PRACTICE EXAM 18: CFM SIMULATION

PRACTICE EXAM 18 — QUESTIONS 1–100

Time Limit: 3 hours · 100 Questions · 4-Option Multiple Choice

Domain Distribution: 10 questions per domain across all 10 official CFM domains

Format Note: This exam emphasizes comparative discrimination questions requiring candidates to distinguish between two or more similar concepts, frameworks, methodologies, or approaches. Difficulty is moderate-to-higher through the requirement of fine-grained conceptual discrimination, distinct from prior exams' single-concept identification or scenario-based formats.

1. The primary distinction between strategic facility planning and tactical facility planning is that strategic planning:

A. Focuses on shorter time horizons typically up to 12 months

B. Addresses operational metrics and daily performance management

C. Documents vendor selection criteria and procurement processes

D. Translates organizational strategy into long-term facility implications

2. The primary distinction between Recovery Time Objective and Recovery Point Objective is that RTO measures:

A. The acceptable data loss expressed as time before disruption occurs

B. The target timeframe within which a function must be restored

C. The frequency at which backup systems must be tested for validation

D. The estimated duration of typical disruption events affecting facility

3. The primary distinction between Scope 1 and Scope 2 emissions in the GHG Protocol is that Scope 1:

A. Includes direct emissions from owned or controlled sources

B. Includes value chain emissions from supplier and customer activities

C. Includes purchased energy consumption from utility providers

D. Includes excluded emissions from organizational reporting

4. The primary distinction between Cost Performance Index and Schedule Performance Index is that CPI measures:

A. Performance against planned project timelines and milestones

B. Performance against planned project resource utilization patterns

C. Cost performance against earned value relative to actual cost

D. Quality performance against established project quality standards

5. The primary distinction between preventive maintenance and predictive maintenance is that predictive maintenance:

A. Performs maintenance at fixed time or runtime intervals

B. Performs maintenance only after equipment failure has occurred

C. Eliminates the need for any scheduled maintenance activities

D. Uses condition monitoring to determine maintenance timing

6. The primary distinction between elimination and substitution in the hierarchy of controls is that elimination:

A. Removes the hazard entirely from the workplace environment

B. Replaces the hazard with a less hazardous alternative consistently

C. Uses engineering controls to isolate workers from the hazard

D. Provides personal protective equipment to reduce exposure

7. The primary distinction between Triple Net (NNN) and Modified Gross lease structures is that Triple Net requires the tenant to pay:

A. Only base rent without any pass-through expense responsibility

B. Base rent plus utilities and janitorial services exclusively

C. Base rent plus property taxes, insurance, and maintenance

D. Base rent plus marketing costs and tenant improvement allowances

8. The primary distinction between Construction Manager at Risk and Design-Build delivery is that CMAR provides:

A. Single point of responsibility for both design and construction

B. Preconstruction expertise during design with construction phase guarantee

C. Multi-party contract with shared risk and reward structure

D. Long-term operational integration with design and construction

9. The primary distinction between Design-Build and Integrated Project Delivery is that IPD provides:

A. Single point of responsibility for both design and construction

B. Preconstruction expertise during design with construction phase guarantee

C. Sequential procurement with competitive bidding processes

D. Multi-party contract with shared risk and reward structure

10. The primary distinction between LEED and WELL Building certification is that WELL certification focuses on:

A. Occupant health, comfort, and wellness outcomes systematically

B. Energy efficiency and environmental impact reduction primarily

C. Construction waste diversion and recycling rate achievement

D. Stormwater management and site sustainability practices

11. The primary distinction between leading and lagging indicators in performance management is that leading indicators:

A. Measure outcomes that have already occurred in the past

B. Provide retrospective analysis of completed performance results

C. Predict future performance through input or activity measurement

D. Document historical patterns for future reference and analysis

12. The primary distinction between criterion-referenced and norm-referenced exam scoring is that criterion-referenced scoring:

A. Compares candidate performance to peer cohort percentile rankings

B. Determines pass-fail based on minimum knowledge competency standard

C. Ranks candidates based on relative performance in the cohort

D. Establishes pass thresholds based on candidate performance distribution

13. The primary distinction between qualitative and quantitative risk assessment is that quantitative assessment:

A. Uses numerical probability and impact scoring with statistical analysis

B. Uses descriptive likelihood and consequence categorization without numbers

C. Uses subject matter expert judgment without structured methodology

D. Uses historical narrative without forward-looking analytical framework

14. The primary distinction between mitigation and preparedness in emergency management is that mitigation:

A. Focuses on response coordination during active emergency events

B. Focuses on recovery activities following emergency event conclusion

C. Focuses on training and resource readiness for potential events

D. Focuses on reducing the likelihood or consequences of emergencies

15. The primary distinction between an SLA and a KPI is that an SLA:

A. Measures internal performance against organizational objectives

B. Tracks employee productivity across various operational dimensions

C. Defines measurable performance commitments between two parties

D. Reports historical financial performance against budget targets

16. The primary distinction between a project charter and a project plan is that a project charter:

A. Formally authorizes the project and defines high-level purpose

B. Documents detailed work breakdown structures and task assignments

C. Establishes daily work schedules and resource utilization patterns

D. Records vendor pricing negotiations and procurement details

17. The primary distinction between the Critical Path Method and PERT is that PERT:

A. Identifies the longest sequence of dependent project activities

B. Uses probabilistic time estimates for activities with uncertainty

C. Calculates float for non-critical project activities exclusively

D. Documents historical project schedules for future reference

18. The primary distinction between contingency reserve and management reserve is that management reserve:

A. Addresses known risks identified during project planning

B. Is included in the cost baseline managed by the project manager

C. Is reduced as identified risks are addressed during execution

D. Addresses unknown risks not identified during project planning

19. The primary distinction between quality assurance and quality control is that quality assurance:

A. Verifies actual outputs against established quality requirements

B. Inspects completed deliverables for conformance to specifications

C. Prevents defects through process design and management

D. Documents quality outcomes for reporting and analysis

20. The primary distinction between a Pareto chart and a histogram is that a Pareto chart:

A. Identifies the vital few causes producing the majority of problems

B. Shows distribution of data across measurement ranges in bars

C. Tracks process variation against statistical control limits over time

D. Maps cause-and-effect relationships through hierarchical structures

21. The primary distinction between SWOT analysis and PESTLE analysis is that SWOT analysis:

A. Examines external macro factors including political and economic

B. Evaluates technological and legal environment systematically

C. Evaluates internal strengths and weaknesses with external opportunities and threats

D. Maps stakeholder influence and interest patterns systematically

22. The primary distinction between integrated facility management and outsourced facility management is that integrated facility management:

A. Coordinates multiple facility functions through unified governance

B. Transfers all facility responsibility to external service providers

C. Eliminates internal facility staff in favor of vendor relationships

D. Reduces facility costs through service category consolidation

23. The primary distinction between a chargeback model and a cost allocation model is that a chargeback model:

A. Distributes facility costs across departments without billing structure

B. Documents facility costs without recovery from consuming departments

C. Allocates facility costs through accounting entries without billing

D. Bills consuming departments for facility services to incentivize behavior

24. The primary distinction between life cycle cost analysis and total cost of ownership is that LCC analysis:

A. Focuses exclusively on initial acquisition cost without operations

B. Captures acquisition, operation, maintenance, and disposition costs

C. Documents historical costs without forward-looking projection

D. Calculates depreciation expense for accounting reporting purposes

25. The primary distinction between strategic value and operational value in vendor management is that strategic value addresses:

A. Long-term competitive positioning and organizational alignment

B. Short-term cost reduction through efficient service delivery

C. Day-to-day service quality and operational consistency

D. Administrative efficiency in vendor relationship management

26. The primary distinction between space utilization and space allocation is that space utilization measures:

A. The space assigned to specific organizational functions or departments

B. The total square footage available across the facility portfolio

C. The actual use of allocated space relative to capacity

D. The cost per square foot across different facility locations

27. The primary distinction between service level agreement and operating level agreement is that an SLA addresses:

A. Internal team coordination across organizational departments

B. Vendor relationship management within procurement processes

C. Cost allocation across departmental cost center categories

D. Performance commitments between service provider and consumer

28. The primary distinction between a PPM (planned preventive maintenance) and CBM (condition-based maintenance) is that PPM is performed:

A. At fixed time or runtime intervals regardless of asset condition

B. Only when condition monitoring indicates potential failure

C. After equipment failure to restore operational capability

D. Through continuous monitoring without scheduled intervention

29. The primary distinction between a CMMS and an IWMS is that an IWMS:

A. Focuses exclusively on maintenance management functions

B. Integrates space, asset, real estate, and maintenance management

C. Manages only real estate transactions and lease administration

D. Tracks vendor relationships and procurement activities exclusively

30. The primary distinction between a tabletop exercise and a functional exercise is that a functional exercise:

A. Involves discussion-based scenario walk-through without operational activity

B. Documents emergency procedures for future reference and review

C. Tests operational capability through simulated emergency response

D. Reviews emergency plan content without scenario-based engagement

31. The primary distinction between Failure Modes and Effects Analysis and Fault Tree Analysis is that FMEA:

A. Traces failure causes backward through hierarchical decomposition

B. Maps potential consequences of initiating events through pathways

C. Visualizes risk causes, controls, and consequences in bowtie format

D. Identifies failure modes systematically through forward analysis

32. The primary distinction between Six Sigma DMAIC and DMADV is that DMAIC focuses on:

A. Improving existing processes to reduce variation and defects

B. Designing new processes from scratch with quality built in

C. Documenting historical process performance without improvement

D. Implementing technology platforms across the organization

33. The primary distinction between a balanced scorecard and a strategy map is that a balanced scorecard:

A. Visualizes cause-effect relationships across strategic objectives

B. Documents historical performance without forward-looking measurement

C. Measures performance across financial, customer, internal process, and learning perspectives

D. Plans long-term strategic initiatives across multiple time horizons

34. The primary distinction between a kanban board and a Gantt chart is that a kanban board:

A. Shows project activity dependencies across calendar time

B. Visualizes workflow and limits work in progress through process stages

C. Tracks resource utilization across multiple project phases

D. Documents project costs against budget across measurement periods

35. The primary distinction between agile and waterfall project methodologies is that agile:

A. Manages projects through sequential phase completion only

B. Documents requirements completely before execution begins

C. Plans all activities in detail before any execution occurs

D. Manages projects through iterative cycles with evolving requirements

36. The primary distinction between fixed-price and cost-plus contracting is that fixed-price contracts:

A. Place cost risk on the contractor for defined scope delivery

B. Reimburse contractors for actual costs plus a fee component

C. Pay contractors based on hourly rates and material costs

D. Provide bonuses for performance achievement against targets

37. The primary distinction between RTO and MTPD in business continuity is that MTPD represents:

A. The target timeframe within which a function must be restored

B. The acceptable data loss expressed as time before disruption

C. The maximum tolerable period of disruption before unacceptable consequences

D. The estimated duration of typical disruption events affecting facility

38. The primary distinction between BIM Level of Development 200 and LOD 400 is that LOD 400:

A. Provides generic representations with approximate quantities and shapes

B. Provides detailed representations suitable for fabrication and assembly

C. Documents existing conditions through laser scanning and survey

D. Maps strategic facility requirements before design begins

39. The primary distinction between vertical integration and horizontal integration in facility management is that vertical integration:

A. Coordinates similar functions across multiple facility locations

B. Combines multiple service categories at single facility location

C. Distributes facility services across multiple vendor providers

D. Combines multiple stages of service delivery within facility function

40. The primary distinction between a service blueprint and a process map is that a service blueprint:

A. Visualizes service delivery across customer-facing and back-stage activities

B. Documents process steps without distinguishing customer interaction

C. Maps decision points without representing customer experience

D. Tracks process performance against established quality standards

41. The primary distinction between change management and project management is that change management:

A. Manages project scope, schedule, and budget execution systematically

B. Manages organizational and individual transitions through change adoption

C. Documents project deliverables for stakeholder review and approval

D. Tracks project resource utilization across measurement periods

42. The primary distinction between Kotter's eight-step change model and ADKAR is that ADKAR focuses on:

A. Leading large-scale organizational change through structured stages

B. Aligning organizational elements through systematic transformation

C. Managing change through unfreeze-change-refreeze stage progression

D. Managing individual change progression through psychological stages

43. The primary distinction between transformational leadership and transactional leadership is that transformational leadership:

A. Inspires followers through vision and intrinsic motivation

B. Manages followers through reward and punishment exchanges

C. Focuses on task completion through structured oversight

D. Documents performance against established work standards

44. The primary distinction between a stakeholder map and a stakeholder register is that a stakeholder map:

A. Documents stakeholder contact information and communication preferences

B. Lists all project stakeholders with their roles and responsibilities

C. Visualizes stakeholder influence and interest through plotting

D. Tracks stakeholder engagement activities across project phases

45. The primary distinction between push and pull communication strategies is that pull communication:

A. Distributes information to stakeholders through direct delivery

B. Makes information available for stakeholders to access as needed

C. Requires stakeholder confirmation of information receipt and understanding

D. Documents communication delivery through formal acknowledgment

46. The primary distinction between transactional and transformational vendor relationships is that transformational relationships:

A. Focus on price and service delivery for specific transactions

B. Operate through standardized contract terms without customization

C. Use competitive bidding to select vendors for each transaction

D. Develop strategic partnership with shared objectives and innovation

47. The primary distinction between operational expenditure and capital expenditure is that capital expenditure:

A. Represents long-term asset investment depreciated over useful life

B. Represents recurring operational costs expensed in current period

C. Represents short-term inventory purchases consumed during operations

D. Represents administrative overhead allocated across operations

48. The primary distinction between net present value and internal rate of return is that NPV:

A. Identifies the discount rate at which project value equals zero

B. Calculates the time required to recover initial investment outlay

C. Calculates the dollar value of investment at present time

D. Expresses returns as percentage of initial investment cost

49. The primary distinction between strategic sourcing and tactical procurement is that strategic sourcing:

A. Focuses on individual transaction processing without strategic alignment

B. Manages day-to-day purchase orders for routine operational needs

C. Documents historical procurement without forward-looking analysis

D. Develops long-term supply strategy aligned with organizational objectives

50. The primary distinction between insource and outsource decisions is that outsource decisions:

A. Develop internal capability for service delivery within the organization

B. Transfer service responsibility to external providers through contract

C. Combine internal and external resources without clear responsibility

D. Document service delivery without specific provider identification

51. The primary distinction between GBAC STAR accreditation and ISO 9001 certification is that GBAC STAR specifically addresses:

A. Cleaning, disinfection, and infectious disease prevention protocols

B. Quality management system requirements across industries

C. Environmental management system requirements universally

D. Occupational health and safety management requirements

52. The primary distinction between thermal comfort and indoor air quality is that thermal comfort addresses:

A. Pollutant concentration levels and air filtration system effectiveness

B. Outdoor air ventilation rates and air change frequency in spaces

C. Temperature, humidity, airspeed, and radiant condition combinations

D. Microbial contamination and water management across building systems

53. The primary distinction between ASHRAE Standard 90.1 and ASHRAE Standard 62.1 is that Standard 90.1 addresses:

A. Water management plans for Legionella risk in building water systems

B. Thermal comfort temperature and humidity ranges for occupied spaces

C. Outdoor air ventilation rates for indoor air quality requirements

D. Energy efficiency standards for commercial building operations

54. The primary distinction between NFPA 101 and NFPA 70 is that NFPA 101 addresses:

A. Life safety and means of egress requirements for buildings

B. Electrical installation requirements for commercial facilities

C. Fire alarm and signaling code requirements systematically

D. Inspection of water-based fire protection systems specifically

55. The primary distinction between ADA Title I and ADA Title III is that Title III addresses:

A. Employment discrimination and reasonable accommodation requirements

B. Public sector facility accessibility and program access requirements

C. Public accommodations and commercial facility accessibility requirements

D. Telecommunications relay services and accessibility requirements

56. The primary distinction between NIOSH and OSHA is that OSHA:

A. Conducts research on occupational hazards without enforcement authority

B. Establishes and enforces workplace safety regulations and standards

C. Provides industrial hygiene consultation without regulatory authority

D. Develops safety training materials without enforcement responsibility

57. The primary distinction between Crime Prevention Through Environmental Design and physical security is that CPTED:

A. Uses guards, locks, and surveillance equipment for protection

B. Implements electronic access control systems across facilities

C. Provides reactive security response to identified incidents

D. Uses environmental design principles to reduce crime opportunity

58. The primary distinction between a fire alarm system and a fire suppression system is that a fire alarm system:

A. Detects and signals fire conditions for occupant notification

B. Extinguishes fires through water or chemical agent application

C. Compartmentalizes fires through passive barrier construction

D. Manages smoke movement through mechanical ventilation systems

59. The primary distinction between a wet pipe sprinkler system and a dry pipe sprinkler system is that a dry pipe system:

A. Contains water in pipes ready for immediate discharge

B. Uses foam concentrate as the suppression agent exclusively

C. Contains pressurized air or nitrogen rather than water in pipes

D. Releases suppression agent through pre-action valve activation

60. The primary distinction between Class A and Class B fires is that Class B fires involve:

A. Ordinary combustibles such as wood, paper, and cloth

B. Flammable liquids such as gasoline, oil, and grease

C. Energized electrical equipment and wiring systems

D. Combustible metals such as magnesium and titanium

61. The primary distinction between functional programming and detailed design is that functional programming:

A. Defines design requirements before construction begins

B. Specifies detailed dimensions and materials for construction

C. Documents construction-phase activities and procedures

D. Records as-built conditions for facility operations support

62. The primary distinction between churn rate and absorption rate in real estate is that churn rate measures:

A. The pace at which new space is leased to tenants

B. The rate of vacancy across the real estate portfolio

C. The frequency of internal moves and reconfigurations

D. The age of facility infrastructure across the portfolio

63. The primary distinction between gross floor area and rentable area is that gross floor area:

A. Represents the leasable area available for tenant occupancy

B. Includes all enclosed building space within exterior walls

C. Excludes mechanical, electrical, and circulation spaces consistently

D. Represents only the directly assigned office workspace area

64. The primary distinction between common area maintenance and operating expenses is that CAM addresses:

A. Property tax assessments and insurance premium costs

B. Capital improvements and major building renovation projects

C. Utility costs and direct space-specific operational charges

D. Shared building space maintenance and operational costs

65. The primary distinction between a sale-leaseback and a synthetic lease is that a sale-leaseback:

A. Transfers ownership of an asset to a buyer with subsequent leaseback

B. Creates off-balance-sheet financing through tax-advantaged structure

C. Combines purchase and lease provisions through hybrid arrangement

D. Documents lease provisions without transferring ownership rights

66. The primary distinction between hot desking and hoteling is that hoteling:

A. Provides assigned workstations to specific employees only

B. Allows first-come first-served workspace selection without reservations

C. Requires reservations for workspace use through booking system

D. Eliminates workspace concept in favor of mobile work approaches

67. The primary distinction between activity-based working and free address is that activity-based working:

A. Provides assigned workstations based on organizational hierarchy

B. Provides workspace types matched to specific work activity requirements

C. Allows employees to choose any available workspace without restriction

D. Eliminates physical workspace through complete remote work arrangements

68. The primary distinction between a touchdown space and a focus room is that a focus room provides:

A. Brief work pause space without intensive concentration support

B. Open collaboration area for team interaction and discussion

C. Casual meeting space for informal stakeholder conversations

D. Quiet enclosed space for concentrated individual work activity

69. The primary distinction between a digital twin and BIM is that a digital twin:

A. Provides real-time operational mirror of physical asset performance

B. Documents construction-phase model for design coordination

C. Records as-built conditions for facility operations support

D. Maps strategic facility requirements before design begins

70. The primary distinction between IoT sensors and BAS sensors is that IoT sensors:

A. Connect through traditional building automation network protocols

B. Operate exclusively within building automation system architecture

C. Connect through internet protocols often deployed independently of BAS

D. Require building automation system platform for data communication

71. The primary distinction between cybersecurity governance and cybersecurity operations is that cybersecurity governance:

A. Implements technical controls for cyber threat detection and response

B. Conducts security incident response and threat investigation activities

C. Manages security operations center daily monitoring and alert response

D. Establishes policies, standards, and oversight for cybersecurity programs

72. The primary distinction between OT (Operational Technology) and IT (Information Technology) is that OT:

A. Manages enterprise data systems and business application platforms

B. Manages physical equipment and industrial control systems

C. Provides communication infrastructure for office productivity tools

D. Implements security controls for enterprise data protection systems

73. The primary distinction between a Tier I and Tier IV data center is that Tier IV provides:

A. Fault tolerance with concurrent maintainability and dual-powered components

B. Basic capacity with single power and cooling distribution paths

C. Redundant capacity components with single distribution paths

D. Concurrent maintainability with multiple distribution paths

74. The primary distinction between RPO and MAO in business continuity is that MAO represents:

A. The maximum acceptable downtime for restoration to occur

B. The acceptable data loss expressed as time before disruption

C. The estimated duration of typical disruption events affecting facility

D. The maximum acceptable outage time before unacceptable consequences

75. The primary distinction between a hot site and a cold site in disaster recovery is that a hot site:

A. Provides empty space requiring equipment installation after disaster

B. Provides space with basic infrastructure but no operational systems

C. Provides fully operational alternate site ready for immediate use

D. Provides shared facility space with multiple participating organizations

76. The primary distinction between a Net Zero Energy building and a Net Zero Carbon building is that Net Zero Carbon:

A. Balances total carbon emissions including embodied and operational

B. Balances on-site renewable energy generation with energy consumption

C. Eliminates all energy consumption through passive design exclusively

D. Reduces energy consumption to zero through operational efficiency

77. The primary distinction between Scope 3 emissions and Scope 1 emissions is that Scope 3:

A. Includes direct emissions from owned or controlled sources

B. Includes value chain emissions from supplier and customer activities

C. Includes purchased energy consumption from utility providers

D. Includes refrigerant leakage from owned cooling equipment

78. The primary distinction between embodied carbon and operational carbon is that embodied carbon represents:

A. Carbon emissions from building energy consumption during operations

B. Carbon emissions from building utility services during occupancy

C. Carbon emissions from building maintenance activities during operations

D. Carbon emissions from building materials, construction, and disposal

79. The primary distinction between a Power Purchase Agreement and a Renewable Energy Certificate is that a PPA:

A. Provides long-term contractual commitment for renewable energy purchase

B. Documents historical renewable energy generation without commitment

C. Trades renewable energy attributes separately from physical energy

D. Provides short-term spot market purchases of renewable energy

80. The primary distinction between an energy audit and a retrocommissioning is that retrocommissioning:

A. Identifies energy efficiency opportunities through systematic assessment

B. Documents historical energy consumption without operational changes

C. Optimizes existing building systems to perform as originally intended

D. Conducts new building commissioning during construction phase

81. The primary distinction between strategic-level facility communication and tactical-level facility communication is that strategic-level communication:

A. Documents daily operational activities and routine status updates

B. Records specific work order completion and maintenance activities

C. Translates facility decisions into organizational strategic context

D. Provides routine reporting on facility operational metrics

82. The primary distinction between a facility manager's strategic role and tactical role is that the strategic role:

A. Connects facility decisions to organizational outcomes and direction

B. Manages day-to-day work order completion and vendor coordination

C. Documents facility activities for routine operational reporting

D. Implements specific maintenance procedures and operational tasks

83. The primary distinction between Bottom Line Up Front and traditional narrative communication is that BLUF:

A. Provides chronological background before reaching conclusions

B. Documents detailed analysis before presenting recommendations

C. Records historical context before introducing current situation

D. Leads with conclusions and recommendations before supporting detail

84. The primary distinction between formal and informal communication channels is that formal channels:

A. Operate through organizational hierarchy with documented protocols

B. Operate through personal relationships without structured protocols

C. Bypass organizational hierarchy through direct peer interactions

D. Document only technical content without administrative protocols

85. The primary distinction between change communication and change implementation is that change communication:

A. Builds awareness, understanding, and commitment for change adoption

B. Executes specific operational changes through structured implementation

C. Documents change activities without engagement of affected stakeholders

D. Tracks change progress without addressing stakeholder communication

86. The primary distinction between active listening and passive listening is that active listening:

A. Receives information without engagement or feedback to speakers

B. Documents communication content without verification of understanding

C. Provides feedback without acknowledgment of speaker perspective

D. Engages with speaker through verification, questioning, and reflection

87. The primary distinction between IFMA Code of Conduct integrity and competence principles is that integrity addresses:

A. Provision of services within demonstrated capability and qualification

B. Maintenance of professional credentials and continuous learning

C. Honesty and fairness without misleading parties in professional practice

D. Documentation of professional decisions for organizational review

88. The primary distinction between negotiation and mediation is that mediation:

A. Involves direct negotiation between parties without third-party assistance

B. Uses neutral third-party facilitator to support party agreement

C. Imposes binding decisions on disputing parties through arbitration

D. Documents party positions without facilitation of agreement

89. The primary distinction between a competency model and a job description is that a competency model:

A. Identifies the knowledge, skills, and behaviors required for performance

B. Documents specific tasks and responsibilities for job performance

C. Records reporting relationships and organizational hierarchy positions

D. Specifies compensation ranges and benefits for positions held

90. The primary distinction between coaching and mentoring is that mentoring:

A. Focuses on specific skill development through structured instruction

B. Provides performance feedback through observation and assessment

C. Addresses immediate task completion through direct supervision

D. Provides long-term career development through experienced guidance

91. The primary distinction between Total Quality Management and Six Sigma is that Six Sigma specifically focuses on:

A. Long-term cultural transformation through quality philosophy adoption

B. Comprehensive quality integration across organizational functions

C. Statistical reduction of variation and defects through structured methodology

D. Customer satisfaction improvement through quality emphasis

92. The primary distinction between ISO 9001 and ISO 14001 is that ISO 14001 addresses:

A. Environmental management systems for organizational sustainability

B. Quality management systems for product and service quality

C. Occupational health and safety management requirements

D. Information security management systems for data protection

93. The primary distinction between continuous improvement and breakthrough improvement is that breakthrough improvement:

A. Achieves incremental improvements through ongoing operational adjustment

B. Achieves significant performance gains through fundamental change

C. Documents historical performance without specific improvement focus

D. Tracks performance metrics without structured improvement methodology

94. The primary distinction between a policy and a procedure is that a procedure:

A. Establishes organizational position on specific issues for guidance

B. Documents organizational values without operational specificity

C. Provides general direction without specific implementation steps

D. Specifies step-by-step actions for implementing organizational direction

95. The primary distinction between a standard and a guideline is that a standard:

A. Establishes mandatory requirements for compliance and conformance

B. Provides recommended best practice without mandatory compliance

C. Documents historical practice without forward-looking direction

D. Suggests potential approaches without specific recommendation

96. The primary distinction between ENERGY STAR Portfolio Manager and ASHRAE Building Energy Quotient is that Portfolio Manager:

A. Provides letter grade ratings based on building performance assessment

B. Provides design-only ratings without operational performance measurement

C. Provides 1-100 percentile scores based on actual operational energy use

D. Provides certification tier ratings based on building operational achievement

97. The primary distinction between operational benchmarking and strategic benchmarking is that strategic benchmarking:

A. Compares operational metrics against industry peer performance

B. Documents historical performance without comparison to peers

C. Tracks performance metrics without specific peer comparison framework

D. Compares strategic positioning against best-in-class organizational practices

98. The primary distinction between key performance indicators and key risk indicators is that key risk indicators:

A. Measure performance achievement against organizational objectives

B. Provide early warning of potential risk emergence and exposure

C. Document historical performance without forward-looking analysis

D. Track financial outcomes without operational risk consideration

99. The primary distinction between a SIPOC diagram and a process flowchart is that a SIPOC diagram:

A. Documents detailed process steps with decision points

B. Maps process activities through standardized symbol representation

C. Provides high-level overview of Suppliers, Inputs, Process, Outputs, and Customers

D. Tracks process performance against established quality standards

100. The primary distinction between Earned Value Management and traditional project tracking is that EVM:

A. Integrates cost and schedule performance through earned value measurement

B. Documents historical project costs without schedule integration analysis

C. Tracks project schedule performance without cost integration consideration

D. Records project resource utilization without performance measurement framework

PRACTICE EXAM 18 — ANSWER KEY AND FULL EXPLANATIONS

1. D — Strategic facility planning translates organizational strategy into long-term facility implications, typically across 3-10 year horizons. Strategic plans connect facility decisions to organizational direction, while tactical plans address shorter-term operational implementation. Short horizons, operational metrics, and procurement criteria are tactical concerns rather than strategic.

2. B — RTO measures the target timeframe within which a function must be restored after disruption. RPO measures acceptable data loss expressed as time. The two metrics address different continuity dimensions and are derived from Business Impact Analysis to guide continuity investment.

3. A — Scope 1 emissions are direct emissions from sources owned or controlled by the organization, including onsite combustion and refrigerant leakage. Scope 2 covers purchased energy, and Scope 3 covers value chain activities. The three-scope framework provides standardized carbon measurement methodology.

4. C — Cost Performance Index measures cost performance against earned value relative to actual cost (EV/AC). Schedule Performance Index measures schedule performance (EV/PV). The two indices address different project performance dimensions and are foundational to Earned Value Management.

5. D — Predictive maintenance uses condition monitoring to determine maintenance timing based on actual equipment condition. Time-based PM operates at fixed intervals regardless of condition. The distinction is fundamental to maintenance strategy selection based on asset characteristics.

6. A — Elimination removes the hazard entirely from the workplace, while substitution replaces the hazard with a less hazardous alternative. Elimination is the most preferred level in the hierarchy of controls because it eliminates the source of risk entirely. Substitution, engineering controls, and PPE represent successively less effective approaches.

7. C — Triple Net (NNN) leases require the tenant to pay base rent plus property taxes, insurance, and maintenance — the three pass-through expenses that give the structure its name. Modified gross leases distribute these expenses differently between landlord and tenant. The structure determines tenant cost risk allocation.

8. B — Construction Manager at Risk provides preconstruction expertise during design with construction phase guarantee through Guaranteed Maximum Price. Design-build provides single-

point responsibility for design and construction. The two methods fit different project profiles based on owner needs.

9. D — Integrated Project Delivery uses a multi-party contract with shared risk and reward among owner, designer, and contractor. Design-build provides single-point responsibility through traditional contracting. IPD is appropriate for complex projects where collaboration produces significant value.

10. A — WELL Building certification focuses primarily on occupant health, comfort, and wellness outcomes through air, water, nourishment, light, movement, thermal comfort, sound, materials, mind, and community categories. LEED focuses on environmental performance. The two frameworks address complementary but distinct sustainability dimensions.

11. C — Leading indicators predict future performance through input or activity measurement. Lagging indicators measure outcomes that have already occurred. PM compliance is leading; failure rates are lagging. Effective performance management uses both indicator types.

12. B — Criterion-referenced scoring determines pass-fail based on minimum knowledge competency standard established through standard-setting study. Norm-referenced scoring compares performance to peer cohort. The CFM exam uses criterion-referenced scoring to validate competency.

13. A — Quantitative risk assessment uses numerical probability and impact scoring with statistical analysis. Qualitative assessment uses descriptive likelihood and consequence categorization. The two methods support different decision contexts depending on data availability and required precision.

14. D — Mitigation focuses on reducing the likelihood or consequences of emergencies before they occur. Preparedness focuses on training and resource readiness. The four FEMA phases (mitigation, preparedness, response, recovery) address different temporal dimensions of emergency management.

15. C — Service-level agreements define measurable performance commitments between two parties — typically service provider and consumer. KPIs measure internal performance against organizational objectives. SLAs are external accountability instruments while KPIs are internal performance measures.

16. A — A project charter formally authorizes the project and defines high-level purpose, scope, deliverables, and project manager authority. The project plan provides detailed work breakdown, schedule, and resource allocation. The charter precedes detailed planning.

17. B — Program Evaluation and Review Technique uses probabilistic time estimates (optimistic, most likely, pessimistic) for activities with uncertainty. Critical Path Method uses deterministic single-time estimates. PERT addresses scheduling uncertainty more explicitly than CPM.

18. D — Management reserve addresses unknown risks not identified during project planning. Contingency reserve addresses known risks identified during planning and is included in the cost baseline. Management reserve is controlled by management above the project manager.

19. C — Quality assurance prevents defects through process design and management. Quality control verifies actual outputs against established quality requirements through inspection. QA addresses systemic quality through process; QC addresses individual output quality through verification.

20. A — Pareto charts identify the vital few causes producing the majority of problems through frequency-ordered visualization. Histograms show distribution of data across measurement ranges. The two charts serve different analytical purposes despite both using bar visualization.

21. C — SWOT analysis evaluates internal strengths and weaknesses with external opportunities and threats. PESTLE analysis examines external macro factors (Political, Economic, Social, Technological, Legal, Environmental). SWOT combines internal and external while PESTLE focuses on external context.

22. A — Integrated facility management coordinates multiple facility functions through unified governance. Outsourcing transfers facility responsibility to external providers. The two approaches address different organizational decisions about facility function structure.

23. D — Chargeback models bill consuming departments for facility services to incentivize behavior. Cost allocation models distribute facility costs through accounting entries without direct billing. Chargeback creates direct cost-consumption alignment while allocation provides cost visibility without billing.

24. B — Life cycle cost analysis captures acquisition, operation, maintenance, and disposition costs across the asset lifecycle. The framework prevents the damaging habit of selecting based on upfront cost alone. Total cost of ownership applies similar logic to broader cost categories.

25. A — Strategic value addresses long-term competitive positioning and organizational alignment. Operational value addresses short-term cost reduction and service quality. Vendor relationships should be evaluated against both dimensions to optimize total contribution.

26. C — Space utilization measures the actual use of allocated space relative to capacity. Space allocation refers to the assignment of space to specific functions or departments. The two metrics address different dimensions of space management decision making.

27. D — Service-level agreements address performance commitments between service provider and consumer (typically external). Operating level agreements address internal team coordination across organizational departments. SLAs are external while OLAs are internal coordination instruments.

28. A — Planned preventive maintenance is performed at fixed time or runtime intervals regardless of asset condition. Condition-based maintenance is performed when condition monitoring indicates potential failure. Strategy selection matches asset failure characteristics.

29. B — IWMS integrates space, asset, real estate, and maintenance management through unified platform. CMMS focuses primarily on maintenance management functions. The two platforms serve different organizational scope requirements.

30. C — Functional exercises test operational capability through simulated emergency response involving actual response activities. Tabletop exercises involve discussion-based scenario walk-through without operational activity. Functional exercises validate operational capability that tabletop exercises cannot.

31. D — FMEA identifies failure modes systematically through forward analysis from potential failures to their effects. Fault tree analysis traces failure causes backward through hierarchical decomposition. The two methods address different analytical directions for failure analysis.

32. A — DMAIC (Define, Measure, Analyze, Improve, Control) focuses on improving existing processes to reduce variation and defects. DMADV (Define, Measure, Analyze, Design, Verify) designs new processes from scratch. Method selection depends on whether the process exists or is being created.

33. C — Balanced scorecard measures performance across financial, customer, internal process, and learning perspectives. Strategy maps visualize cause-effect relationships across strategic objectives. The scorecard measures while the map visualizes strategy.

34. B — Kanban boards visualize workflow and limit work in progress through process stages. Gantt charts show project activity dependencies across calendar time. The two tools serve different project management purposes — flow management vs. schedule management.

35. D — Agile manages projects through iterative cycles with evolving requirements emphasizing adaptive planning and continuous delivery. Waterfall manages projects through sequential phase completion with comprehensive upfront planning. Method selection depends on requirement stability and project profile.

36. A — Fixed-price contracts place cost risk on the contractor for defined scope delivery. Cost-plus contracts reimburse contractors for actual costs plus a fee. The two structures allocate risk differently between owner and contractor.

37. C — Maximum Tolerable Period of Disruption represents the maximum tolerable period before unacceptable consequences occur. RTO is the target restoration timeframe; MTPD is the maximum tolerable timeframe. RTO must be less than MTPD to ensure acceptable continuity outcomes.

38. B — BIM Level of Development 400 provides detailed representations suitable for fabrication and assembly. LOD 200 provides generic representations with approximate quantities and shapes. LOD progression reflects increasing model detail and reliability.

39. D — Vertical integration combines multiple stages of service delivery within facility function under unified ownership. Horizontal integration coordinates similar functions across multiple locations. The two integration approaches address different organizational consolidation strategies.

40. A — Service blueprints visualize service delivery across customer-facing and back-stage activities through structured mapping. Process maps document process steps without explicit customer-facing/back-stage distinction. Blueprints support service experience design more comprehensively.

41. B — Change management manages organizational and individual transitions through change adoption. Project management manages project scope, schedule, and budget execution. The two disciplines are complementary — projects deliver outputs while change management drives adoption.

42. D — ADKAR (Awareness, Desire, Knowledge, Ability, Reinforcement) focuses on managing individual change progression through psychological stages. Kotter's eight-step model addresses large-scale organizational change leadership. The two models address different change scope dimensions.

43. A — Transformational leadership inspires followers through vision and intrinsic motivation. Transactional leadership manages followers through reward and punishment exchanges. The two leadership approaches address different motivational mechanisms.

44. C — Stakeholder maps visualize stakeholder influence and interest through plotting on matrices. Stakeholder registers list stakeholders with roles, contact information, and engagement preferences. The map supports analysis while the register supports administration.

45. B — Pull communication makes information available for stakeholders to access as needed (intranets, repositories, dashboards). Push communication distributes information through direct delivery (email, broadcast notifications). Channel selection should match information urgency and stakeholder preferences.

46. D — Transformational vendor relationships develop strategic partnership with shared objectives and innovation. Transactional relationships focus on price and service delivery for specific transactions. Relationship type should match strategic importance of the vendor relationship.

47. A — Capital expenditure represents long-term asset investment depreciated over useful life. Operational expenditure represents recurring operational costs expensed in current period. The distinction affects financial reporting, tax treatment, and approval processes.

48. C — Net Present Value calculates the dollar value of investment at present time through discounted cash flow analysis. Internal Rate of Return identifies the discount rate at which NPV equals zero. The two metrics provide complementary investment evaluation perspectives.

49. D — Strategic sourcing develops long-term supply strategy aligned with organizational objectives. Tactical procurement manages day-to-day purchase orders for routine operational needs. Strategic sourcing addresses category strategy while tactical procurement addresses transaction execution.

50. B — Outsource decisions transfer service responsibility to external providers through contract. Insource decisions develop internal capability for service delivery. The make-vs-buy decision should reflect strategic importance, capability availability, and economic analysis.

51. A — GBAC STAR specifically addresses cleaning, disinfection, and infectious disease prevention protocols. ISO 9001 addresses quality management systems across industries. GBAC STAR emerged in response to infectious disease management requirements.

52. C — Thermal comfort addresses temperature, humidity, airspeed, and radiant condition combinations governed by ASHRAE Standard 55. Indoor air quality addresses pollutant concentration and ventilation governed by ASHRAE Standard 62.1. The two performance areas address distinct occupant experience dimensions.

53. D — ASHRAE Standard 90.1 addresses energy efficiency standards for commercial building operations. Standard 62.1 addresses outdoor air ventilation rates. The standards address distinct facility performance areas through separate technical requirements.

54. A — NFPA 101 (Life Safety Code) addresses life safety and means of egress requirements for buildings. NFPA 70 (National Electrical Code) addresses electrical installation. NFPA 72 addresses fire alarm and signaling. Each NFPA code addresses distinct fire and life safety areas.

55. C — ADA Title III addresses public accommodations and commercial facility accessibility requirements. Title I addresses employment discrimination. Title II addresses public sector facility accessibility. Each title addresses distinct accessibility scope areas.

56. B — OSHA establishes and enforces workplace safety regulations and standards. NIOSH conducts research on occupational hazards without enforcement authority. The two agencies have distinct functions in workplace safety governance.

57. D — Crime Prevention Through Environmental Design uses environmental design principles to reduce crime opportunity through natural surveillance, natural access control, territorial reinforcement, and maintenance. Physical security uses guards, locks, and surveillance equipment. CPTED is preventive while physical security is protective.

58. A — Fire alarm systems detect and signal fire conditions for occupant notification. Fire suppression systems extinguish fires through water or chemical agent application. The two system types serve detection vs. extinguishment functions.

59. C — Dry pipe systems contain pressurized air or nitrogen rather than water in pipes, preventing freezing in unconditioned spaces. Wet pipe systems contain water ready for immediate discharge. System selection depends on space conditioning and freeze protection needs.

60. B — Class B fires involve flammable liquids such as gasoline, oil, and grease. Class A involves ordinary combustibles. Class C involves energized electrical equipment. Class D involves combustible metals. Fire classification determines appropriate suppression agent selection.

61. A — Functional programming defines design requirements before construction begins through documentation of users, activities, space requirements, adjacencies, performance criteria, and constraints. Detailed design specifies dimensions and materials for construction. Programming precedes detailed design.

62. C — Churn rate measures the frequency of internal moves and reconfigurations within an organization. Absorption rate measures the pace at which new space is leased to tenants in market analysis. The two metrics address different real estate dimensions.

63. B — Gross floor area includes all enclosed building space within exterior walls. Rentable area is the leasable area available for tenant occupancy, typically a portion of gross. The two measurements support different facility analysis purposes.

64. D — Common area maintenance addresses shared building space maintenance and operational costs. Operating expenses include CAM plus property taxes, insurance, utilities, and other building costs. CAM is a subset of total operating expenses.

65. A — Sale-leaseback transfers ownership of an asset to a buyer with subsequent leaseback to the original owner. Synthetic lease creates off-balance-sheet financing through tax-advantaged structure. The two structures serve different financial objectives.

66. C — Hoteling requires reservations for workspace use through booking system. Hot desking allows first-come first-served workspace selection without reservations. The two unassigned-seating models address different organizational coordination needs.

67. B — Activity-based working provides workspace types matched to specific work activity requirements. Free address allows employees to choose any available workspace. ABW supports activity-specific work modes while free address provides general flexibility.

68. D — Focus rooms provide quiet enclosed space for concentrated individual work activity. Touchdown spaces provide brief work pause space without intensive concentration support. The two space types serve different work mode requirements.

69. A — Digital twins provide real-time operational mirror of physical asset performance through live data integration. BIM documents construction-phase model for design coordination. The two model types serve construction vs. operations purposes.

70. C — IoT sensors connect through internet protocols often deployed independently of BAS. BAS sensors operate within building automation system architecture through traditional building network protocols. The two sensor types support different deployment and integration models.

71. D — Cybersecurity governance establishes policies, standards, and oversight for cybersecurity programs at the strategic level. Cybersecurity operations implement technical controls and conduct incident response at the operational level. Governance directs operations through policy.

72. B — Operational Technology manages physical equipment and industrial control systems including building automation. Information Technology manages enterprise data systems and business application platforms. The two domains have distinct security requirements and increasingly converge.

73. A — Tier IV provides fault tolerance with concurrent maintainability and dual-powered components throughout. Tier I provides basic capacity with single distribution paths. Tier II adds redundant components, and Tier III adds concurrent maintainability. Tier ratings progress in resilience capability.

74. D — Maximum Acceptable Outage represents the maximum acceptable outage time before unacceptable consequences occur. RPO addresses data loss tolerance, RTO addresses target restoration timeframe. The three metrics support comprehensive continuity planning.

75. C — Hot sites provide fully operational alternate sites ready for immediate use. Cold sites provide empty space requiring equipment installation after disaster. Warm sites provide intermediate readiness. Site type selection reflects RTO requirements and cost trade-offs.

76. A — Net Zero Carbon balances total carbon emissions including embodied (construction materials) and operational (energy use). Net Zero Energy balances on-site renewable energy generation with energy consumption. Net Zero Carbon is a more comprehensive sustainability target.

77. B — Scope 3 emissions include value chain emissions from supplier and customer activities. Scope 1 includes direct emissions from owned sources. Scope 2 includes purchased energy. The three-scope framework provides standardized carbon measurement methodology.

78. D — Embodied carbon represents emissions from building materials, construction, and disposal. Operational carbon represents emissions from building energy consumption during operations. Comprehensive carbon accounting requires both embodied and operational dimensions.

79. A — Power Purchase Agreements provide long-term contractual commitment for renewable energy purchase. Renewable Energy Certificates trade renewable energy attributes separately from physical energy. The two instruments serve different renewable energy procurement strategies.

80. C — Retrocommissioning optimizes existing building systems to perform as originally intended through systematic testing and adjustment. Energy audits identify energy efficiency opportunities through assessment. The two approaches serve different efficiency improvement purposes.

81. C — Strategic-level facility communication translates facility decisions into organizational strategic context. Tactical-level communication addresses operational activities and routine status. Strategic communication connects facility decisions to organizational strategic outcomes.

82. A — The strategic role connects facility decisions to organizational outcomes and direction. The tactical role manages day-to-day operations and vendor coordination. Competent facility managers operate across both strategic and tactical levels.

83. D — Bottom Line Up Front leads with conclusions and recommendations before supporting detail. Traditional narrative communication presents background before reaching conclusions. BLUF respects executive consumption patterns and decision orientation.

84. A — Formal communication channels operate through organizational hierarchy with documented protocols. Informal channels operate through personal relationships without structured protocols. Effective communication uses both channel types appropriately.

85. A — Change communication builds awareness, understanding, and commitment for change adoption. Change implementation executes specific operational changes. Communication enables implementation by addressing the human dimension of change.

86. D — Active listening engages with speaker through verification, questioning, and reflection. Passive listening receives information without engagement. Active listening supports accurate understanding and relationship building.

87. C — The IFMA Code of Conduct's integrity principle addresses honesty and fairness without misleading parties in professional practice. The competence principle addresses provision of services within demonstrated capability. The two principles address distinct ethical dimensions.

88. B — Mediation uses neutral third-party facilitator to support party agreement. Negotiation involves direct interaction between parties. Arbitration imposes binding decisions on disputing parties. The three approaches address different dispute resolution mechanisms.

89. A — Competency models identify the knowledge, skills, and behaviors required for performance. Job descriptions document specific tasks and responsibilities. Competency models support development and assessment more comprehensively than task-focused job descriptions.

90. D — Mentoring provides long-term career development through experienced guidance and relationship-based learning. Coaching focuses on specific skill development through structured instruction. The two development approaches serve complementary purposes.

91. C — Six Sigma specifically focuses on statistical reduction of variation and defects through structured DMAIC methodology. Total Quality Management addresses comprehensive quality

integration across organizational functions. Six Sigma provides specific methodology while TQM provides cultural framework.

92. A — ISO 14001 addresses environmental management systems for organizational sustainability. ISO 9001 addresses quality management systems. ISO 45001 addresses occupational health and safety. ISO 27001 addresses information security. Each standard addresses distinct management system scope.

93. B — Breakthrough improvement achieves significant performance gains through fundamental change. Continuous improvement achieves incremental improvements through ongoing adjustment. The two improvement approaches serve different strategic purposes and complement each other.

94. D — Procedures specify step-by-step actions for implementing organizational direction. Policies establish organizational position on specific issues for guidance. Procedures operationalize policies through specific implementation guidance.

95. A — Standards establish mandatory requirements for compliance and conformance. Guidelines provide recommended best practice without mandatory compliance. The distinction is fundamental to compliance management and audit interpretation.

96. C — ENERGY STAR Portfolio Manager provides 1-100 percentile scores based on actual operational energy use. ASHRAE Building Energy Quotient provides letter grades based on building performance assessment. The two systems use different rating methodologies.

97. D — Strategic benchmarking compares strategic positioning against best-in-class organizational practices. Operational benchmarking compares operational metrics against industry peers. Strategic benchmarking addresses how organizations compete; operational benchmarking addresses how they perform.

98. B — Key risk indicators provide early warning of potential risk emergence and exposure. Key performance indicators measure performance achievement against organizational objectives. KRIs support proactive risk management while KPIs measure outcomes.

99. C — SIPOC diagrams provide high-level overview of Suppliers, Inputs, Process, Outputs, and Customers. Process flowcharts document detailed process steps with decision points. SIPOC supports process scope definition while flowcharts support detailed process analysis.

100. A — Earned Value Management integrates cost and schedule performance through earned value measurement. Traditional project tracking typically addresses cost and schedule separately. EVM provides integrated performance assessment for comprehensive project management.