SIMULATION EXAM 15 — QUESTIONS 1–100

1. A CTS holder is integrating a new boardroom that must support both local presentations and videoconferencing for executive meetings. During commissioning, far-end participants report that the audio has good level but lacks clarity on remote speakers. Local audio is clear. The most appropriate next investigation is:

A. Replace the microphone array and codec

B. Ask the client to change cloud platforms

C. Examine the microphone coverage pattern, gain structure from mics to codec send, and DSP processing affecting the outbound audio path

D. Increase amplifier output

2. A conference room's occupancy sensors are reporting inconsistent readings, causing automatic power-on of the AV system to occur when rooms are empty. This affects a fleet of 20 rooms. The most appropriate investigation path is:

A. Review the occupancy sensor placement, sensitivity configuration, and firmware, with systematic testing across the fleet to identify patterns

B. Replace all sensors immediately

C. Disable all sensors

D. Switch to manual operation only

3. A client has requested the AV system for their 40-seat training room support lecture capture with both live streaming and on-demand archive. The room has existing LED lighting that flickers at 60 Hz. The most important design consideration is:

A. Ignore the lighting issue

B. Select cameras with flicker reduction or electronic shutter synchronization and verify on lecture capture quality

C. Reduce the room's ambient lighting to darkness

D. Disable the lecture capture feature

4. A CTS holder is managing a three-room renovation project. Two rooms have completed commissioning and passed acceptance; the third room has discovered an HDMI distribution amplifier that failed pre-commissioning testing. The client expects all three rooms operational by end-of-week. The most appropriate response is:

A. Proceed with acceptance of all three

B. Delay the project indefinitely

C. Skip the third room's commissioning

D. Expedite replacement of the failed amplifier, inform the client of schedule impact, and complete the third room's commissioning before acceptance

5. A conference room has experienced repeated intermittent audio dropouts during large meetings. Investigation reveals the DSP's firmware was updated two months ago as part of a vendor security push. The most appropriate response is:

A. Review the firmware change log, consider rollback options, and coordinate with the manufacturer on any required follow-up

B. Replace the DSP entirely

C. Disable the audio system

D. Accept the dropouts as normal

6. A CTS holder is designing a system for a financial services client that requires audit logging of all administrative actions on the AV equipment. The most important design consideration is:

A. The aesthetic appeal of the rack

B. The cheapest equipment option

C. Implement audit logging with compliance-aligned retention, secure storage, and integration with the client's audit or SIEM system

D. Generic manufacturer marketing claims

7. A CTS holder has completed installation of a video wall. During client verification, specific tiles show color drift at specific times of day. Other tiles remain consistent. The most likely cause is:

A. The entire wall is failing

B. Sunlight entering the room affects specific tiles' light sensors or calibration at those positions

C. The client has tampered with the installation

D. The entire tile manufacturing lot is defective

8. A boardroom in continuous use for five years has experienced progressive audio quality degradation. Investigations reveal HVAC noise has increased since a recent mechanical upgrade. The most appropriate response is:

A. Replace all AV equipment

B. Ignore the change

C. Accept the degradation as normal

D. Measure the new HVAC noise floor, coordinate with mechanical to reduce it, and evaluate whether AV equipment adjustments are also needed

9. A CTS holder is planning the commissioning of an auditorium sound system. The room has complex acoustics with parallel walls and a curved ceiling. The most appropriate commissioning approach is:

A. Conduct acoustic measurements at multiple listener positions, verify STIpa, and adjust processing to achieve target coverage uniformity

B. Measure only one point

C. Skip acoustic testing entirely

D. Rely solely on listener subjective impression

10. A CTS holder is integrating a room that has existing ceiling loudspeakers from a previous installation. The client wants to retain these to reduce cost. The speakers are showing signs of age with degraded high-frequency response. The most appropriate response is:

A. Install new system around the old speakers without evaluation

B. Replace speakers without client discussion

C. Evaluate the loudspeakers' current performance against system requirements and present a recommendation to the client

D. Ignore the aging speakers

11. A client has requested that their AV equipment be managed through a cloud-based platform. The client's IT security team has specified zero-trust network architecture. The most appropriate response is:

A. Bypass zero-trust for AV

B. Install without coordination

C. Use default credentials

D. Coordinate with IT security to architect the AV cloud integration aligned with zero-trust principles including identity verification and continuous authentication

12. A CTS holder is reviewing a proposal for a 150-seat lecture hall. The room will be used for both traditional lectures and hybrid learning with remote students. The most important consideration for microphone design is:

A. Use a single table microphone at the lectern

B. Design microphone coverage for both the instructor and student participation areas, with appropriate DSP processing for remote students' audio

C. Use only wireless handheld microphones

D. Use consumer-grade microphones

13. A CTS holder has been asked to evaluate whether a 10-year-old matrix switcher should be retained in a room upgrade. The matrix still functions but is approaching manufacturer end-of-support. The most appropriate response is:

A. Present replacement analysis including end-of-support implications, support availability, and interoperability with new equipment

B. Retain without evaluation

C. Replace without analysis

D. Refuse to address the question

14. A conferencing codec has been generating firmware update notifications for the past month. The client has not acted. The most appropriate response is:

A. Apply the update immediately without testing

B. Bypass the update

C. Replace the codec

D. Develop a firmware management strategy with the client that tests updates before production deployment with appropriate staging and rollback planning

15. A CTS holder is managing a project where the client has delegated decision authority to multiple subordinates with different decision scopes. The most appropriate approach is:

A. Make decisions without input

B. Seek sign-off on every minor decision

C. Map decision authority levels with the client, document who decides what, and capture appropriate approvals

D. Use a single contact only

16. A new construction project has AV system installation scheduled during the final construction phase. The general contractor reports that the ceiling cloud installations have been delayed by two weeks. The most appropriate response is:

A. Proceed with AV installation regardless of ceiling status

B. Coordinate with the general contractor and adjust AV installation sequencing to follow the ceiling completion, documenting any resulting schedule impact

C. Cancel the project

D. Refuse to accommodate the delay

17. A CTS holder is integrating a boardroom with integrated lighting control for scene-based room modes (presentation, collaboration, video call). The client's lighting designer has specified DALI for the lighting system. The most appropriate AV integration approach is:

A. Design the AV control system to communicate with the DALI lighting system using appropriate gateways or native DALI interfaces per the client's architecture

B. Install a separate independent lighting system

C. Bypass the lighting designer

D. Use consumer-grade lighting control

18. A conference room has a ceiling-mounted camera with PTZ functionality. The camera has been in service for three years and has developed progressive slowness in its pan/tilt response. Other functions appear normal. The most likely cause is:

A. The camera firmware is defective

B. The network is congested

C. The control programming is incorrect

D. Mechanical wear on the pan/tilt motor, with progressive degradation typical of mechanical aging

19. A CTS holder is asked to integrate AV systems across five global offices for standardization. The offices are in different regulatory environments. The most important design consideration is:

A. Use a single design without regulatory review

B. Review each jurisdiction's regulatory requirements and design with appropriate variations while maintaining the shared standardization framework

C. Bypass regulations

D. Ignore regional differences

20. A CTS holder has completed commissioning and is awaiting client acceptance. The client has identified three items that need minor adjustment. Two are within scope and can be addressed; one is outside scope. The most appropriate response is:

A. Refuse to address any items

B. Absorb all three including the out-of-scope item

C. Complete the in-scope items as planned and propose the out-of-scope item as a change order or separate engagement, with appropriate documentation

D. Declare the project complete and ignore all three

21. A CTS holder is designing a sound system for a multipurpose space that serves as both a sanctuary for religious services and a performance space for community concerts. The most appropriate design approach is:

A. Design the system to support both primary uses with appropriate processing, zoning, and configuration options

B. Design only for religious services

C. Design only for concerts

D. Skip the design process

22. A CTS holder is reviewing a proposed installation where the client's IT team is deploying Microsoft Intune for mobile device management. The most appropriate consideration is:

A. Intune is irrelevant to AV

B. Bypass Intune controls

C. Use only personal devices

D. Coordinate with the Intune administrator to ensure any mobile devices or tablets used for room management comply with Intune policies

23. A CTS holder is managing a project that has experienced significant cost overrun due to unforeseen site conditions. The client has expressed concern. The most appropriate response is:

A. Hide the overrun

B. Blame the design phase

C. Document the condition, justify the cost impact with evidence, and present options for the client's decision

D. Absorb all cost

24. A conferencing codec has been experiencing registration failures coincident with the client's IT rollout of new security policies. The most likely cause is:

A. The codec hardware is universally defective

B. Security policy changes have altered authentication tokens or blocked required ports, disrupting the codec's cloud connection

C. The display has failed

D. The cable has degraded

25. A CTS holder is managing a project where the client has requested that the integrator provide ongoing support for five years post-installation. The most appropriate response is:

A. Develop and document a support agreement including response times, escalation paths, coverage scope, and pricing structure

B. Refuse the request

C. Provide support informally

D. Require the client to hire a separate support vendor

26. A CTS holder is evaluating whether a client-provided equipment list meets the room's requirements. The client's list specifies loudspeakers that cannot deliver the required coverage uniformity. The most appropriate response is:

A. Install the specified equipment despite the inadequacy

B. Explain the coverage limitation to the client, propose alternatives that meet requirements, and document the basis for the recommendation

C. Substitute alternative equipment without client notification

D. Refuse the project entirely

27. A CTS holder is reviewing a firmware update from a major DSP manufacturer. The update includes security patches and feature improvements. The client's AV system is stable in current production. The most appropriate response is:

A. Apply immediately to all systems

B. Apply without testing

C. Defer indefinitely

D. Test in a non-production environment first, then stage deployment to production with rollback capability and appropriate scheduling

28. A CTS holder is managing installation in a commercial building where multiple AV contractors are installing simultaneously in adjacent spaces. Cable pathways are shared. The most appropriate coordination approach is:

A. Install without coordinating with other contractors

B. Coordinate with all contractors on shared pathway use, cable labeling, and work sequence to prevent damage and rework

C. Complete work as fast as possible without checking other contractors

D. Block all other contractors from the space

29. A CTS holder is designing a system that will be deployed across 50 conference rooms of similar size and use. The most appropriate approach to standardization is:

A. Design each room independently

B. Use the lowest-cost option for all rooms

C. Develop a standardized room design template with variations for room-specific needs, supported by consistent documentation and training

D. Replicate a single room exactly in all locations regardless of differences

30. A CTS holder has been asked to recommend whether a client should continue using an aging AV system or replace it. The system is 8 years old, still functions, but is approaching end-of-support. The most appropriate analytical approach is:

A. Evaluate remaining useful life, support availability, operational risk of failure, and cost of replacement vs. continued operation, then present findings with recommendation

B. Recommend replacement without analysis

C. Recommend retention without analysis

D. Defer the decision indefinitely

31. A CTS holder is managing a project with a fixed-price contract. Mid-project, the client has requested 15% additional scope. The most appropriate response is:

A. Absorb the additional work

B. Refuse the request

C. Accept informally

D. Process the additional work through a formal change order with appropriate contract amendment, scope definition, cost, and schedule impact

32. A CTS holder is reviewing a proposed design for a large auditorium. The client has specified a specific brand of line array loudspeakers based on prior experience. The room has unique acoustic characteristics that require specific dispersion patterns. The most appropriate response is:

A. Ignore the room's acoustic requirements

B. Verify whether the specified line arrays have appropriate dispersion for the room, present an informed recommendation to the client considering both their preference and the acoustic requirements

C. Substitute alternative equipment without client notification

D. Refuse the project

33. A CTS holder is troubleshooting a system where audio from a connected laptop has excessive high-frequency content compared to other sources. The DSP is applying EQ to the laptop input. The most appropriate response is:

A. Investigate the laptop's output level, DSP EQ settings, and source-specific processing to identify and correct the root cause

B. Replace the DSP entirely

C. Disable the laptop input

D. Add more EQ to compensate

34. A CTS holder has been asked to advise on whether a new AV installation should include a dedicated UPS for critical equipment. The client operates in a region with frequent power fluctuations. The most appropriate response is:

A. Recommend no UPS

B. Recommend UPS without analysis

C. Evaluate the criticality of the equipment, power reliability in the region, load requirements, and cost/benefit, then recommend appropriate UPS sizing

D. Defer the decision

35. A CTS holder is deploying a new conference room with automatic scene triggering based on calendar integration. Occasionally the scene triggers before the meeting starts. The most likely cause is:

A. The display has failed

B. The calendar integration is reading meeting start times with imprecise rounding or the trigger threshold is not correctly configured

C. The room has lost power

D. The network has failed completely

36. A CTS holder has identified a safety concern at a work site — a suspended ceiling tile has partially collapsed and could fall during installation. The most appropriate response is:

A. Continue installation around the concern

B. Ignore the ceiling issue

C. Work quickly before it falls

D. Stop affected work, report the concern through documented safety channels, and coordinate with the GC or safety team for resolution before proceeding

37. A CTS holder is integrating a conference room that will be used by a regulated industry client (healthcare) with recording capability for meeting documentation. The most important compliance consideration is:

A. Implement HIPAA-required technical and procedural safeguards for any PHI that may be captured, including encryption, access controls, and audit logging

B. Use the cheapest recording equipment

C. Skip compliance review

D. Follow only generic industry standards

38. A CTS holder is reviewing an AV system where one microphone is producing audible white noise. Other microphones are clear. The most likely cause is:

A. All microphones have failed

B. The DSP has failed entirely

C. The specific microphone has a preamp failure or cable connection issue

D. The amplifier is the problem

39. A CTS holder is managing the final acceptance for a conferencing installation. The client has asked specifically about what happens if the cloud service fails. The most appropriate response is:

A. Hide the cloud platform's SLA

B. Present the cloud platform's SLAs, failover procedures, and any backup capabilities that have been designed into the system

C. Refuse to answer

D. Simply state that cloud services don't fail

40. A CTS holder is reviewing a proposed design for a broadcast studio. The client has specified redundant networking and power. The most appropriate response is:

A. Ignore the redundancy request

B. Use only consumer-grade equipment

C. Cut cost by omitting redundancy

D. Design the system with appropriate redundancy in networking, power, and signal paths aligned with the client's business continuity requirements

41. A CTS holder has been asked about the interoperability between different videoconferencing platforms (Zoom, Teams, Meet). The most accurate response is:

A. All platforms are fully interoperable

B. No platforms interoperate at all

C. Platforms have different levels of interoperability — standards-based (SIP/H.323) with appropriate gateways can bridge, while native integration is platform-specific

D. Only one platform exists

42. A CTS holder is investigating a video wall where some tiles show lower brightness than others despite identical settings. The wall is one year old. The most likely cause is:

A. Per-tile calibration drift or LED panel aging that varies by tile due to manufacturing differences or usage patterns

B. The entire wall has failed

C. The network is congested

D. The DSP is malfunctioning

43. A CTS holder is managing a project where the client's procurement team has placed a stop on all new orders. This affects equipment needed for the next phase. The most appropriate response is:

A. Proceed without equipment

B. Escalate through appropriate channels, document the impact on schedule and scope, and coordinate with the client on resolution or schedule adjustment

C. Absorb the delay silently

D. Cancel the project

44. A CTS holder is reviewing a design for a financial trading room where latency is critical for audio communications. The most appropriate consideration is:

A. Ignore latency

B. Use only consumer-grade equipment

C. Accept any latency level

D. Design with minimum-latency signal paths, consider low-latency DSP and codec options, and verify actual latency against requirements

45. A CTS holder is coordinating with a client's facilities management team for equipment installation in a non-typical environment (warehouse). The most appropriate approach is:

A. Install standard office equipment regardless

B. Refuse to work in the environment

C. Evaluate environmental conditions and specify equipment rated for the actual conditions, coordinating with facilities on any modifications

D. Use consumer-grade equipment only

46. A CTS holder is reviewing a proposed camera position for a hybrid meeting room. The client wants the camera at one end of the room. Analysis shows this position creates extreme perspective compression for distant participants. The most appropriate response is:

A. Install at the client's preferred position regardless of analysis

B. Explain the perspective limitation, propose alternatives with rationale, and engage the client in an informed decision

C. Refuse the project

D. Install without any analysis

47. A CTS holder is managing a multi-room project where different rooms use different conferencing platforms (Teams, Zoom, Meet). The most appropriate approach is:

A. Design and configure each room per its specific platform's requirements, with appropriate certified endpoints and platform-specific management integration

B. Use a single platform for all rooms

C. Use consumer-grade equipment across all rooms

D. Refuse the project

48. A CTS holder is troubleshooting an AV-over-IP system where specific encoders randomly drop from multicast streams. The network switch configuration has been verified. The most likely cause is:

A. The switch hardware is completely failed

B. All encoders have failed simultaneously

C. The network has no issues

D. Individual encoder hardware defects, switch backplane or uplink bandwidth saturation, or multicast-specific configuration issues

49. A CTS holder is reviewing an installation where a recent firmware update for a control processor has introduced unexpected behavior in a touch panel interface. Users report the change. The most appropriate response is:

A. Ignore the reports

B. Replace the control processor

C. Review the firmware change log, identify the specific behavior change, coordinate with the manufacturer and client on appropriate resolution, which may include rollback, configuration adjustment, or UI updates

D. Disable the touch panel

50. A CTS holder has been asked to evaluate whether to upgrade a 6-year-old audio system. The system still functions but lacks some modern features. The client's budget is constrained. The most appropriate analysis is:

A. Evaluate the current system's remaining useful life, feature gap against business needs, upgrade cost, and risk of continuing, then present findings with cost-benefit recommendation

B. Recommend replacement immediately

C. Recommend retention without analysis

D. Defer indefinitely

51. A CTS holder is deploying a conference room with specific requirements for recording capability. The client wants recordings stored locally and securely. The most appropriate design approach is:

A. Enable default cloud storage

B. Skip security considerations

C. Use consumer-grade recording

D. Implement local recording with appropriate encryption, access controls, retention policies, and backup consistent with the client's data governance

52. A CTS holder is managing a project where the client has expressed urgency to accelerate the schedule. The most appropriate response is:

A. Commit to the acceleration without analysis

B. Evaluate feasibility of acceleration, identify required tradeoffs (scope, resources, quality), and present options to the client

C. Refuse the request categorically

D. Accept while planning to miss the accelerated deadline

53. A CTS holder is integrating AV-over-IP for a 40-endpoint deployment. The client's network team has expressed concerns about bandwidth. The most appropriate response is:

A. Conduct bandwidth analysis including per-stream requirements, aggregate bandwidth, switch backplane capacity, and present findings to network team for joint planning

B. Ignore the network team's concerns

C. Use a separate isolated network

D. Reduce the number of endpoints

54. A CTS holder is managing a project where the commissioning has revealed that the client's calendar system does not integrate with the specified room scheduling panel. The most appropriate response is:

A. Skip the integration

B. Install without verification

C. Review the integration requirements, identify compatibility gaps, and coordinate with the client on resolution (potentially including platform migration or alternative integration)

D. Accept the limitation without action

55. A CTS holder has been asked by the client to provide training on the new AV system. The most appropriate approach is:

A. Provide exhaustive technical content

B. Skip training

C. Provide training only on the most expensive equipment

D. Tailor training to the specific user roles and tasks, focus on common scenarios with reference materials for exceptions, and provide operational confidence

56. A CTS holder is reviewing an emerging technology (e.g., spatial audio) for potential deployment. The most appropriate evaluation approach is:

A. Research the technology's maturity, interoperability, integration requirements, and actual benefit to the specific use case

B. Deploy immediately without evaluation

C. Reject all emerging technologies

D. Let the manufacturer decide

57. A CTS holder is integrating a conference room with specific accessibility requirements for hearing-impaired users. The most appropriate design approach is:

A. Install louder loudspeakers

B. Use only personal hearing aids

C. Implement assistive listening system (FM, IR, induction loop, or hearing aid telecoil support) covering the seating area in compliance with ADA and applicable standards

D. Use larger displays only

58. A CTS holder is managing a complex installation with multiple subcontractors. The most appropriate coordination practice is:

A. Let subcontractors self-coordinate

B. Establish clear coordination meetings, shared schedules, defined scope boundaries, and documented decisions

C. Communicate only through executive management

D. Avoid documentation

59. A CTS holder is reviewing an AV system where the client has requested that the system support automatic speaker tracking during meetings. The most appropriate design consideration is:

A. Use only consumer-grade equipment

B. Implement without coverage analysis

C. Rely solely on the client's preferences

D. Select a speaker tracking system appropriate for the room geometry, verify coverage analysis, and test accuracy with representative seating configurations

60. A CTS holder has discovered during installation that the room's power outlets are not positioned where the equipment requires. The most appropriate response is:

A. Document the issue, coordinate with the electrical contractor or client for resolution, and plan accordingly

B. Install with extension cords

C. Refuse to proceed

D. Ignore the issue

61. A CTS holder is reviewing a proposed design for a client in a regulated industry where all AV data must remain within the client's jurisdiction. The most appropriate response is:

A. Use any cloud platform

B. Ignore the requirement

C. Coordinate with the client and cloud providers to verify data residency compliance, routing, and storage aligned with the jurisdictional requirements

D. Use consumer-grade cloud services

62. A CTS holder is managing installation in a corporate environment where the client has strict IT security policies about network access for AV devices. The most appropriate approach is:

A. Bypass IT security

B. Coordinate with IT security to design AV network integration aligned with their policies, including VLAN, authentication, monitoring, and lifecycle management

C. Use default credentials

D. Install AV on an isolated consumer network

63. A CTS holder is reviewing a proposal where the client has requested both wired and wireless presentation capability. The most appropriate design consideration is:

A. Use only wired

B. Use only wireless

C. Refuse the dual-mode requirement

D. Design with both wired (USB-C, HDMI) and wireless (platform-specific) options, with appropriate user experience design

64. A CTS holder is managing a project where the client has requested real-time telemetry dashboards for the AV fleet. The most appropriate response is:

A. Evaluate the requirement, design the monitoring architecture with appropriate data collection, integration with client's infrastructure, and dashboards aligned with client's operational needs

B. Refuse the request

C. Provide a static report only

D. Use only manufacturer default dashboards

65. A CTS holder is integrating a client's AV system with their enterprise single sign-on environment. The most important consideration is:

A. Bypass SSO with local credentials

B. Use shared passwords

C. Implement SSO using the client's supported protocols (SAML 2.0, OAuth 2.0, OpenID Connect) in coordination with identity management

D. Disable authentication

66. A CTS holder has completed a project and the client has identified a failure during the warranty period. The most appropriate response is:

A. Refuse the warranty claim

B. Investigate the failure, determine the root cause, and address through the warranty or repair process per the contract and vendor warranty terms

C. Require the client to pay for repair

D. Blame the client

67. A CTS holder is reviewing a deployment where a client has requested integration with AI transcription services for meeting documentation. The most important consideration is:

A. Deploy without privacy review

B. Enable unconditionally

C. Use consumer-grade transcription

D. Evaluate the privacy, data residency, security, and regulatory implications; ensure compliance with applicable requirements and client policies

68. A CTS holder is managing a project where the client's acceptance depends on a specific performance test. The test reveals a minor deficiency that can be addressed with DSP tuning. The most appropriate response is:

A. Address the deficiency through DSP tuning, re-test, and document the resolution before completing acceptance

B. Proceed with acceptance despite the deficiency

C. Blame the design

D. Refuse to tune the DSP

69. A CTS holder is reviewing a system where one of the displays has a color drift issue that affects color-critical content review. The most appropriate response is:

A. Ignore the color drift

B. Replace the display without analysis

C. Investigate calibration status, measure actual color performance, and address through recalibration or replacement as appropriate

D. Adjust the display's brightness only

70. A CTS holder has been asked to provide a professional opinion on whether a specific manufacturer's equipment is suitable for a client's application. The most appropriate response is:

A. Provide opinion based on brand preference

B. Evaluate the equipment's specifications against the application's requirements, the manufacturer's support and reliability record, and present a data-driven recommendation

C. Refuse to provide opinion

D. Recommend the cheapest option

71. A CTS holder is managing a complex installation where different phases are installed by different crews. The most appropriate documentation practice is:

A. Skip documentation

B. Document only final phases

C. Use informal notes

D. Maintain consistent documentation throughout the project with updated drawings, as-builts, change records, and handoff documentation

72. A CTS holder is integrating a new room where the client has requested ambient noise measurements as part of commissioning. The most appropriate response is:

A. Measure ambient noise with calibrated instruments at appropriate locations, document results against the room's NC/RC target, and address any deficiencies

B. Rely on subjective impression

C. Skip the measurements

D. Use a consumer-grade app

73. A CTS holder is managing a project where the client has requested that the integrator support their business continuity planning with AV redundancy. The most appropriate approach is:

A. Ignore BC requirements

B. Use only consumer-grade equipment

C. Understand the client's BC requirements, design appropriate redundancy at appropriate levels (power, network, signal, content), and document the BC architecture

D. Use a single manufacturer for all equipment

74. A CTS holder is reviewing a proposal where the client has requested that the system support live streaming to a public platform. The most important consideration is:

A. Use consumer-grade streaming equipment

B. Evaluate streaming platform requirements, encoding capabilities, bandwidth, security, and content rights; design a streaming architecture meeting these requirements

C. Ignore streaming requirements

D. Use only internal streaming

75. A CTS holder is managing a project where the client has discovered that some of the delivered AV equipment has shipping damage. The most appropriate response is:

A. Install the damaged equipment

B. Hide the damage

C. Refuse to handle

D. Document the damage, coordinate with the manufacturer/shipper for replacement, and arrange delivery of new equipment with appropriate schedule impact

76. A CTS holder is reviewing a design where the client has requested that all room equipment be manageable through a central dashboard. The most appropriate design consideration is:

A. Use each room's local management only

B. Ignore the requirement

C. Design with centralized management platform integration, including device inventory, monitoring, alerts, firmware management, and usage analytics

D. Use consumer-grade tools

77. A CTS holder is deploying a cloud-based AV management platform. The most important consideration for compliance with the client's data residency requirements is:

A. Verify the platform's data residency provisions, regional data center options, and compliance with applicable regulations before deployment

B. Use any platform

C. Ignore data residency

D. Use consumer platforms

78. A CTS holder is managing a project where the commissioning has identified that one of the installed devices is not functioning to specification. The most appropriate response is:

A. Accept the degraded performance

B. Troubleshoot systematically, identify the root cause, repair or replace as appropriate, and verify specification compliance before acceptance

C. Hide the issue

D. Blame the manufacturer

79. A CTS holder is reviewing a proposal for a training center with multiple classrooms. The client has requested consistent user experience across all rooms. The most appropriate design approach is:

A. Design each room independently

B. Use the lowest-cost equipment

C. Skip user experience design

D. Develop standardized user interface and workflow across all rooms, with training and documentation reflecting the consistent design

80. A CTS holder has been asked to integrate AV systems with the client's existing enterprise directory service. The most appropriate approach is:

A. Implement using the client's supported directory protocols (LDAP, Active Directory integration), with appropriate user account management and synchronization

B. Use consumer authentication

C. Use shared passwords

D. Skip directory integration

81. A CTS holder is reviewing a system where ambient temperature in the rack area has exceeded specifications due to HVAC issues in the facility. The most appropriate response is:

A. Ignore the temperature issue

B. Use only consumer-grade equipment

C. Coordinate with facilities on HVAC resolution, temporarily shut down non-critical equipment if needed to protect critical equipment, and document the incident

D. Accept the elevated temperatures

82. A CTS holder is managing a project where the client has requested that the AV system be accessible to users with various disabilities. The most appropriate design approach is:

A. Use consumer-grade accessibility features

B. Ignore accessibility

C. Apply only one accessibility feature

D. Implement ADA-compliant features including ALS, captioning capability, accessible user interfaces, and appropriate mounting heights, per applicable standards

83. A CTS holder is managing a project with a client who has not clearly defined some requirements. The most appropriate response is:

A. Assume requirements

B. Proceed without clarification

C. Engage the client to clarify specific unclear requirements through documented requirement elicitation, and update project documentation with the clarifications

D. Refuse the project

84. A CTS holder is reviewing a design for a broadcast facility where audio latency across all paths must be matched within strict tolerances. The most appropriate design consideration is:

A. Use consumer-grade equipment

B. Design the signal chain with matched latency across all paths, use appropriate latency compensation, and verify actual latency against requirements during commissioning

C. Ignore latency requirements

D. Use different signal paths randomly

85. A CTS holder is managing an installation where a specific feature requires client IT to configure their firewall to allow specific ports. The client's IT team has been unresponsive to the request. The most appropriate response is:

A. Bypass the firewall

B. Attempt to configure without IT

C. Proceed without the feature

D. Escalate through appropriate documented channels, explain the impact on the feature, and coordinate with the client's leadership for IT resolution

86. A CTS holder has been asked to evaluate a newly announced AV-over-IP codec for potential deployment. The most appropriate approach is:

A. Research the codec's maturity, ecosystem support, long-term viability, interoperability, and specific fit for the client's requirements, then make an informed recommendation

B. Adopt immediately

C. Reject all new codecs

D. Ignore emerging options

87. A CTS holder is deploying a room with automated PTZ camera preset recall triggered by microphone activity. The system has been working but occasionally misfires. The most likely cause is:

A. The camera has completely failed

B. The network has failed

C. Microphone sensitivity, automatic gain, or processing configuration is triggering presets on non-speech sounds; requires tuning of the trigger logic

D. The display has failed

88. A CTS holder is managing a project where the client has discovered that some equipment will not arrive in time for the scheduled commissioning. The most appropriate response is:

A. Skip the affected equipment

B. Coordinate with the client on the schedule impact, potential partial commissioning, and delivery of remaining equipment for completion, with formal documentation

C. Delay the project indefinitely

D. Install consumer-grade substitutes

89. A CTS holder is reviewing a system where the DSP's acoustic echo cancellation has drifted, causing degraded far-end audio in conferencing. The most appropriate response is:

A. Re-tune the AEC configuration, verify reference routing, and confirm proper operation in representative use conditions

B. Replace the DSP

C. Disable AEC

D. Accept the degradation

90. A CTS holder is managing a global multi-site project where each site has different power infrastructures (220V vs 110V, different outlet types). The most appropriate approach is:

A. Use North American standards globally

B. Ignore regional differences

C. Use consumer-grade equipment

D. Specify equipment appropriately for each region's power standards and outlet types, with regional variations documented

91. A CTS holder is reviewing an installation where the ceiling-mounted ceiling array microphones are picking up excessive HVAC noise. The most appropriate response is:

A. Ignore the noise pickup

B. Coordinate with facilities on HVAC noise reduction, adjust microphone processing (noise reduction, dynamic filtering), and verify acceptable noise floor in meetings

C. Replace the microphone array

D. Disable the microphones

92. A CTS holder is managing a project where the client has requested that the integrator ensure all equipment is registered with the manufacturer for warranty and support. The most appropriate response is:

A. Register only the most expensive equipment

B. Ignore the request

C. Register all equipment per manufacturer requirements, maintain registration documentation, and provide the client with appropriate records

D. Use only informal registration

93. A CTS holder is reviewing a proposed design where the client has requested that the system support emergency notification integration. The most important consideration is:

A. Ignore the emergency requirement

B. Use only consumer-grade equipment

C. Skip integration

D. Design with appropriate integration to the client's emergency notification system, including audio override capability and failover considerations

94. A CTS holder is managing a project where the lifecycle support plan has been requested by the client. The most appropriate content includes:

A. Equipment warranty terms, integrator workmanship warranty, manufacturer support lifecycle, refresh plans, and ongoing support options

B. Marketing materials only

C. Financial data only

D. Skip the request

95. A CTS holder is reviewing an installation where a specific conferencing endpoint has become unreliable after a recent firmware update. The most appropriate response is:

A. Ignore the reliability issue

B. Review the firmware change log, coordinate with the manufacturer on the issue, consider rollback or subsequent updates, and plan remediation aligned with the client's risk tolerance

C. Replace the endpoint immediately

D. Disable the endpoint

96. A CTS holder is managing a project where the client has asked about supporting remote workers in hybrid meetings. The most appropriate design consideration is:

A. Use consumer-grade equipment

B. Ignore remote workers

C. Require remote workers to come onsite

D. Design the room for effective hybrid interaction — appropriate camera framing, microphone coverage, loudspeaker performance, and codec processing for balanced local-remote experience

97. A CTS holder is reviewing a system where the assistive listening system is not providing adequate coverage in the rear of the room. The most appropriate response is:

A. Ignore the coverage issue

B. Accept the limitation

C. Investigate ALS transmitter placement, power, and antenna configuration to achieve uniform coverage per applicable standards

D. Replace with a different technology without analysis

98. A CTS holder is managing a project where the client has requested a comprehensive post-installation training program for their internal support staff. The most appropriate content is:

A. Tailor content to the internal support role — system architecture, common troubleshooting, escalation paths, and maintenance procedures — with reference materials and hands-on practice

B. Provide only user-level training

C. Skip support staff training

D. Provide marketing content only

99. A CTS holder is reviewing a design where the client has requested that the system support future technology expansion. The most appropriate design philosophy is:

A. Hard-code current technology with no flexibility

B. Design with modularity, upgrade paths, and appropriate headroom within cost and architectural constraints while meeting current requirements

C. Over-provision by 500% regardless of need

D. Skip current requirements to focus on future

100. A CTS holder is reviewing a system's overall performance against the original functional requirements. The most appropriate verification approach is:

A. Subjective impression only

B. Manufacturer claims only

C. Systematic verification testing against each functional requirement, with documented results, acceptance criteria, and remediation for any deficiencies

D. Verify only the loudest requirements

SIMULATION EXAM 15 — ANSWER KEY AND FULL EXPLANATIONS

1. C — Examine the microphone coverage pattern, gain structure from mics to codec send, and DSP processing affecting the outbound audio path. When local audio is clear but remote participants hear poor quality, the fault is in the local-to-far-end path — mic coverage, gain to the codec input, and processing affecting transmitted audio. Wholesale equipment replacement, platform changes, or amplifier adjustments don't address the actual signal path carrying the problem.

2. A — Review the occupancy sensor placement, sensitivity configuration, and firmware, with systematic testing across the fleet to identify patterns. Fleet-wide inconsistent sensor behavior requires systematic investigation to identify whether the issue is placement, sensitivity settings, firmware, or environmental conditions across the locations. Wholesale replacement, disabling, or manual operation all fail to address root cause.

3. B — Select cameras with flicker reduction or electronic shutter synchronization and verify on lecture capture quality. 60 Hz LED flicker interacts with camera shutter timing producing visible banding in captured video. Cameras with appropriate shutter sync or flicker reduction processing address the issue directly. Ignoring, darkening the room, or disabling capture don't solve the client's actual need.

4. D — Expedite replacement of the failed amplifier, inform the client of schedule impact, and complete the third room's commissioning before acceptance. Failed-test equipment cannot be included in acceptance without remediation — it must be replaced and re-commissioned. Proceeding despite failure, skipping commissioning, or indefinite delay all fail the project discipline that protects both parties.

5. A — Review the firmware change log, consider rollback options, and coordinate with the manufacturer on any required follow-up. When problems correlate with a specific firmware update, the update is the first suspect. Change log review identifies what changed; rollback or manufacturer coordination produces the appropriate resolution. Equipment replacement or system disabling are disproportionate first responses.

6. C — Implement audit logging with compliance-aligned retention, secure storage, and integration with the client's audit or SIEM system. Financial services audit logging has specific compliance requirements — scope of logged events, retention periods, security controls, and audit accessibility. Aesthetic, cost, or marketing considerations don't meet regulatory compliance requirements.

7. B — Sunlight entering the room affects specific tiles' light sensors or calibration at those positions. Time-of-day-correlated color drift on specific tiles points to environmental influence — sunlight entering the room affecting specific tile sensors or automatic calibration. Neither wholesale wall failure, tampering, nor manufacturing lots explain the time-of-day pattern.

8. D — Measure the new HVAC noise floor, coordinate with mechanical to reduce it, and evaluate whether AV equipment adjustments are also needed. HVAC changes have altered the room's acoustic baseline, requiring measurement of the new condition and coordinated response — both mechanical-side noise reduction and AV-side processing adjustments as appropriate. Equipment replacement or ignoring the change don't address root cause.

9. A — Conduct acoustic measurements at multiple listener positions, verify STIpa, and adjust processing to achieve target coverage uniformity. Complex acoustics require multi-position measurement and iterative adjustment to achieve consistent intelligibility. Single-point measurement, skipping testing, or subjective-only assessment don't verify the engineered performance complex acoustics require.

10. C — Evaluate the loudspeakers' current performance against system requirements and present a recommendation to the client. Legacy equipment decisions require professional evaluation against current requirements, with transparent recommendations to the client. Installing around without evaluation, replacing without discussion, or ignoring all fail the client's informed decision-making.

11. D — Coordinate with IT security to architect the AV cloud integration aligned with zero-trust principles including identity verification and continuous authentication. Zero-trust architecture applies to all networked systems including AV. Coordination with IT security produces compliant integration. Bypassing, ignoring, or using default credentials all violate zero-trust principles.

12. B — Design microphone coverage for both the instructor and student participation areas, with appropriate DSP processing for remote students' audio. Hybrid lecture halls require coverage that captures both instructor and student voices with quality that serves both local and remote audiences. Single-source, wireless-only, or consumer equipment don't meet the multi-use, multi-audience requirement.

13. A — Present replacement analysis including end-of-support implications, support availability, and interoperability with new equipment. Approaching-end-of-support equipment decisions require multi-factor analysis — support implications, spare parts availability, and compatibility with planned upgrades. Blanket retention or replacement without analysis, or refusing the question, all fail the client's decision-making need.

14. D — Develop a firmware management strategy with the client that tests updates before production deployment with appropriate staging and rollback planning. Unmanaged firmware notifications indicate a gap in the client's firmware management. Structured testing and staging approaches reduce the risk of update-induced regressions. Immediate updates, bypass, or replacement don't address the systemic gap.

15. C — Map decision authority levels with the client, document who decides what, and capture appropriate approvals. Delegated decision-making requires clear authority mapping. Unilateral decisions exceed integrator authority; all-decisions-to-top wastes time; single-contact approaches ignore the delegation and create scope-approval confusion.

16. B — Coordinate with the general contractor and adjust AV installation sequencing to follow the ceiling completion, documenting any resulting schedule impact. Construction schedule dependencies require accommodation — AV work follows ceiling work, with appropriate coordination and documentation. Proceeding regardless, cancellation, or refusal all fail the coordination reality of construction projects.

17. A — Design the AV control system to communicate with the DALI lighting system using appropriate gateways or native DALI interfaces per the client's architecture. Smart lighting integration requires understanding the specific protocol (DALI) and designing appropriate integration paths. Separate systems, bypassing, or consumer alternatives don't align with the client's integrated design intent.

18. D — Mechanical wear on the pan/tilt motor, with progressive degradation typical of mechanical aging. Progressive slowness of a PTZ camera over years is characteristic of mechanical wear — bearings, belts, motor components degrade over time. Firmware, network, or control programming issues would produce different symptom patterns.

19. B — Review each jurisdiction's regulatory requirements and design with appropriate variations while maintaining the shared standardization framework. Multi-jurisdictional deployments require balancing standardization with jurisdiction-specific compliance. Uniform designs ignoring regulation or ignoring regional differences both create compliance exposure; bypassing regulations is non-compliant.

20. C — Complete the in-scope items as planned and propose the out-of-scope item as a change order or separate engagement, with appropriate documentation. Mid-acceptance items are handled per their scope status — in-scope items completed, out-of-scope items formally addressed through change control. Refusing all, absorbing all, or ignoring all fail the appropriate professional response.

21. A — Design the system to support both primary uses with appropriate processing, zoning, and configuration options. Multi-purpose spaces require design that supports both primary uses — different processing, zone configurations, and scene modes for each use. Single-use design or skipping design fail one or both uses.

22. D — Coordinate with the Intune administrator to ensure any mobile devices or tablets used for room management comply with Intune policies. Enterprise MDM governs mobile device configuration across the organization; AV-integrated mobile devices must comply. Bypassing, using personal devices, or claiming irrelevance all fail enterprise governance.

23. C — Document the condition, justify the cost impact with evidence, and present options for the client's decision. Cost overruns from unforeseen conditions require transparent communication — documentation, justification, and options. Concealment, blame, or silent absorption all fail the client relationship and contractual discipline.

24. B — Security policy changes have altered authentication tokens or blocked required ports, disrupting the codec's cloud connection. When registration failures correlate with IT security policy changes, the changes are almost certainly the root cause — altered tokens, new firewall rules, or modified authentication methods. Hardware, display, or cable issues don't correlate with security policy timing.

25. A — Develop and document a support agreement including response times, escalation paths, coverage scope, and pricing structure. Long-term support requires formalized agreement with specific terms. Informal arrangements, refusal, or client-direct hiring all fail to establish the structured support relationship the client has requested.

26. B — Explain the coverage limitation to the client, propose alternatives that meet requirements, and document the basis for the recommendation. Client equipment lists may have gaps; the CTS holder's role is professional evaluation and informed recommendation. Installing inadequate equipment, substituting silently, or refusing the project all fail to serve the client's actual interest.

27. D — Test in a non-production environment first, then stage deployment to production with rollback capability and appropriate scheduling. Firmware updates need risk management through staging, testing, and rollback capability — not immediate blanket deployment, untested application, or indefinite deferral. Staged rollout balances security benefits against regression risk.

28. B — Coordinate with all contractors on shared pathway use, cable labeling, and work sequence to prevent damage and rework. Shared-pathway environments require multi-contractor coordination — protecting each other's work and preventing conflicts. Non-coordination, speed-only, or blocking approaches all create problems that cost more time than the coordination itself.

29. C — Develop a standardized room design template with variations for room-specific needs, supported by consistent documentation and training. Multi-room deployments balance standardization (consistent user experience, simplified management) with room-specific adaptation. Independent design per room, lowest-cost, or strict replication all miss the balance.

30. A — Evaluate remaining useful life, support availability, operational risk of failure, and cost of replacement vs. continued operation, then present findings with recommendation. Replace-vs-retain decisions require multi-factor analysis. Recommendations without analysis (either direction) or indefinite deferral fail the client's professional advisory need.

31. D — Process the additional work through a formal change order with appropriate contract amendment, scope definition, cost, and schedule impact. Scope growth of 15% is significant and

requires formal contract treatment. Informal acceptance, absorption, or refusal all fail the professional change control discipline that protects both parties.

32. B — Verify whether the specified line arrays have appropriate dispersion for the room, present an informed recommendation to the client considering both their preference and the acoustic requirements. Client preferences are legitimate inputs but don't override acoustic engineering requirements. Professional evaluation and informed recommendation serve the client's actual success, while silent substitution, ignoring requirements, or refusing all fail appropriate professional practice.

33. A — Investigate the laptop's output level, DSP EQ settings, and source-specific processing to identify and correct the root cause. Source-specific audio issues require systematic investigation of the source-to-output path. Wholesale equipment replacement, source disabling, or compensating processing all fail to address the root cause.

34. C — Evaluate the criticality of the equipment, power reliability in the region, load requirements, and cost/benefit, then recommend appropriate UPS sizing. UPS decisions are context-specific — criticality, power conditions, load, and economics. Blanket recommendations (yes or no) or deferral don't produce a context-informed recommendation.

35. B — The calendar integration is reading meeting start times with imprecise rounding or the trigger threshold is not correctly configured. Early triggering suggests configuration issues — time rounding, trigger thresholds, or scene trigger timing. These are configuration-level issues, not hardware failures like display or network loss.

36. D — Stop affected work, report the concern through documented safety channels, and coordinate with the GC or safety team for resolution before proceeding. Safety concerns override schedule — stopping work and proper reporting protects people. Working around, ignoring, or racing against the concern all violate safety discipline and potentially OSHA requirements.

37. A — Implement HIPAA-required technical and procedural safeguards for any PHI that may be captured, including encryption, access controls, and audit logging. Healthcare recording requires HIPAA-specific controls for PHI. Cheapest, skipping, or generic-standards approaches all fail to meet the regulatory requirement.

38. C — The specific microphone has a preamp failure or cable connection issue. When one microphone produces noise while others are clear, the fault is localized to that microphone's signal path — preamp, cable, or connection. All-mic failure, DSP failure, or amplifier issues would affect multiple microphones.

39. B — Present the cloud platform's SLAs, failover procedures, and any backup capabilities that have been designed into the system. Cloud service continuity questions require honest, substantive response — platform SLAs, fallback procedures, and design considerations. Hiding information, refusing, or claiming perfect service all fail the client's legitimate question.

40. D — Design the system with appropriate redundancy in networking, power, and signal paths aligned with the client's business continuity requirements. Broadcast studios have specific reliability requirements; the design should reflect them. Ignoring, consumer-grade, or cost-cutting approaches all fail to deliver the engineered reliability the application requires.

41. C — Platforms have different levels of interoperability — standards-based (SIP/H.323) with appropriate gateways can bridge, while native integration is platform-specific. Videoconferencing interoperability is nuanced — different platforms offer different bridging approaches. Categorical statements (all or none) misrepresent the technical reality.

42. A — Per-tile calibration drift or LED panel aging that varies by tile due to manufacturing differences or usage patterns. Tile-specific brightness variation in a video wall is characteristic of per-tile calibration drift or aging variations. Network, DSP, or wholesale wall failure would produce different patterns.

43. B — Escalate through appropriate channels, document the impact on schedule and scope, and coordinate with the client on resolution or schedule adjustment. Client-caused delays require transparent communication with appropriate escalation. Proceeding without equipment, silent absorption, or cancellation all fail the project's coordination requirements.

44. D — Design with minimum-latency signal paths, consider low-latency DSP and codec options, and verify actual latency against requirements. Trading floors have strict latency requirements that drive system architecture. Ignoring, using consumer equipment, or accepting any latency all fail the specific operational requirement.

45. C — Evaluate environmental conditions and specify equipment rated for the actual conditions, coordinating with facilities on any modifications. Non-office environments have specific environmental requirements that drive equipment selection. Standard office equipment, refusal, or consumer-grade approaches all fail the environment's operational demands.

46. B — Explain the perspective limitation, propose alternatives with rationale, and engage the client in an informed decision. Client preferences may conflict with technical realities; the CTS holder's role is transparent analysis and informed alternatives. Installing despite inadequacy, refusing, or installing without analysis all fail the client's decision-making need.

47. A — Design and configure each room per its specific platform's requirements, with appropriate certified endpoints and platform-specific management integration. Multi-platform deployments require platform-specific treatment for each room — certified hardware, specific configuration, appropriate management integration. Single-platform standardization, consumer equipment, or refusing all fail the client's operational needs.

48. D — Individual encoder hardware defects, switch backplane or uplink bandwidth saturation, or multicast-specific configuration issues. When specific encoders drop while others continue, the

fault is often localized — specific hardware or bandwidth exceeding capacity at certain conditions. Wholesale failures or no-issue claims don't match the observed pattern.

49. C — Review the firmware change log, identify the specific behavior change, coordinate with the manufacturer and client on appropriate resolution, which may include rollback, configuration adjustment, or UI updates. Post-update behavior changes require investigation and collaborative resolution. Ignoring reports, wholesale replacement, or disabling the panel all fail the remediation the situation requires.

50. A — Evaluate the current system's remaining useful life, feature gap against business needs, upgrade cost, and risk of continuing, then present findings with cost-benefit recommendation. Upgrade-vs-retain decisions require multi-factor analysis that supports informed client decision-making. Recommendations without analysis (either direction) or deferral fail the client's need.

51. D — Implement local recording with appropriate encryption, access controls, retention policies, and backup consistent with the client's data governance. Secure local recording requires multiple controls working together — encryption at rest, access management, retention, and backup alignment with client governance. Default cloud, skipping security, or consumer-grade approaches all fail the client's security requirement.

52. B — Evaluate feasibility of acceleration, identify required tradeoffs (scope, resources, quality), and present options to the client. Schedule acceleration requires feasibility analysis and informed option presentation. Blind commitment, refusal, or acceptance-with-failure-plan all fail the client's decision-making need.

53. A — Conduct bandwidth analysis including per-stream requirements, aggregate bandwidth, switch backplane capacity, and present findings to network team for joint planning. Network team concerns about bandwidth warrant substantive analysis and joint planning — not dismissal, separate-network isolation, or scope reduction.

54. C — Review the integration requirements, identify compatibility gaps, and coordinate with the client on resolution (potentially including platform migration or alternative integration). Integration gaps discovered at commissioning require systematic investigation and client-coordinated resolution. Skipping, accepting limitation, or installing without verification all fail the integration requirement.

55. D — Tailor training to the specific user roles and tasks, focus on common scenarios with reference materials for exceptions, and provide operational confidence. Effective user training matches content to user needs — common tasks with references for exceptions. Exhaustive, skipping, or limited-scope training all fail one or more user groups.

56. A — Research the technology's maturity, interoperability, integration requirements, and actual benefit to the specific use case. Emerging technology evaluation requires professional due

diligence matching capabilities to client needs. Immediate deployment, categorical rejection, or manufacturer-delegated decisions all fail the evaluation standard.

57. C — Implement assistive listening system (FM, IR, induction loop, or hearing aid telecoil support) covering the seating area in compliance with ADA and applicable standards. ADA requires ALS in spaces above specified occupancy serving hearing-impaired users. Louder speakers, personal hearing aids, or larger displays don't address the specific hearing accommodation requirement.

58. B — Establish clear coordination meetings, shared schedules, defined scope boundaries, and documented decisions. Multi-subcontractor coordination requires structured regular communication, shared planning, and documented decisions. Self-coordination, executive-only communication, or no documentation all fail the operational coordination.

59. D — Select a speaker tracking system appropriate for the room geometry, verify coverage analysis, and test accuracy with representative seating configurations. Speaker tracking requires room-appropriate technology, verified coverage, and tested accuracy. Consumer equipment, skipping analysis, or relying solely on preferences all fail the engineering requirements.

60. A — Document the issue, coordinate with the electrical contractor or client for resolution, and plan accordingly. Power outlet position issues require coordination with the responsible party for resolution, not extension cords (code violations) or refusing to proceed (project failure).

61. C — Coordinate with the client and cloud providers to verify data residency compliance, routing, and storage aligned with the jurisdictional requirements. Data residency is a jurisdiction-specific compliance matter requiring documentation and verification. Using any platform, ignoring, or consumer services all fail to meet the client's regulatory requirement.

62. B — Coordinate with IT security to design AV network integration aligned with their policies, including VLAN, authentication, monitoring, and lifecycle management. IT security policies set the framework for AV integration. Bypassing, default credentials, or consumer networks all violate IT governance and create security gaps.

63. D — Design with both wired (USB-C, HDMI) and wireless (platform-specific) options, with appropriate user experience design. Dual-mode presentation is a valid requirement requiring both technologies. Single-mode, refusal, or inadequate design all fail the client's use scenarios.

64. A — Evaluate the requirement, design the monitoring architecture with appropriate data collection, integration with client's infrastructure, and dashboards aligned with client's operational needs. Monitoring dashboards are a scope addition requiring evaluation and design. Refusal, static-only, or default-only approaches all fail the client's stated need.

65. C — Implement SSO using the client's supported protocols (SAML 2.0, OAuth 2.0, OpenID Connect) in coordination with identity management. Enterprise SSO integration aligns with the client's identity management infrastructure using supported protocols. Bypassing, shared passwords, or no authentication all violate enterprise security.

66. B — Investigate the failure, determine the root cause, and address through the warranty or repair process per the contract and vendor warranty terms. Warranty claims require systematic investigation and appropriate resolution per contractual and warranty terms. Refusal, client-pay, or blame-shifting all fail the warranty responsibility.

67. D — Evaluate the privacy, data residency, security, and regulatory implications; ensure compliance with applicable requirements and client policies. AI transcription processes sensitive conversation content requiring specific compliance evaluation. Deployment without review, unconditional enabling, or consumer alternatives all fail compliance requirements.

68. A — Address the deficiency through DSP tuning, re-test, and document the resolution before completing acceptance. Remediable deficiencies found at acceptance must be addressed — test, tune, verify, document. Proceeding with deficiency, blame, or refusing to tune all fail the acceptance standard.

69. C — Investigate calibration status, measure actual color performance, and address through recalibration or replacement as appropriate. Color-critical applications require verification and targeted remediation — measurement, calibration, or replacement based on findings. Ignoring, wholesale replacement, or brightness-only adjustments don't address color accuracy.

70. B — Evaluate the equipment's specifications against the application's requirements, the manufacturer's support and reliability record, and present a data-driven recommendation. Professional equipment opinions require evidence-based analysis, not brand-based or cost-only judgments. Refusing, brand-preference, or cheapest selection all fail to serve the client's need.

71. D — Maintain consistent documentation throughout the project with updated drawings, as-builts, change records, and handoff documentation. Multi-crew projects amplify the need for consistent documentation — everyone works from the same record. Skipping, partial, or informal documentation creates errors and confusion.

72. A — Measure ambient noise with calibrated instruments at appropriate locations, document results against the room's NC/RC target, and address any deficiencies. Ambient noise verification requires calibrated measurement against quantitative targets. Subjective impression, skipping, or consumer apps don't meet the professional standard.

73. C — Understand the client's BC requirements, design appropriate redundancy at appropriate levels (power, network, signal, content), and document the BC architecture. Business continuity integration requires understanding client-specific requirements and engineering appropriate redundancy. Ignoring, consumer-grade, or single-manufacturer approaches don't meet documented BC needs.

74. B — Evaluate streaming platform requirements, encoding capabilities, bandwidth, security, and content rights; design a streaming architecture meeting these requirements. Live streaming to

public platforms involves multiple technical and legal considerations. Consumer equipment, ignoring requirements, or internal-only don't deliver the public streaming capability.

75. D — Document the damage, coordinate with the manufacturer/shipper for replacement, and arrange delivery of new equipment with appropriate schedule impact. Damaged equipment requires systematic response — document, coordinate replacement, accommodate schedule. Installing damaged equipment, concealment, or refusing all fail appropriate professional response.

76. C — Design with centralized management platform integration, including device inventory, monitoring, alerts, firmware management, and usage analytics. Centralized management is a specific architectural approach requiring purposeful design and integration. Room-local only, ignoring, or consumer tools all fail the client's requirement.

77. A — Verify the platform's data residency provisions, regional data center options, and compliance with applicable regulations before deployment. Data residency requires platform-specific verification and documented compliance. Using any platform, ignoring, or consumer services all fail the residency requirement.

78. B — Troubleshoot systematically, identify the root cause, repair or replace as appropriate, and verify specification compliance before acceptance. Specification-deficient devices require systematic remediation. Accepting, concealment, or blame-shifting all fail the specification requirement that governs acceptance.

79. D — Develop standardized user interface and workflow across all rooms, with training and documentation reflecting the consistent design. Consistent UX across rooms requires deliberate design standardization — templates, documentation, training. Independent design, cost-only, or skipping UX all fail the client's consistency requirement.

80. A — Implement using the client's supported directory protocols (LDAP, Active Directory integration), with appropriate user account management and synchronization. Enterprise directory integration uses established protocols and includes account lifecycle management. Consumer authentication, shared passwords, or skipping integration all fail enterprise security.

81. C — Coordinate with facilities on HVAC resolution, temporarily shut down non-critical equipment if needed to protect critical equipment, and document the incident. Elevated temperatures threaten equipment — immediate protection combined with facilities coordination for root cause. Ignoring, consumer equipment, or accepting all risk equipment damage.

82. D — Implement ADA-compliant features including ALS, captioning capability, accessible user interfaces, and appropriate mounting heights, per applicable standards. ADA accessibility requires multiple specific features working together. Consumer features, ignoring, or single-feature approaches all fail ADA requirements.

83. C — Engage the client to clarify specific unclear requirements through documented requirement elicitation, and update project documentation with the clarifications. Unclear requirements require

engagement and documentation — assumptions, proceeding, or refusal don't produce clear requirements or protect the project.

84. B — Design the signal chain with matched latency across all paths, use appropriate latency compensation, and verify actual latency against requirements during commissioning. Matched latency in broadcast requires engineered signal paths and compensation, with commissioning verification. Consumer equipment, ignoring, or random signal paths all fail broadcast standards.

85. D — Escalate through appropriate documented channels, explain the impact on the feature, and coordinate with the client's leadership for IT resolution. IT unresponsiveness requires escalation through proper channels, not bypassing (violates policy), unauthorized configuration, or feature abandonment.

86. A — Research the codec's maturity, ecosystem support, long-term viability, interoperability, and specific fit for the client's requirements, then make an informed recommendation. Emerging codec evaluation requires multi-dimensional analysis. Immediate adoption, categorical rejection, or ignoring emerging options all fail the evaluation standard.

87. C — Microphone sensitivity, automatic gain, or processing configuration is triggering presets on non-speech sounds; requires tuning of the trigger logic. Automation misfires suggest configuration tuning — sensitivity, gating, or processing thresholds. Hardware failures (camera, network, display) produce different symptom patterns.

88. B — Coordinate with the client on the schedule impact, potential partial commissioning, and delivery of remaining equipment for completion, with formal documentation. Delayed equipment delivery requires client coordination on partial commissioning and completion planning. Skipping, indefinite delay, or consumer substitutes all fail the client's actual need.

89. A — Re-tune the AEC configuration, verify reference routing, and confirm proper operation in representative use conditions. AEC drift requires systematic tuning — configuration review, reference verification, and validation testing. Replacement, disabling, or accepting degradation all fail the remediation requirement.

90. D — Specify equipment appropriately for each region's power standards and outlet types, with regional variations documented. Global deployment requires region-specific power handling. Uniform global standards, ignoring regional differences, or consumer equipment all fail the regional power realities.

91. B — Coordinate with facilities on HVAC noise reduction, adjust microphone processing (noise reduction, dynamic filtering), and verify acceptable noise floor in meetings. Excessive HVAC pickup requires both facilities-side noise reduction and AV-side processing adjustments. Ignoring, wholesale replacement, or disabling all fail the resolution requirement.

92. C — Register all equipment per manufacturer requirements, maintain registration documentation, and provide the client with appropriate records. Complete manufacturer registration is a standard

expectation for warranty and support. Selective, ignoring, or informal registration all fail the client's need for complete equipment records.

93. D — Design with appropriate integration to the client's emergency notification system, including audio override capability and failover considerations. Emergency notification integration is a safety requirement with specific design needs. Ignoring, consumer equipment, or skipping all fail the safety integration requirement.

94. A — Equipment warranty terms, integrator workmanship warranty, manufacturer support lifecycle, refresh plans, and ongoing support options. Lifecycle support plans require comprehensive content — warranties from both sides, manufacturer support timeline, refresh planning, ongoing support. Marketing, financial-only, or skipping don't address the operational need.

95. B — Review the firmware change log, coordinate with the manufacturer on the issue, consider rollback or subsequent updates, and plan remediation aligned with the client's risk tolerance. Firmware-caused reliability issues require structured response — change review, manufacturer coordination, and risk-informed remediation planning.

96. D — Design the room for effective hybrid interaction — appropriate camera framing, microphone coverage, loudspeaker performance, and codec processing for balanced local-remote experience. Hybrid meetings require purposeful design across multiple dimensions. Consumer equipment, ignoring remote workers, or requiring onsite attendance all fail the hybrid workforce reality.

97. C — Investigate ALS transmitter placement, power, and antenna configuration to achieve uniform coverage per applicable standards. ALS coverage issues require systematic investigation — placement, power, and antenna configuration. Ignoring, accepting, or wholesale technology change all fail the coverage standard.

98. A — Tailor content to the internal support role — system architecture, common troubleshooting, escalation paths, and maintenance procedures — with reference materials and hands-on practice. Internal support staff training has specific content needs different from end-user training. User-only, skipping, or marketing content all fail the support staff's actual responsibilities.

99. B — Design with modularity, upgrade paths, and appropriate headroom within cost and architectural constraints while meeting current requirements. Future-readiness requires balanced design — reasonable modularity within constraints, not hard-coding or extreme overbuilding. Current-requirement skipping fails the immediate need.

100. C — Systematic verification testing against each functional requirement, with documented results, acceptance criteria, and remediation for any deficiencies. Professional verification requires comprehensive testing against requirements with documented results. Subjective, manufacturer-claim-based, or selective verification all fail the professional standard.