
- C. Individual judgment without regulations
- D. Consumer-grade safety only

70. The Sarbanes-Oxley Act applies to:

- A. Publicly-traded companies in the U.S., addressing financial reporting and record retention

- B. Only medical facilities
- C. Only government contracts
- D. Only residential applications

71. A CTS holder is installing AV in a regulated facility (nuclear, financial, healthcare). The most appropriate approach is:

- A. Coordinate with the client's regulatory compliance team to ensure the design meets the specific regulatory framework applicable to the facility
- B. Use consumer-grade equipment
- C. Ignore regulations
- D. Proceed without compliance review

72. Breach of contract in professional services typically involves:

- A. Following the contract terms
- B. Exceeding expectations
- C. Failing to perform the contractual obligations as agreed, with potential damages liability
- D. Premium compensation

73. Information security standards for AV equipment in enterprise environments typically include:

- A. Only physical access
- B. Only wireless security
- C. Only password management
- D. Authentication, encryption, secure configuration, patch management, and audit logging

74. The U.S. Copyright Fair Use doctrine permits:

- A. Unauthorized reproduction of all content
- B. Limited use of copyrighted material for purposes such as commentary, criticism, education, or research, evaluated through specific factors
- C. Commercial reproduction without authorization
- D. Only academic reproduction

75. The CTS holder's duty to the profession includes:

- A. Only self-promotion
- B. Only financial gain
- C. Maintaining competence, contributing to professional development, and upholding the Code of Ethics
- D. Competing unethically

76. An authority having jurisdiction (AHJ) in building/electrical code context:

- A. Is the manufacturer of products
- B. Is the CTS holder's employer
- C. Is the consumer advocacy group
- D. Is the organization or individual responsible for enforcing code requirements for a given project

77. The CTS holder's duty to the public includes:

- A. Prioritizing personal profit over safety
- B. Identifying safety concerns, providing competent service, and reporting ethical violations
- C. Only protecting existing clients

D. Only promoting specific products

78. A CTS holder is asked to sign documents certifying compliance in areas outside the CTS holder's expertise. The most appropriate response is:

A. Sign without concern

B. Sign with a disclaimer only

C. Decline to sign outside expertise and coordinate with qualified professionals for the specific domain

D. Sign if paid extra

79. Trade secrets in professional practice:

A. Require confidentiality maintenance consistent with contractual and ethical obligations

B. Can be freely shared with competitors

C. Are only marketing materials

D. Have no legal protection

80. The duty of care in professional services refers to:

A. Care for one's own interests first

B. Personal comfort only

C. Only manufacturer warranties

D. The legal obligation to perform services with the skill and attention of a similarly qualified professional

81. Client data confidentiality extends to:

A. Only explicit contractual terms

- B. Legal, contractual, and ethical obligations to protect client information regardless of explicit terms
- C. Only public information
- D. Only financial data

82. The CTS Code of Ethics principle of competence requires:

- A. Maintaining current knowledge and skills appropriate to the services offered, including recognizing one's limitations
- B. Only the initial CTS exam
- C. Only annual self-study
- D. Only manufacturer certifications

83. NFPA 99 addresses:

- A. Only plumbing
- B. Only residential systems
- C. Health Care Facilities Code, including requirements for electrical and life safety systems
- D. Only consumer electronics

84. A CTS holder discovers a manufacturer defect affecting safety. The most appropriate action is:

- A. Hide the defect
- B. Ignore the defect
- C. Use the defect for competitive advantage
- D. Report the defect through appropriate manufacturer and safety channels consistent with the Code of Ethics

85. The ADA's "readily achievable" standard for accessibility improvements means:

- A. Easily accomplishable without significant difficulty or expense, applied with consideration of facility resources
- B. Impossible in all cases
- C. Only applicable to new construction
- D. Only required by state law

86. A CTS holder is engaged by Client A and subsequently approached by Client B whose interests conflict with Client A. The most appropriate response is:

- A. Proceed with both without disclosure
- B. Disclose the potential conflict to both and, if representation of both would harm either, decline or seek informed consent
- C. Drop Client A without discussion
- D. Charge both clients

87. NEC Article 110 addresses:

- A. Only fire alarm systems
- B. Only consumer electronics
- C. Only residential lighting
- D. Requirements for electrical installations, general

88. The CTS Code of Ethics recognizes the credential holder's responsibility to:

- A. The client, the profession, the public, and the credentialing body
- B. Only the employer

- C. Only AVIXA
- D. Only continuing education providers

89. Intellectual property licensing in AV typically involves:

- A. Agreements governing the use of proprietary technology, content, or software with specific terms and conditions
- B. Only manufacturer warranties
- C. Only consumer agreements
- D. Only public domain content

90. A CTS holder is asked to provide testimony in a legal matter involving professional AV practice. The most appropriate approach is:

- A. Provide biased opinion only
- B. Provide honest, objective professional testimony based on expertise and facts, consistent with legal obligations and professional ethics
- C. Refuse all requests
- D. Testify only for highest bidder

91. Anti-discrimination laws apply to:

- A. Only specific industries
- B. Only federal employees
- C. Business practices, hiring, services, and facilities, with specific requirements varying by jurisdiction
- D. Only government contracts

92. A CTS holder must balance competing interests through:

- A. Consumer preference
- B. Manufacturer pressure
- C. Personal financial gain
- D. Ethical decision-making consistent with the Code of Ethics, disclosing conflicts and prioritizing professional obligations

93. The CTS Code of Ethics is:

- A. Enforceable only if signed
- B. A standard of professional conduct binding on all AVIXA credential holders
- C. Only a recommendation
- D. Only applicable to management

94. A CTS holder discovers that their employer is requesting them to violate professional ethics. The most appropriate response is:

- A. Raise the concern internally, document the situation, and if necessary, decline to perform unethical work even at career risk
- B. Comply silently
- C. Resign without discussion
- D. Escalate publicly

95. Confidential information obtained through professional engagement:

- A. Can be used for personal benefit
- B. Only applies to written materials

- C. Can be shared freely after project closure
- D. Must be protected consistent with the duty of confidentiality and applicable law

96. OSHA's General Duty Clause requires employers to:

- A. Ignore hazards
- B. Outsource safety
- C. Provide a workplace free from recognized hazards likely to cause death or serious harm
- D. Rely on employee judgment only

97. The CTS Code of Ethics addresses the handling of errors by requiring:

- A. Concealment of all errors
- B. Acknowledgment of errors, prompt correction where possible, and honest communication with affected parties
- C. Blame attribution to subordinates
- D. Ignoring errors

98. The Foreign Corrupt Practices Act (FCPA) prohibits:

- A. Bribery of foreign government officials by U.S. persons and entities
- B. Only domestic business practices
- C. Only consumer transactions
- D. Only construction activities

99. A CTS holder is offered an inappropriate gift by a manufacturer. The most appropriate response is:

- A. Accept without concern
- B. Hide the gift
- C. Decline the gift or disclose it consistent with company policy and the Code of Ethics principles on conflicts of interest
- D. Accept and not disclose

100. The CTS Code of Ethics applies to credential holders:

- A. Only during working hours
- B. Only when dealing with AVIXA
- C. Only when in uniform
- D. Across all professional activities and interactions, including digital communication and social media where professional identity is conveyed

SIMULATION EXAM 18 — ANSWER

KEY AND FULL EXPLANATIONS

1. C — ANSI/AVIXA V202.01. This is the Display Image Size for 2D Content in Audiovisual Systems standard, establishing the 4H rule for Analytical Decision-Making content and the 6H rule for Basic Decision-Making content. A102.01 addresses audio coverage; ISO 9001 is quality management; NFPA 70 is the NEC — none of which govern display sizing.
2. A — ANSI/AVIXA A102.01. The Audio Coverage Uniformity in Listener Areas standard specifies permissible SPL variation (± 3 dB) across a listening space and the measurement methodology. V202.01 addresses displays; ISO 27001 is information security; NFPA 72 is fire alarm signaling.
3. D — NEC Article 725. This article of the National Electrical Code specifically governs Class 2 and Class 3 remote-control, signaling, and power-limited circuits — which includes most low-voltage AV cabling. Understanding this article is essential for compliant AV pathway and cable installation.
4. B — Communications circuits, including low-voltage AV cabling. NEC Article 800 covers communications circuits — the standard pathway requirements for structured cabling, telephone, and low-voltage signal cabling used in AV installations. This article addresses separation, firestop, and listing requirements.
5. A — Accurately describe credentials, experience, and capabilities without exaggeration. The honest representation principle is foundational to the CTS Code of Ethics, requiring that credential holders not overstate their qualifications or misrepresent their experience. This principle protects clients from relying on inflated credentials and protects the profession's integrity.
6. C — Places of public accommodation and commercial facilities in the United States. ADA's Title III addresses public accommodations including commercial facilities (restaurants, offices, conference centers, hotels) — where most AV installations occur. This broad scope makes ADA consideration relevant to the vast majority of commercial AV projects.
7. B — Assembly areas meeting specific size thresholds defined by ADA standards. ADA Standards for Accessible Design specify ALS requirements in assembly areas based on occupant load — the exact thresholds trigger ALS provision. This prevents discriminatory exclusion of people with hearing disabilities from meaningful participation.
8. D — Systems may capture, transmit, or store Protected Health Information (PHI). HIPAA applies to covered entities and business associates handling PHI. AV systems in healthcare facilities that

could capture, transmit, or store PHI (video recordings, audio captures, screen sharing) must implement HIPAA-required technical, administrative, and physical safeguards.

9. A — Personal data protection of individuals in the European Union. GDPR establishes comprehensive data protection rights for EU residents regardless of where the data processor is located. This has global reach for AV systems handling EU resident data and mandates specific consent, access, and breach notification requirements.
10. C — Conflicts of interest undisclosed to the client. The CTS Code of Ethics requires disclosure of conflicts that could affect professional judgment — undisclosed conflicts violate the duty of loyalty and honest dealing. Continuing education, fair competition, and standard terminology are encouraged, not prohibited.
11. B — Report the concern through appropriate professional channels per the Code of Ethics. The CTS Code of Ethics addresses professional conduct of colleagues, particularly safety concerns. Structured reporting protects public welfare while maintaining professional decorum — neither ignoring nor publicly attacking the colleague serves these interests.
12. D — 3 years. The CTS credential operates on a three-year renewal cycle, requiring accumulated Renewal Units (RUs) through documented continuing education and payment of maintenance fees. This cycle ensures credential holders maintain current knowledge.
13. A — The U.S. standard for electrical installation safety. NFPA 70 is the National Electrical Code — the comprehensive U.S. standard for electrical installations, adopted into law by most jurisdictions. It addresses safety requirements that apply to AV installations' electrical aspects.
14. C — The National Fire Alarm and Signaling Code. NFPA 72 governs fire alarm system installation and signaling — relevant to AV when audio systems integrate with emergency notification, when AV installations must coordinate with fire alarm pathways, or when mass notification systems are specified.
15. B — Workplace safety for employees, including fall protection, electrical safety, and hazard communication. OSHA regulations apply to employers of AV technicians, mandating safe workplaces through specific regulations on fall protection, electrical safety, lockout/tagout, hazard communication, and PPE. These apply regardless of facility type.
16. D — Protected commercial digital video content distribution. HDCP (High-bandwidth Digital Content Protection) protects copyrighted digital video content by authenticating devices before allowing protected content to pass. It's required by content owners for most premium commercial video distribution.
17. A — Disclose the interest to the client before providing recommendations involving that manufacturer. The Code of Ethics requires disclosure of conflicts of interest — allowing the client to evaluate recommendations with full information. Non-disclosure undermines the trust relationship and violates the duty of honest dealing.

18. B — Integrity in professional practice, including honest representation and fair dealing. The CTS Code of Ethics establishes integrity as foundational — honest representation of qualifications, fair dealing with clients and competitors, and truthful communication throughout professional engagement.
19. C — Decline and explain that falsification violates professional ethics and potentially law. Back-dating certificates is document falsification — ethically prohibited under the Code and potentially legally actionable as fraud. Professional response protects both the CTS holder and the integrity of professional documentation.
20. D — Between approximately 15 inches and 48 inches above the floor for forward reach. ADA 2010 Standards specify reach range limits for operable parts — 15"-48" for unobstructed forward reach, with variations for obstructed reach. These ranges define accessible placement of touch panels, switches, and control elements.
21. A — Original creative works including audio, video, and written materials. U.S. copyright law protects original expression fixed in tangible form — text, music, video, software, and artistic works. This protection affects AV installations that reproduce copyrighted content.
22. B — Decline and explain that reproduction without appropriate license violates copyright law. Unauthorized reproduction of copyrighted material is copyright infringement, exposing the CTS holder and client to legal liability. Licensing through appropriate channels is the compliant path; non-disclosure doesn't mitigate legal exposure.
23. C — Personal information of California residents, imposing specific rights and obligations on businesses. CCPA (and the subsequent CPRA) grants California residents specific rights over their personal information — access, deletion, opt-out of sale. It applies to businesses meeting threshold criteria, regardless of business location.
24. D — Report the finding to the client's compliance team and recommend appropriate remediation to ensure HIPAA compliance. Discovered HIPAA exposure requires immediate response through the client's compliance function. Ignoring, continuing, or profiting from the situation all violate ethical duties and potentially incur personal liability under HIPAA.
25. A — Fire alarm circuits and systems. NEC Article 760 addresses fire alarm circuits — their classification (FPLP, FPLR, FPL), installation requirements, and integration with power-limited systems. AV installations interacting with fire alarm systems must coordinate with this article.
26. B — Errors or omissions in professional services that result in client financial harm. Professional liability (errors and omissions) insurance covers claims against professional services arising from alleged errors or omissions. It's distinct from general liability (property/bodily harm) and consumer product warranties.
27. D — Explain that code compliance is not negotiable and present compliant alternatives. Building and electrical codes are enforced by law and cannot be waived by client preference. The

professional response maintains code compliance while finding alternative approaches that meet the client's underlying needs.

28. A — The U.S. member body of ISO and coordinator of voluntary standards. ANSI (American National Standards Institute) is the U.S. federation that develops and approves voluntary consensus standards, represents U.S. interests in ISO, and accredits standards developers. ANSI itself doesn't write standards but coordinates the voluntary standards system.
29. C — Electrical, electronic, and computing technologies. IEEE publishes thousands of standards across electrical, electronic, and computing domains — including 802 series for networking, standards for power systems, and many protocols relevant to modern AV over IP systems.
30. A — Specific duration, coverage scope, exclusions, and claim procedures. Professional warranties have defined terms — time period, what's covered and excluded, how claims are made. Marketing promises, aesthetic guarantees, or verbal commitments don't constitute enforceable warranty terms.
31. D — Generally 6 feet for construction work, with variations by specific regulation. OSHA's construction fall protection standard (1926.501) generally requires fall protection for work at 6 feet or above, with different thresholds for other industries. Specific activity requirements can trigger protection at lower heights.
32. B — Disclosing potential conflicts and managing them per the Code of Ethics. Conflicts of interest are managed through disclosure and appropriate handling, not concealment or avoidance. The Code of Ethics provides specific guidance on disclosure and management to preserve client trust.
33. C — Respect the NDA and decline to discuss confidential information. NDAs create enforceable confidentiality obligations that apply regardless of competitive pressure. Violating an NDA exposes the CTS holder to contractual liability and violates the ethical duty of confidentiality.
34. D — ANSI/AVIXA F502.01 or related rack and cabling standards. AVIXA's F-series standards address field practices including rack building and cable management — establishing professional norms for physical installation work. These standards define the quality baseline for professional rack fabrication.
35. B — Maximum conduit fill ratios based on wire type and size. NEC Chapter 9 Table 12 (and related tables) specifies maximum conduit fill — typically 40% for three or more conductors. These limits ensure proper heat dissipation and installation safety.
36. C — Coordinate with a qualified accessibility professional to confirm compliance before signing, if within the CTS holder's role. Accessibility compliance often requires specialized expertise (architectural, legal) beyond base AV knowledge. Coordination with qualified professionals produces valid certifications; inappropriate self-certification creates liability.

37. A — Personal integrity, professional competence, service to clients, and the AV profession as a whole. The CTS Code of Ethics addresses multiple dimensions of professional conduct — not just technical standards or pricing, but the full scope of how credential holders should engage with their work and the profession.
38. D — A certification of security practices, especially for service providers handling client data. SOC 2 reports evaluate service organizations' security controls against established criteria (security, availability, processing integrity, confidentiality, privacy). This certification is increasingly required for service providers handling client data.
39. B — A violation of professional ethics requiring disclosure of conflicts of interest. The Code of Ethics is unambiguous on conflicts — financial interests in recommended products must be disclosed. Non-disclosure violates the duty of honest dealing and undermines the client's ability to evaluate recommendations.
40. A — Grounding and bonding requirements. NEC Article 250 addresses grounding and bonding — foundational safety requirements for electrical systems. AV installations must comply with grounding requirements for equipment, racks, and systems that interact with building electrical systems.
41. C — Respect client confidentiality and decline without appropriate client authorization. Client information is confidential regardless of explicit contractual terms — the ethical duty of confidentiality applies to all client engagement. Authorization from the client is required for sharing; payment or convenience don't create authorization.
42. B — A state or jurisdictional license for certain types of work (e.g., electrical, general contracting) where required by law. Certain AV-related work (electrical, structured cabling, general contracting) requires state or local licensure depending on jurisdiction. The CTS credential doesn't grant licensure — holders must separately meet state requirements.
43. D — General wiring methods and material requirements. NEC Article 300 addresses general wiring methods — the foundational requirements applying broadly across electrical installations. AV low-voltage work often intersects with these general wiring requirements through pathway, support, and enclosure rules.
44. A — Maintain competence through ongoing learning. The CTS Code of Ethics and renewal requirements establish continuing competence as a professional obligation. This reflects the evolving nature of AV technology and the ethical duty to maintain current skills for client service.
45. C — Fails to act in the client's best interest despite a duty to do so. Fiduciary duty arises when one party has a duty to act in another's interest — common in professional relationships. Breach occurs when actions prioritize self-interest or other parties over the client, despite the fiduciary duty.
46. D — Federal agencies' handling of personal records. The Privacy Act of 1974 specifically addresses federal agency record practices — establishing rules for collection, maintenance, and

disclosure of personal records by federal agencies. State governments and private entities have separate privacy frameworks.

47. A — Copyright, trademark, patent, and trade secret protections for creative and innovative works. Intellectual property law encompasses multiple protections — copyright for creative expression, trademark for identifying marks, patents for inventions, trade secrets for confidential business information. Each has distinct requirements and protections.
48. B — Identify and address the safety issue through appropriate channels, consistent with the Code of Ethics obligation to protect public welfare. The CTS Code of Ethics places public welfare among its foundational principles. Safety concerns require active attention and appropriate action — ignoring, delaying, or blaming all violate this fundamental obligation.
49. C — Wireless microphone frequency allocations, unlicensed device regulations, and equipment authorization. FCC regulates radio frequency use in the U.S. — including wireless microphone band allocations, requirements for unlicensed devices (Part 15), and equipment authorization. This affects wireless microphone and RF system selection and use.
50. A — Specific continuing education credits within the renewal period. CTS renewal requires accumulating Renewal Units (RUs) through documented continuing education within the 3-year renewal cycle, along with payment of renewal fees. This ensures credential holders maintain current knowledge.
51. A — Decline or coordinate with a qualified licensed professional to handle the regulated work. Unlicensed work where licensure is required is illegal and exposes the CTS holder and client to liability. Coordinating with qualified licensed professionals produces compliant work; proceeding without license violates law.
52. C — Information security management systems. ISO 27001 is the international standard for information security management systems (ISMS) — addressing how organizations should manage information security risks. Certification requires independent audit and ongoing management commitment.
53. B — State-specific accessibility standards and Section 508 for federal technology accessibility. U.S. accessibility requirements extend beyond ADA — many states have specific requirements that may exceed ADA, and Section 508 governs federal technology accessibility. AV design must consider all applicable layers.
54. D — Honest, transparent, and equitable treatment of clients, competitors, and other stakeholders. Fair dealing in the CTS Code of Ethics requires integrity across all professional interactions — with clients, competitors, and others. Unfair practices, taking advantage, or mere legal compliance don't meet the ethical standard.
55. B — Prompt notification to affected parties per applicable regulations and client contracts, with appropriate response. Data breach response is governed by specific requirements — GDPR

mandates 72-hour notification; CCPA has notification requirements; sector-specific regulations (HIPAA, PCI) have their own rules. Contract terms often add requirements.

56. A — Identifying and reporting safety or ethical concerns consistent with the Code of Ethics. The CTS Code of Ethics extends the credential holder's responsibility to public welfare beyond immediate client interests. This broader duty supports the profession's standing and protects people who may be affected by AV systems.
57. C — The Life Safety Code, addressing building safety requirements. NFPA 101 is the Life Safety Code — a comprehensive code addressing egress, fire protection, and related life safety features in buildings. AV installations must coordinate with life safety requirements, particularly around egress and emergency notification.
58. B — Decline and explain the security implications, proposing alternatives that maintain security while addressing the client's actual need. Security controls serve protective purposes — bypassing them creates risks the controls exist to prevent. The professional response offers alternatives meeting the underlying need while preserving security posture.
59. D — Installation expertise building on the base CTS. CTS-I (Certified Technology Specialist—Installation) is a specialty certification for installation professionals, building on CTS foundation with installation-focused competencies. It validates advanced installation expertise.
60. A — Is an international association for audiovisual technology professionals. AVIXA (Audiovisual and Integrated Experience Association, formerly InfoComm International) is a global trade association serving AV professionals, publishing standards, providing certification, and representing industry interests.
61. B — AV design expertise building on the base CTS. CTS-D (Certified Technology Specialist—Design) is the specialty certification for AV designers, building on CTS foundation with design-focused competencies in system architecture, specification, and documentation.
62. D — Report through appropriate AVIXA channels per the Code of Ethics. Ethics violations by fellow credential holders are addressed through AVIXA's established review processes — not personal action, credit-taking, or ignoring. This structured approach protects credential integrity and due process.
63. C — Appropriate investigation, verification, and documentation before committing to action. Due diligence in professional practice means thorough preparation — research, verification, and documented consideration — before making significant decisions. This protects clients, the CTS holder, and professional quality.
64. A — Respect the original client's intellectual property and confidentiality, declining to share without appropriate authorization. Client designs and proprietary information belong to the original client. Sharing without authorization violates contractual, ethical, and potentially legal obligations regardless of any perceived benefit.

65. D — Competence comparable to other similarly qualified AV professionals in good standing. The professional standard of care — a legal concept central to negligence analysis — is defined by what similarly qualified professionals would do. Meeting this standard is foundational to professional service; failing to meet it creates liability exposure.
66. B — All professional conduct of credential holders, including digital communications and documentation. The CTS Code of Ethics applies broadly to professional conduct — not just face-to-face interactions but all forms of communication and documentation where the credential holder acts in professional capacity. This includes email, social media, written documents, and verbal interactions.
67. C — Network-powered broadband communications systems. NEC Article 830 specifically addresses network-powered broadband communications systems — including fiber-to-the-premises installations with power over the network. Modern AV over IP installations may interact with these provisions.
68. A — Decline and explain the legal concerns, proposing lawful alternatives that meet the client's legitimate needs. Covert recording laws (federal and state wiretapping statutes) prohibit certain recording without consent. The professional response identifies the legal issue and proposes compliant alternatives that meet the client's underlying needs.
69. A — Following OSHA and applicable safety regulations, with appropriate PPE and hazard mitigation. Workplace safety is both a legal (OSHA) and ethical obligation. Compliance with specific safety standards — fall protection, electrical safety, hazard communication — protects workers and meets legal requirements.
70. A — Publicly-traded companies in the U.S., addressing financial reporting and record retention. Sarbanes-Oxley (SOX) applies primarily to publicly-traded companies, imposing requirements on financial reporting, internal controls, and record retention. AV installations in SOX-regulated environments may need to support these compliance requirements.
71. A — Coordinate with the client's regulatory compliance team to ensure the design meets the specific regulatory framework applicable to the facility. Regulated facility types have specific requirements — coordination with the client's compliance team ensures the AV design meets applicable regulations. Ignoring or proceeding without compliance review creates significant exposure.
72. C — Failing to perform the contractual obligations as agreed, with potential damages liability. Breach of contract occurs when a party fails to perform their contractual obligations as specified — creating liability for damages. Following contract terms or exceeding expectations is not breach; premium compensation doesn't relate to breach.
73. D — Authentication, encryption, secure configuration, patch management, and audit logging. Enterprise information security requires multiple layered controls working together — single-

dimension approaches create gaps. Comprehensive controls across authentication, encryption, configuration management, patching, and auditing produce defense-in-depth security.

74. B — Limited use of copyrighted material for purposes such as commentary, criticism, education, or research, evaluated through specific factors. Fair use is a copyright doctrine allowing limited unauthorized use in specific circumstances. The four-factor test (purpose, nature, amount, market effect) determines whether use qualifies — not blanket permission.
75. C — Maintaining competence, contributing to professional development, and upholding the Code of Ethics. Duty to the profession extends beyond self-interest to professional development and ethical conduct. This supports the profession's overall standing and benefits all credential holders and clients over time.
76. D — Is the organization or individual responsible for enforcing code requirements for a given project. The Authority Having Jurisdiction (AHJ) is the code enforcement entity — typically a building inspector, fire marshal, or equivalent authority. Understanding who the AHJ is for a given project drives compliance approach.
77. B — Identifying safety concerns, providing competent service, and reporting ethical violations. The CTS Code of Ethics duty to public extends to multiple elements — safety identification, competent service, and ethics reporting. This broader duty recognizes that AV professionals affect people beyond immediate clients.
78. C — Decline to sign outside expertise and coordinate with qualified professionals for the specific domain. Signing certifications outside one's expertise creates personal liability and misrepresents qualifications. Professional response involves coordinating with qualified professionals for specialized compliance areas — not signing inappropriately.
79. A — Require confidentiality maintenance consistent with contractual and ethical obligations. Trade secrets (confidential business information with competitive value) require active confidentiality maintenance — ethical duty plus contractual terms. Sharing freely or ignoring these obligations destroys the trade secret protection and creates liability.
80. D — The legal obligation to perform services with the skill and attention of a similarly qualified professional. Duty of care is the legal standard measuring professional service quality. It's an objective standard — what a similarly qualified professional would do — rather than personal preference or manufacturer-defined standards.
81. B — Legal, contractual, and ethical obligations to protect client information regardless of explicit terms. Client confidentiality is multi-sourced — legal duties (privacy laws), contractual duties (NDAs and service agreements), and ethical duties (Code of Ethics). These obligations apply to all client information, not just explicitly-labeled items.
82. A — Maintaining current knowledge and skills appropriate to the services offered, including recognizing one's limitations. Professional competence requires both ongoing learning and self-

awareness about limitations. Offering services beyond competence — or failing to maintain competence — violates the ethical obligation.

83. C — Health Care Facilities Code, including requirements for electrical and life safety systems. NFPA 99 addresses health care facility requirements — electrical systems, medical gas, life safety. AV installations in healthcare facilities must coordinate with these specialized requirements.
84. D — Report the defect through appropriate manufacturer and safety channels consistent with the Code of Ethics. Safety-affecting defects require active response through appropriate channels — manufacturer notification and safety authorities as applicable. Ethical duty to public safety overrides competitive or confidentiality considerations in safety matters.
85. A — Easily accomplishable without significant difficulty or expense, applied with consideration of facility resources. ADA's "readily achievable" standard applies to existing facilities — requiring accessibility improvements that are easily accomplishable given the facility's resources. The standard considers the specific context of the facility, not absolute criteria.
86. B — Disclose the potential conflict to both and, if representation of both would harm either, decline or seek informed consent. Conflicts between clients require disclosure to affected parties. If representation would harm either client, the professional either declines both engagements or obtains informed consent from all affected parties — consistent with ethical duties.
87. D — Requirements for electrical installations, general. NEC Article 110 provides general requirements for electrical installations — workmanship, identification, clearances, and related provisions. AV installations with electrical components must comply with these general requirements.
88. A — The client, the profession, the public, and the credentialing body. CTS Code of Ethics recognizes multiple stakeholder relationships — each with its own ethical obligations. Single-stakeholder focus misses the breadth of professional responsibility.
89. A — Agreements governing the use of proprietary technology, content, or software with specific terms and conditions. IP licensing involves formal agreements defining how proprietary assets may be used — scope, duration, permitted uses, restrictions. This is distinct from warranties, consumer agreements, or public domain content.
90. B — Provide honest, objective professional testimony based on expertise and facts, consistent with legal obligations and professional ethics. Professional testimony requires honesty and objectivity — the expert's role is to help the fact-finder understand technical matters. Biased testimony, refusal, or highest-bidder approaches all violate professional integrity.
91. C — Business practices, hiring, services, and facilities, with specific requirements varying by jurisdiction. Anti-discrimination laws apply broadly — federal (Civil Rights Act, ADA, others), state, and local — with varying requirements. AV businesses must comply across hiring, services delivery, and facilities access.

92. D — Ethical decision-making consistent with the Code of Ethics, disclosing conflicts and prioritizing professional obligations. Competing interests are balanced through ethical decision-making using the Code of Ethics framework — disclosure, prioritization of professional obligations, and consideration of all affected parties. This structured approach produces consistent ethical outcomes.
93. B — A standard of professional conduct binding on all AVIXA credential holders. The CTS Code of Ethics applies to credential holders as a condition of maintaining the credential — it's not optional, signed-only, or management-only. Violations can result in credential discipline.
94. A — Raise the concern internally, document the situation, and if necessary, decline to perform unethical work even at career risk. Ethical obligations apply regardless of employer pressure. The professional response involves raising concerns, documenting, and ultimately declining unethical work even at career cost — the Code doesn't yield to employer demands.
95. D — Must be protected consistent with the duty of confidentiality and applicable law. Professional confidential information receives protection from ethical duties (Code of Ethics), contractual obligations (NDAs, service agreements), and applicable law. This protection continues beyond engagement completion — not just during active work.
96. C — Provide a workplace free from recognized hazards likely to cause death or serious harm. OSHA's General Duty Clause (29 USC 654) establishes the foundational employer obligation — providing workplaces free from recognized hazards. This general duty applies even without specific OSHA standards addressing a particular hazard.
97. B — Acknowledgment of errors, prompt correction where possible, and honest communication with affected parties. The CTS Code of Ethics addresses errors constructively — acknowledgment and correction rather than concealment or blame-shifting. This protects client interests and preserves professional relationships and integrity.
98. A — Bribery of foreign government officials by U.S. persons and entities. FCPA prohibits U.S. persons and entities from bribing foreign government officials for business advantages. It includes anti-bribery and accounting provisions. This has global reach for U.S.-connected business.
99. C — Decline the gift or disclose it consistent with company policy and the Code of Ethics principles on conflicts of interest. Inappropriate gifts create conflicts of interest. Professional response involves evaluation against company policy and ethics framework — declining when appropriate, disclosing when gifts are accepted, and avoiding undisclosed receipt.
100. D — Across all professional activities and interactions, including digital communication and social media where professional identity is conveyed. The Code of Ethics applies broadly to professional conduct — not limited to work hours, AVIXA interactions, or specific contexts. Digital communication and social media where professional identity is visible fall within scope.