

PRACTICE EXAM 3: CFM SIMULATION

PRACTICE EXAM 3 — 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 definition-based knowledge items, technical fluency questions, and shorter scenario items with crisper answer discrimination than Practice Exams 1 and 2.

1. The professional discipline that integrates people, place, process, and technology to ensure the functionality, comfort, safety, and efficiency of the built environment is best defined as:

- A. Property management with operational support
- B. Real estate portfolio administration
- C. Building operations and engineering
- D. Facility management

2. A facility's total occupancy cost includes base rent, escalators, operating expense pass-throughs, common area maintenance charges, and which additional category?

- A. Buildout, restoration, and tenant improvement obligations
- B. Marketing costs associated with the building location
- C. Vendor payment terms and accounts payable timing
- D. Corporate income tax allocation by square footage

3. A building automation system's hierarchical architecture typically includes operator workstations, supervisory controllers, and which layer responsible for direct equipment control?

- A. Cloud computing services with remote monitoring
- B. Enterprise resource planning system integration
- C. Field-level controllers connected to sensors and actuators
- D. Mass notification and emergency alerting platforms

4. The Plan-Do-Check-Act cycle is most commonly attributed to which quality management thought leader?

- A. Joseph Juran
- B. W. Edwards Deming
- C. Philip Crosby
- D. Kaoru Ishikawa

5. A facility lease that requires the tenant to pay base rent plus property taxes, insurance, and maintenance is described as a:

- A. Gross lease with operating expense inclusion
- B. Modified gross lease with shared responsibility
- C. Triple net lease with full pass-through
- D. Percentage lease with revenue participation

6. The IFMA Certification Commission's Code of Conduct prohibits credential holders from discriminating based on which set of characteristics?

- A. Race, sex, religion, age, disability, national origin, and sexual orientation
- B. Job title, tenure, and reporting relationship within the organization
- C. Geographic location, building assignment, and access privileges
- D. Vendor selection criteria and contract performance evaluation

7. The Greenhouse Gas Protocol categorizes direct emissions from sources owned or controlled by the organization as:

- A. Indirect indirect emissions accounted as Scope 4
- B. Direct emissions accounted as Scope 1
- C. Value chain emissions accounted as Scope 3
- D. Energy emissions accounted as Scope 2

8. A facility's commissioning process is most accurately described as:

- A. Contractor punch list completion at substantial completion
- B. Building official certificate of occupancy issuance
- C. Manufacturer warranty validation for installed equipment
- D. Quality verification that systems perform per owner requirements

9. The Critical Path Method identifies the sequence of project activities that:

- A. Determines the project's minimum total duration
- B. Requires the most labor resources during execution
- C. Carries the highest individual cost per activity
- D. Produces the most visible deliverables to stakeholders

10. A facility manager's risk treatment strategy that purchases insurance to cover potential losses is best classified as:

- A. Risk avoidance through activity elimination
- B. Risk mitigation through control implementation
- C. Risk transfer through contractual mechanism
- D. Risk acceptance through deliberate retention

11. ASHRAE Standard 62.1 establishes minimum requirements for which facility performance area?

- A. Thermal comfort temperature and humidity ranges
- B. Outdoor air ventilation rates for indoor air quality
- C. Lighting illumination levels and color quality
- D. Acoustic background noise and reverberation

12. The hierarchy of controls in occupational safety prioritizes hazard management approaches in which order from most to least effective?

- A. Elimination, substitution, engineering, administrative, PPE
- B. PPE, training, engineering, substitution, elimination
- C. Engineering, elimination, substitution, PPE, administrative
- D. Administrative, engineering, substitution, PPE, elimination

13. The IFMA exam blueprint allocates how many scored questions to each of the ten official domains?

- A. 5 scored questions equally weighted across domains
- B. 15 scored questions varying by domain criticality
- C. 20 scored questions emphasizing operations content

D. 10 scored questions equally weighted at 10% each

14. A facility manager applying the Bottom Line Up Front communication principle should structure executive presentations to begin with:

- A. Comprehensive background context and historical analysis
- B. The recommendation and supporting business case
- C. Detailed technical specifications of proposed solutions
- D. Stakeholder consensus building and process description

15. A facility's preventive maintenance program is most appropriate for assets that:

- A. Have completely random failure patterns
- B. Are easily replaced when they fail
- C. Exhibit predictable wear patterns over time
- D. Require continuous condition monitoring infrastructure

16. The Recovery Time Objective in business continuity planning represents:

- A. The target timeframe within which a function must be restored
- B. The maximum acceptable data loss before disruption
- C. The frequency at which backup systems must be tested
- D. The estimated duration of typical disruption events

17. A facility manager's chargeback model that allocates costs based on each department's occupied square footage is described as:

- A. Consumption-based chargeback with metered usage
- B. Performance-based chargeback by service tier
- C. No chargeback with central absorption
- D. Allocation-based chargeback by space utilized

18. The Thomas-Kilmann conflict mode framework identifies which approach as combining high cooperativeness with high assertiveness?

- A. Compromising for quick mutually acceptable solutions
- B. Collaborating for integrative problem-solving
- C. Accommodating to preserve relationship harmony
- D. Avoiding to allow time for emotions to subside

19. The Work Breakdown Structure decomposes project scope into:

- A. Marketing materials for stakeholder approval
- B. Daily field activity reports for documentation
- C. Estimable, schedulable, trackable work components
- D. Change order requests for scope modification

20. A facility's master plan typically covers a planning horizon of:

- A. 5 to 20 years aligned with organizational strategy
- B. 1 to 2 years matching annual budget cycles
- C. 30 to 50 years based on building structural life
- D. Indefinitely without defined review cycles

21. The Greenhouse Gas Protocol categorizes purchased electricity consumed by facility systems as:

- A. Direct emissions accounted as Scope 1
- B. Value chain emissions accounted as Scope 3
- C. Indirect emissions accounted as Scope 2
- D. Out-of-scope emissions excluded from reporting

22. A facility's earned value management calculation produces a Cost Performance Index of 0.85. This value indicates:

- A. Performance unfavorable to budget by 15%
- B. Performance favorable to budget by 15%
- C. Performance exactly matching budgeted cost
- D. Performance unmeasurable from current data

23. The widely referenced project delivery method in which a single entity is responsible for both design and construction is:

- A. Construction Manager at Risk with preconstruction services
- B. Design-build with single point of responsibility
- C. Design-bid-build with sequential procurement
- D. Public-Private Partnership with operations integration

24. A facility's Common Area Maintenance charges in a multi-tenant lease are most likely to cover:

- A. Tenant-specific buildout and improvements
- B. Individual tenant utility consumption only
- C. Tenant signage and exterior branding rights

D. Shared building areas and operating costs

25. The eight-step change management model widely referenced in facility management practice was developed by:

- A. John Kotter for organizational change leadership
- B. Peter Drucker for management by objectives
- C. Michael Porter for competitive strategy analysis
- D. Frederick Taylor for scientific management methods

26. A facility manager's stakeholder mapping that plots stakeholders along influence and interest dimensions is used to:

- A. Calculate the financial impact of stakeholder positions
- B. Determine appropriate insurance coverage limits
- C. Match engagement intensity to stakeholder characteristics
- D. Document organizational hierarchy for reporting

27. ENERGY STAR Portfolio Manager produces facility benchmarking scores on what scale?

- A. Letter grades from A through F by building type
- B. Bronze, Silver, Gold, and Platinum certification tiers
- C. Percentile rankings without numerical scoring
- D. Numerical scores from 1 to 100

28. A facility's IWMS platform typically integrates how many primary functional domains?

- A. Three domains covering only maintenance areas
- B. Five domains covering real estate, projects, maintenance, space, sustainability
- C. Eight domains including HR and finance integration
- D. Twelve domains spanning all enterprise functions

29. A facility's risk assessment matrix typically uses which two dimensions to plot identified risks?

- A. Cost and schedule with timeline projections
- B. Stakeholder influence and political support
- C. Likelihood and consequence with proportional response
- D. Geographic distribution and organizational scope

30. The cost of quality framework identifies four categories of quality cost. Investments in process design, training, and quality planning are classified as:

- A. Prevention costs supporting designed-in quality
- B. Appraisal costs verifying achieved quality
- C. Internal failure costs from caught defects
- D. External failure costs from delivered defects

31. A facility's project lifecycle includes which standard phase between planning and monitoring/controlling?

- A. Stakeholder analysis and communication planning
- B. Risk assessment and contingency development
- C. Change order processing and scope adjustment
- D. Execution of project work and deliverable creation

32. The Lean methodology's seven classic waste categories are commonly remembered through which acronym?

- A. PDSA representing the improvement cycle
- B. TIMWOOD covering all seven waste types
- C. SMART describing goal characteristics
- D. DMAIC for Six Sigma project framework

33. A facility's IoT sensor deployment most directly enables which operational capability?

- A. Replacement of all human facility staff with automation
- B. Elimination of preventive maintenance programs
- C. Continuous data capture supporting analytics
- D. Independent operation without IT department coordination

34. The IFMA Certification Commission's mission is to advance facility management worldwide by:

- A. Enhancing and sustaining the integrity of certifications
- B. Developing facility management software platforms
- C. Setting global salary standards for facility professionals
- D. Regulating commercial real estate transactions globally

35. A facility's life cycle cost analysis for a major asset typically shows that the largest cost category over the asset's useful life is:

- A. Initial acquisition price at purchase
- B. Installation and commissioning at startup
- C. Disposal and decommissioning at retirement

D. Operation and maintenance during service

36. The IFMA Certification Commission's Ethics Assessment requirement applies to:

- A. Only candidates pursuing CFM credential maintenance
- B. All CFM credential applicants and recertifying candidates
- C. Only IFMA members in good standing with dues paid
- D. Only candidates from specific geographic regions

37. A facility manager's organizational structure assessment indicates the function reports to:

- A. The role determining facility's strategic positioning
- B. The compensation level across the facility team
- C. The total facility budget allocation each year
- D. The number of square feet under management

38. A facility leader applying the demand-supply framework recognizes that the facility function's purpose is to:

- A. Operate independently to optimize building performance
- B. Maximize facility staff career development opportunities
- C. Serve the demand organization's mission and objectives
- D. Generate operational savings as the primary goal

39. The IFMA exam blueprint includes how many scored items in total?

- A. 50 scored items spread across major topics
- B. 100 scored items across the 10 domains
- C. 150 scored items with bonus questions
- D. 200 scored items including subject specializations

40. A facility manager's Strategic Facility Plan typically addresses how many years of horizon?

- A. 1 year matching the operating budget
- B. 2 years aligned with biennial budget cycles
- C. 3 years corresponding to credential maintenance
- D. 5 to 10 years aligned with organizational strategy

41. A facility's CMMS platform typically supports which set of core functions?

- A. Email management and calendar integration
- B. Asset records, work orders, PM scheduling, inventory, reporting
- C. Customer relationship management and sales automation
- D. Human resources administration and payroll processing

42. A facility's WELL Building Standard certification focuses primarily on:

- A. Energy efficiency and environmental impact reduction
- B. Site sustainability and stormwater management
- C. Construction waste diversion and recycling rates
- D. Occupant health, comfort, and wellness outcomes

43. The asset lifecycle progresses through which standard sequence of phases?

- A. Planning, installation, operation, maintenance, disposition
- B. Acquisition, depreciation, replacement, capitalization
- C. Specification, procurement, warranty, contract closure
- D. Design, construction, occupancy, renovation only

44. A facility's project charter primarily serves to:

- A. Document the construction contractor's daily activities
- B. Negotiate vendor pricing for facility services
- C. Formally authorize the project and define its purpose
- D. Calculate the building's tax depreciation schedule

45. The Recovery Point Objective in business continuity planning represents:

- A. The acceptable downtime before restoration begins
- B. The acceptable data loss expressed as time before disruption
- C. The maximum acceptable annual operating cost
- D. The required frequency of backup system testing

46. A facility's CPTED principles use facility design to:

- A. Maximize energy efficiency through building orientation
- B. Improve indoor air quality through ventilation design
- C. Optimize space utilization through layout planning
- D. Reduce security risk through environmental design

47. A facility leader's principled negotiation approach focuses on:

- A. Underlying interests rather than stated positions
- B. Maximum gain on every variable in the negotiation
- C. Single-issue bargaining without trade-offs
- D. Confrontational tactics to extract concessions

48. The IFMA Code of Conduct's principle of fiduciary responsibility requires practitioners to be:

- A. Aggressive in negotiating vendor financial terms
- B. Neutral on financial matters affecting decisions
- C. Honest, transparent, and trustworthy in financial dealings
- D. Limited to advisory roles in financial matters

49. A facility's space management metric of seat-to-headcount ratio is most relevant to:

- A. Calculating tax depreciation for the building
- B. Determining building code occupancy compliance
- C. Negotiating commercial lease rental rates
- D. Hybrid work and unassigned seating decisions

50. A facility's Computerized Maintenance Management System value depends most directly on:

- A. The financial investment in platform licensing
- B. The discipline of data entry and information quality
- C. The number of users granted system access
- D. The age of the building and equipment portfolio

51. A facility's emergency action plan typically addresses which set of credible threat categories?

- A. Only fire and life safety scenarios
- B. Only natural disaster and weather events
- C. Fire, weather, security, medical, utility, and related events
- D. Only events specifically required by insurance carriers

52. The ICS principle that ensures each responder reports to a single supervisor is:

- A. Unity of command throughout the response structure
- B. Span of control limiting subordinate counts
- C. Common terminology enabling coordination
- D. Modular organization scaling with complexity

53. A facility's master plan element that translates strategy into action is the:

- A. Strategic context and organizational alignment
- B. Implementation roadmap with sequenced initiatives
- C. Demand forecast across the planning horizon
- D. Current state assessment of portfolio condition

54. A facility manager's life cycle cost analysis is most useful for:

- A. Calculating annual depreciation expense
- B. Determining property tax assessments
- C. Negotiating vendor payment terms
- D. Comparing alternatives over total useful life

55. A facility's reliability-centered maintenance approach is best characterized as:

- A. Systematic analysis selecting optimal strategy per asset
- B. Default reactive maintenance for all assets
- C. Universal preventive maintenance for all assets
- D. Continuous predictive monitoring on every asset

56. A facility's Domain B is titled Facility Operations and addresses which set of areas?

- A. Strategic planning and leadership development only
- B. Real estate portfolio and lease administration
- C. Buildings, maintenance, FF&E, health, safety, security
- D. Communication and stakeholder engagement only

57. A facility's electrical system structure typically progresses through which sequence?

- A. Branch circuit, distribution panel, main switchgear, utility
- B. Utility service, main switchgear, transformers, distribution, branch circuits
- C. End-use, branch circuit, transformer, utility service
- D. Distribution, end-use, transformer, branch circuit

58. The IFMA Certification Commission's job analysis study that validated the exam blueprint involved approximately how many participants?

- A. Approximately 200 facility executives only
- B. Approximately 500 academic researchers
- C. Approximately 1,000 vendor representatives
- D. Approximately 1,700 facility managers globally

59. A facility's BIM model used in operations is most valuable when:

- A. Owner BIM requirements were specified upfront in the project
- B. The contractor independently determined model development
- C. The model was built after construction completion
- D. The model excludes asset attribute data for simplicity

60. A facility's chargeback model that distributes costs based on actual measured consumption is described as:

- A. Allocation-based chargeback by occupied area
- B. Service-tiered chargeback by selection
- C. Consumption-based chargeback with metering
- D. No chargeback with central absorption

61. The IFMA exam structure consists of how many total questions delivered to candidates?

- A. 120 questions including 100 scored and 20 pretest
- B. 100 questions scored without pretest items
- C. 150 questions with subject specialization sections
- D. 75 questions covering core domains only

62. A facility's quality management framework identifies how many foundational principles per ISO 9001?

- A. Five foundational principles
- B. Six foundational principles
- C. Seven foundational principles

D. Ten foundational principles

63. A facility manager's organizational role across strategic, tactical, and operational levels reflects:

- A. The need for hierarchical separation between levels
- B. The expectation that competent CFMs operate across all three
- C. The exclusive focus required at each individual level
- D. The progression from tactical to strategic only

64. A facility's Functional Programming process produces which primary deliverable?

- A. A program document defining requirements for design
- B. A construction schedule with sequenced activities
- C. A vendor selection matrix with weighted criteria
- D. An insurance coverage analysis with gap identification

65. A facility manager's Strategic Facility Plan should be reviewed and updated:

- A. Only when significant disruption occurs
- B. Annually with full re-development each cycle
- C. When the existing plan reaches its full horizon
- D. Periodically with substantive reviews every 3 to 5 years

66. The IFMA Code of Conduct addresses the facility manager's primary professional goal as:

- A. Maximizing facility budget allocation
- B. Developing safe, human, functional workspaces
- C. Achieving the lowest operating cost possible
- D. Outsourcing all facility services to vendors

67. A facility's risk management framework following ISO 31000 emphasizes that risk management should be:

- A. Centralized in a dedicated risk department
- B. Limited to insurance and contractual transfer
- C. Integrated, structured, customized, and continuously improved
- D. Concentrated on only the highest probability events

68. A facility's vendor management discipline produces most realized contract value through:

- A. Structured ongoing performance management
- B. Aggressive initial contract negotiation
- C. Selection of the lowest-priced qualified bidder
- D. Geographic proximity to the facility location

69. A facility's lease structure where the tenant pays a single rent amount and the landlord covers operating expenses is described as a:

- A. Triple net lease with full pass-through
- B. Gross lease with landlord expense responsibility
- C. Modified gross lease with shared expenses
- D. Net lease with tenant expense additions

70. A facility's stakeholder engagement category for high-influence, high-interest individuals warrants which strategy?

- A. Monitor through general communication channels
- B. Keep satisfied with limited detailed engagement
- C. Keep informed through periodic updates only
- D. Manage closely through frequent direct engagement

71. A facility's water management plan addressing Legionella risk in cooling tower systems is required under:

- A. ASHRAE Standard 188 for water management
- B. NFPA 70 for electrical safety standards
- C. OSHA 29 CFR 1910 for general industry
- D. IBC Chapter 12 for interior environments

72. A facility manager's procurement solicitation type appropriate for well-defined, price-driven requirements is:

- A. Request for Information (RFI) for market exploration
- B. Request for Proposal (RFP) for technical solutions
- C. Request for Quotation (RFQ) for price comparison
- D. Sole-source justification without competition

73. The IFMA Certification Commission's recertification cycle requires CFM credential renewal every:

- A. 1 year with continuous documentation
- B. 2 years with bi-annual review cycles
- C. 5 years matching exam validity periods
- D. 3 years with documented qualifying activities

74. A facility's preventive maintenance compliance metric is best classified as:

- A. A leading indicator predicting future asset reliability
- B. A lagging indicator describing past failures
- C. A neutral metric without predictive value
- D. An external indicator outside facility control

75. A facility's lease that requires the tenant to pay base rent plus some operating expenses but not all is described as:

- A. Gross lease with all expenses included
- B. Modified gross lease with shared expense responsibility
- C. Triple net lease with full expense pass-through
- D. Percentage lease with revenue-based rent

76. A facility's Domain F titled Communication addresses which set of areas?

- A. Building maintenance and operational support
- B. Real estate portfolio and lease management
- C. Risk management and emergency preparedness
- D. Communication skills and communication management

77. A facility's CMMS data quality discipline directly affects:

- A. The aesthetic appearance of system dashboards
- B. The vendor's marketing materials and brand
- C. The reliability of analytics and management decisions
- D. The geographic distribution of system users

78. A facility's risk treatment strategy that eliminates the activity producing risk is classified as:

- A. Risk avoidance through activity elimination
- B. Risk mitigation through control implementation
- C. Risk transfer through insurance purchase
- D. Risk acceptance through deliberate retention

79. A facility's energy audit level providing detailed analysis to support major capital investment decisions is:

- A. Level 1 walk-through audit with preliminary findings
- B. Level 3 detailed analysis of capital modifications
- C. Continuous metering with monthly reporting only
- D. Annual ENERGY STAR Portfolio Manager benchmarking

80. A facility's project closeout activity most commonly neglected to long-term detriment is:

- A. Final payment processing and lien releases
- B. Punch list completion and substantial completion
- C. Lessons learned documentation and integration

D. Certificate of occupancy filing with authorities

81. A facility's IWMS platform typically replaces which historically separate systems?

- A. Email systems and customer relationship management
- B. Human resources and payroll administration platforms
- C. CAFM and standalone CMMS systems
- D. Enterprise resource planning and accounting systems

82. A facility manager's executive reporting discipline emphasizes:

- A. Bottom Line Up Front structure with conclusions first
- B. Comprehensive technical documentation in chronological order
- C. Maximum operational detail across all measured metrics
- D. Marketing presentation aesthetics over content substance

83. A facility's hierarchy of controls places which control level immediately above PPE in effectiveness?

- A. Elimination of the hazard from the workplace
- B. Substitution with less dangerous alternatives
- C. Engineering controls isolating workers
- D. Administrative controls through procedures and training

84. A facility's insurance coverage that addresses third-party bodily injury and property damage claims is:

- A. Property insurance covering physical damage
- B. Commercial general liability coverage
- C. Business interruption coverage for revenue loss
- D. Workers' compensation for employee injury

85. A facility's project delivery method involving a multi-party contract with shared risk and reward is:

- A. Design-bid-build with traditional sequential contracting
- B. Design-build with single-point responsibility
- C. Integrated Project Delivery with collaborative structure
- D. Public-Private Partnership with long-term operations

86. A facility manager's continuous improvement framework that systematically tests changes through measured implementation is:

- A. The Plan-Do-Check-Act cycle as iterative improvement
- B. The Kotter eight-step model for organizational change
- C. The Thomas-Kilmann conflict mode framework
- D. The Tuckman team development stages model

87. A facility's master data management discipline maintains authoritative records for:

- A. Email distribution lists and meeting calendars
- B. Construction project schedules and budgets
- C. Vendor invoices and payment processing
- D. Assets, spaces, vendors, employees, and locations

88. A facility's Six Sigma improvement methodology applies which framework to existing processes?

- A. PDCA for incremental improvement cycles
- B. DMAIC for define, measure, analyze, improve, control
- C. SMART for goal definition and tracking
- D. ADKAR for individual change progression

89. The CFM credential's eligibility option requiring no formal facility management degree requires how many years of FM work experience?

- A. 5 years of professional facility management experience
- B. 3 years with accelerated certification credit
- C. 7 years matching specialized industries only
- D. 10 years with continuous documentation

90. A facility's space planning hierarchy progresses through which top-down sequence?

- A. Detailed design, space planning, programming, strategy
- B. Programming, strategy, detailed design, space planning
- C. Strategy, programming, space standards, planning, design
- D. Space planning, strategy, design, programming, standards

91. A facility's resilience capacity addresses the ability to:

- A. Reduce capital costs through lean operations
- B. Eliminate all facility risks through controls
- C. Achieve LEED Platinum certification consistently

D. Anticipate, absorb, adapt, and recover from disruption

92. A facility's procurement contract type where the contractor delivers defined scope for a fixed total price is:

- A. Cost-plus fee with full reimbursement
- B. Fixed price or lump sum contracting
- C. Time and materials with hourly billing
- D. Performance-based contracting with bonuses

93. A facility's Domain A titled Leadership and Strategy addresses which set of competencies?

- A. Strategic planning, leadership, change, relationships, team development
- B. Building maintenance and equipment management
- C. Risk assessment and emergency response only
- D. Sustainability and environmental stewardship only

94. A facility manager's after-action review following an incident is primarily intended to:

- A. Assign individual blame for incident occurrence
- B. Document insurance claim information for carriers
- C. Capture lessons learned for future prevention
- D. Generate executive reporting for board oversight

95. A facility's mass notification system effectiveness depends most consequentially on:

- A. The visual aesthetics of the administrative interface
- B. The marketing prominence of the selected vendor
- C. The unit cost per subscriber across users
- D. Multi-channel reach across SMS, voice, email, signage

96. A facility's variance analysis distinguishes between price, volume, efficiency, and timing variances. Variance caused by unit costs differing from assumed cost is:

- A. Price variance reflecting changed unit cost
- B. Volume variance reflecting activity changes
- C. Efficiency variance reflecting performance changes
- D. Timing variance reflecting period shifts

97. A facility's executive sponsor of a major project provides which essential function?

- A. Direct supervision of construction contractor activities
- B. Authorization, resources, and ownership of project outcome
- C. Daily operational management of project tasks
- D. Technical specification approval for equipment selection

98. A facility's preventive maintenance schedule based on calendar intervals or runtime hours is appropriate when:

- A. Equipment failure patterns are completely random
- B. Continuous condition monitoring infrastructure exists
- C. Equipment exhibits predictable wear patterns
- D. Asset criticality is too low for any maintenance

99. A facility's Domain J titled Project Management addresses which set of phases?

- A. Real estate acquisition and disposition
- B. Risk assessment and emergency response
- C. Sustainability and environmental management
- D. Planning, design, execution, delivery, closeout

100. A facility manager's professional ethics under the IFMA Code of Conduct require:

- A. Continual learning to maintain professional skills
- B. Approval from IFMA before pursuing additional training
- C. Limited reading to IFMA-published materials only
- D. Fixed certification cycles every two-year periods

PRACTICE EXAM 3 — ANSWER KEY AND FULL EXPLANATIONS

1. D — Facility management is the discipline integrating people, place, process, and technology to ensure built environment functionality, comfort, safety, and efficiency. The IFMA definition embeds these four domains of integration as the conceptual backbone of the profession. Property management, real estate, and building operations are related but narrower disciplines distinct from facility management.
2. A — Total occupancy cost includes buildout, restoration, and tenant improvement obligations alongside base rent, escalators, and pass-throughs. Restoration obligations at lease end are frequently overlooked but represent a real component of total cost. Marketing, vendor payment terms, and corporate tax allocation are not lease-related occupancy cost categories.
3. C — Field-level controllers connected to sensors and actuators provide direct equipment control in a typical BAS hierarchy. The hierarchy organizes operator workstations and supervisory controllers above field-level devices that interact directly with mechanical equipment. Cloud services, ERP integration, and notification platforms are adjacent technologies, not part of the BAS hierarchy itself.
4. B — W. Edwards Deming developed the Plan-Do-Check-Act cycle as the foundational continuous improvement framework. The cycle is also called the Deming Cycle in recognition of his contribution. Juran developed the quality trilogy, Crosby championed zero defects, and Ishikawa contributed cause-and-effect analysis.
5. C — A triple net (NNN) lease requires the tenant to pay base rent plus property taxes, insurance, and maintenance. The "triple net" name reflects the three pass-through expense categories layered onto base rent. Gross, modified gross, and percentage leases distribute expenses differently between landlord and tenant.
6. A — The IFMA Code of Conduct prohibits discrimination based on race, sex, religion, age, disability, national origin, and sexual orientation. These protected characteristics establish the ethical baseline for service delivery and professional practice. Job title, location, and vendor criteria are not protected categories under the Code.
7. B — Scope 1 emissions are direct emissions from sources owned or controlled by the organization, including onsite combustion, fleet vehicles, and refrigerant leakage. The GHG Protocol's three-scope framework distinguishes Scope 1 from Scope 2 (purchased energy) and Scope 3 (value chain). There is no Scope 4 in the protocol.

8. D — Commissioning is a quality verification of system performance against owner project requirements through systematic testing, documentation, and training. The commissioning authority operates independently of contractors and designers. Punch lists, occupancy permits, and warranty validation are related but distinct activities.
9. A — The Critical Path Method identifies the activity sequence that determines the project's minimum total duration. Activities on the critical path have zero float, meaning any delay extends the project. Resource intensity, cost, and visibility are unrelated to critical path identification.
10. C — Risk transfer shifts risk to a third party through insurance or contractual mechanisms. Purchasing insurance is the classic risk transfer strategy. Avoidance, mitigation, and acceptance represent alternative treatment strategies addressing risk differently.
11. B — ASHRAE Standard 62.1 establishes minimum outdoor air ventilation rates for acceptable indoor air quality in commercial buildings. The standard specifies ventilation rates necessary to dilute and remove contaminants. Standard 55 addresses thermal comfort; lighting and acoustics are governed by other standards.
12. A — The hierarchy of controls prioritizes elimination, substitution, engineering controls, administrative controls, and PPE in descending order of effectiveness. Higher-order controls provide more reliable protection because they reduce dependence on consistent worker behavior. PPE is the last and least preferred line of defense.
13. D — The IFMA exam blueprint allocates 10 scored questions equally to each of the ten official domains, weighted at 10% each. Equal weighting means candidates cannot afford to neglect any single domain area. This is one of the most distinctive features of the CFM credential structure.
14. B — Bottom Line Up Front structures executive presentations to begin with the recommendation and supporting business case. Executives have limited attention and expect conclusion-first communication. Background, technical detail, and process description are appropriate for technical audiences but not for executives.
15. C — Preventive maintenance is most appropriate for assets that exhibit predictable wear patterns over time, allowing scheduled intervention before failure. Random failure patterns favor reactive maintenance, easily replaced equipment may not justify PM, and continuous monitoring enables predictive approaches. Strategy selection matches asset failure characteristics.
16. A — Recovery Time Objective is the target timeframe within which a disrupted function must be restored. RTO is a planning target derived from Business Impact Analysis. Maximum acceptable data loss is RPO; backup testing frequency is a separate operational concern.
17. D — Allocation-based chargeback distributes facility costs based on each department's occupied square footage. The model is transparent and incentivizes space efficiency without requiring consumption measurement infrastructure. Consumption-based, performance-based, and no-chargeback models distribute costs differently.

18. B — Collaborating combines high cooperativeness with high assertiveness in the Thomas-Kilmann conflict mode framework. The approach pursues integrative solutions addressing all parties' interests. Compromising, accommodating, and avoiding represent different combinations of these dimensions.
19. C — A Work Breakdown Structure decomposes project scope into estimable, schedulable, trackable work components. The bottom level — work packages — is the unit at which execution planning occurs. Marketing materials, daily reports, and change orders are not WBS purposes.
20. A — Master plans typically cover 5 to 20 years aligned with organizational strategy, depending on industry, asset life, and planning practices. Annual budget cycles are too short; structural building life is too long; indefinite horizons fail to provide planning discipline. Higher education often uses longer horizons; corporate organizations often use shorter ones.
21. C — Scope 2 emissions are indirect emissions from purchased energy, including electricity, steam, heating, and cooling consumed by the organization. Facility electricity consumption is the most common Scope 2 category. The framework distinguishes Scope 2 from Scope 1 (direct) and Scope 3 (value chain).
22. A — A Cost Performance Index of 0.85 indicates performance unfavorable to budget by 15%. CPI below 1.0 means actual cost exceeds earned value, with the magnitude of difference reflecting unfavorable cost performance. CPI above 1.0 indicates favorable performance.
23. B — Design-build is the project delivery method with single point of responsibility for both design and construction. The model provides faster delivery and accountability concentration but requires owner clarity on requirements upfront. CMAR, design-bid-build, and P3 distribute design and construction responsibility differently.
24. D — Common Area Maintenance charges in multi-tenant leases cover shared building areas and operating costs including lobbies, elevators, parking, and similar shared spaces. CAM is a defining feature of multi-tenant lease structures. Tenant-specific buildouts, individual utilities, and signage are not typically CAM categories.
25. A — John Kotter developed the eight-step change management model widely referenced in facility management practice. The model addresses urgency, coalition, vision, communication, action, wins, acceleration, and institutionalization. Drucker, Porter, and Taylor are management thinkers in different domains.
26. C — Stakeholder mapping plots stakeholders along influence and interest dimensions to match engagement intensity to stakeholder characteristics. The purpose is engagement strategy, not financial calculation, insurance, or organizational documentation. Influence-interest matrices guide where attention is invested.
27. D — ENERGY STAR Portfolio Manager produces facility benchmarking scores on a 1-to-100 scale. Scores of 75 or higher qualify eligible buildings for ENERGY STAR certification. Letter

grades, certification tiers, and percentile rankings without numbers are not the Portfolio Manager scale.

28. B — IWMS platforms typically integrate five primary functional domains: real estate and lease management, capital project management, facility maintenance, space and occupancy, and environmental and sustainability. The unified data architecture is the defining IWMS characteristic. Three, eight, and twelve domains misrepresent the standard IWMS scope.
29. C — Risk assessment matrices plot identified risks along likelihood and consequence dimensions to drive proportional management response. The matrix prioritizes management attention across the risk portfolio. Cost and schedule, stakeholder dimensions, and geographic distribution are not the standard risk matrix axes.
30. A — Prevention costs support designed-in quality and include investments in process design, training, quality planning, and supplier development. The cost of quality framework distinguishes prevention from appraisal, internal failure, and external failure costs. Shifting investment toward prevention reduces total cost of quality.
31. D — Execution of project work and deliverable creation is the standard project lifecycle phase between planning and monitoring/controlling. The lifecycle progresses through initiation, planning, execution, monitoring/controlling, and closeout. Stakeholder analysis, risk assessment, and change order processing occur within phases rather than as standalone phases.
32. B — TIMWOOD covers all seven Lean waste types: Transportation, Inventory, Motion, Waiting, Overproduction, Over-processing, and Defects. The acronym is widely used in Lean education and practice. PDSA, SMART, and DMAIC reference different frameworks.
33. C — IoT sensor deployment most directly enables continuous data capture supporting analytics. The capability extends digital awareness into physical environments at scales manual observation cannot match. IoT does not replace human staff, eliminate PM, or operate independently of IT coordination.
34. A — The IFMA Certification Commission's mission is to advance facility management worldwide by enhancing and sustaining the integrity and quality of certifications. The Commission focuses on credential standards, not software, salaries, or real estate transactions. Mission clarity defines Commission scope.
35. D — Operation and maintenance during service is typically the largest cost category in life cycle cost analysis for facility assets. Industry research consistently shows that O&M dwarfs acquisition, installation, and disposal costs across the full life. This is why life cycle cost analysis is so valuable for capital decisions.
36. B — All CFM credential applicants and recertifying candidates must complete an approved Ethics Assessment. The requirement applies to both initial certification and recurring recertification cycles. The Assessment is a non-negotiable component of the credential.

37. A — The role determining facility's strategic positioning is what reporting structure most directly affects. Reporting to operations, real estate, finance, or executive leadership signals and shapes the function's organizational positioning. Compensation, budget, and square footage are organizational outcomes rather than positioning determinants.
38. C — The facility function's purpose is to serve the demand organization's mission and objectives. The demand-supply framework clarifies that the supply organization (facility function) exists to serve the demand organization (parent entity). Independent operation, staff development, and savings generation are not the foundational purpose.
39. B — The IFMA exam includes 100 scored items across the 10 domains. The exam also includes 20 unscored pretest items, but pretest items do not count toward scoring. Total delivered question count is 120, with 100 scored.
40. D — Strategic Facility Plans typically cover 5 to 10 years aligned with organizational strategy. The horizon matches strategic planning cycles in most organizations. Shorter horizons match operating budgets, and significantly longer horizons match master planning rather than strategic facility planning.
41. B — CMMS platforms support asset records, work orders, PM scheduling, inventory, and reporting as core functions. The platforms centralize maintenance information and operational workflow. Email, CRM, and HR functions are outside CMMS scope.
42. D — WELL Building Standard certification focuses primarily on occupant health, comfort, and wellness outcomes. The framework addresses air, water, nourishment, light, movement, thermal comfort, sound, materials, mind, and community. Energy, site, and waste are LEED and BREEAM emphases.
43. A — The asset lifecycle progresses through planning, installation, operation, maintenance, and disposition phases. Each phase carries distinct decisions affecting subsequent phases. Acquisition-depreciation, specification-procurement, and design-construction sequences misrepresent the lifecycle structure.
44. C — A project charter formally authorizes the project and defines its purpose, scope, deliverables, schedule, budget, stakeholders, and project manager authority. The charter is approved by the project sponsor and serves as the foundational governance document. Daily reports, vendor pricing, and tax depreciation are not charter purposes.
45. B — Recovery Point Objective represents the acceptable data loss expressed as a point in time before disruption. RPO defines how much information loss the organization can tolerate. Downtime acceptance is RTO; operating cost and backup testing are different concerns.
46. D — Crime Prevention Through Environmental Design (CPTED) reduces security risk through environmental design including natural surveillance, natural access control, territorial

reinforcement, and maintenance. The framework integrates security into facility design. Energy, IAQ, and space optimization are addressed through other design disciplines.

47. A — Principled negotiation focuses on underlying interests rather than stated positions. The approach often surfaces creative solutions invisible to positional bargaining. Maximum gain on every variable, single-issue bargaining, and confrontational tactics are not principled negotiation characteristics.
48. C — The IFMA Code of Conduct's principle of fiduciary responsibility requires practitioners to be honest, transparent, and trustworthy in financial dealings. The principle protects employers, clients, and stakeholders from financial misconduct. Aggressive negotiation, neutrality, and advisory limitation are not fiduciary requirements.
49. D — Seat-to-headcount ratio is most relevant to hybrid work and unassigned seating decisions. The metric reflects the recognition that workstation utilization is typically below 50% in traditional models. Tax depreciation, code compliance, and lease rates are governed by different metrics.
50. B — CMMS value depends most directly on the discipline of data entry and information quality. Sophisticated platforms with poor data produce dashboards that mislead decisions. Investment, user counts, and building age do not substitute for data quality discipline.
51. C — Emergency action plans typically address fire, weather, security, medical, utility, and related credible threat categories. The all-hazards approach addresses common elements across event types with hazard-specific procedures layered on top. Single-category and insurance-only approaches are inadequate.
52. A — Unity of command throughout the response structure ensures each responder reports to a single supervisor in ICS. The principle prevents conflicting direction and confusion during incident response. Span of control, common terminology, and modular organization address different ICS concerns.
53. B — The implementation roadmap with sequenced initiatives translates master plan strategy into action. Without a roadmap, plans remain analytical documents that produce no execution. Strategic context, demand forecast, and current state assessment are essential elements but describe analysis rather than action.
54. D — Life cycle cost analysis compares alternatives over total useful life by capturing acquisition, operation, maintenance, and disposition costs. The tool corrects the damaging habit of selecting based on upfront cost alone. Depreciation, taxes, and payment terms are different financial considerations.
55. A — Reliability-centered maintenance is a systematic analytical framework selecting optimal strategy per asset based on failure modes, consequences, and cost-effective mitigation. RCM typically results in a portfolio decision combining strategies rather than uniform application.

Default reactive, universal preventive, and continuous predictive approaches lack RCM's analytical foundation.

56. C — Domain B titled Facility Operations addresses buildings, building systems, infrastructure and grounds, maintenance processes, operations processes, asset management, FF&E, occupant health, safety and security, and work management systems. The breadth of Domain B is why this study guide treats it across three chapters. Other answer choices describe content from different domains.
57. B — Electrical system structure progresses from utility service through main switchgear, transformers, distribution panels, and branch circuits to end-use devices. The hierarchical structure organizes power delivery from utility boundary to consuming equipment. Reverse sequences misrepresent the actual power flow.
58. D — The Dynamic Global Career-Based Practice Analysis involved approximately 1,700 facility managers globally across all seven IFMA geographic regions. The empirical scale of the study established the validity of the exam blueprint. The other counts misrepresent the actual study.
59. A — BIM models used in operations are most valuable when owner BIM requirements were specified upfront in the project. Without owner requirements, models often lack data attributes operations require. Contractor-determined models, post-construction modeling, and excluded attributes all reduce operational value.
60. C — Consumption-based chargeback distributes costs based on actual measured consumption with submetering infrastructure. The model creates direct cost-consumption alignment and incentivizes efficient use. Allocation-based, tiered, and no-chargeback models distribute costs differently.
61. A — The IFMA exam consists of 120 total questions including 100 scored items and 20 unscored pretest items. Candidates do not know which items are scored versus pretest, so all questions warrant full attention. The 100-question scored count is what determines exam outcome.
62. C — Modern quality management per ISO 9001 rests on seven foundational principles: customer focus, leadership, engagement of people, process approach, improvement, evidence-based decision making, and relationship management. The principles structure quality practice across industries. Other counts misrepresent the standard.
63. B — Competent CFMs operate across strategic, tactical, and operational levels rather than being confined to any single level. Senior facility leaders concentrate on strategic work but retain tactical and operational fluency. Hierarchical separation, exclusive focus, and unidirectional progression misrepresent the integrated role.
64. A — Functional Programming produces a program document defining requirements for design including users, activities, space requirements, adjacencies, performance criteria, and constraints. The document is the brief against which design is developed. Schedules, vendor selection, and insurance analysis are different deliverables.

65. D — Strategic Facility Plans should be reviewed and updated periodically with substantive reviews every 3 to 5 years. The cadence balances strategic continuity with response to evolving conditions. Crisis-only review, full annual re-development, and end-of-horizon updates fail to maintain plan currency.
66. B — The IFMA Code of Conduct establishes the facility manager's primary professional goal as developing and managing safe, human, and functional workspaces. The goal centers facility management on stewardship of the built environment in service of occupants. Budget maximization, cost minimization, and outsourcing are not the primary professional goal.
67. C — ISO 31000 emphasizes that risk management should be integrated, structured, customized, and continuously improved. The framework establishes principles applicable across organizational contexts. Centralization, transfer-only, and probability-only emphases misrepresent the standard's integrated approach.
68. A — Vendor management produces most realized contract value through structured ongoing performance management. Contract negotiation establishes terms; ongoing management determines actual outcomes. Initial negotiation, lowest-price selection, and geographic proximity do not predict realized value.
69. B — A gross lease has the tenant pay a single rent amount with the landlord covering operating expenses. The structure simplifies tenant administration but typically carries higher base rent reflecting landlord assumption of expense risk. Triple net, modified gross, and net lease structures distribute expenses differently.
70. D — High-influence, high-interest stakeholders warrant close management through frequent direct engagement. They have both the power to shape outcomes and the active interest to do so. Lower-engagement strategies are appropriate for stakeholders with less influence or interest.
71. A — ASHRAE Standard 188 governs water management plans addressing Legionella risk in cooling tower and other building water systems. The standard establishes requirements for risk assessment, control measures, monitoring, and documentation. NFPA 70, OSHA, and IBC standards address different facility concerns.
72. C — Request for Quotation (RFQ) is appropriate for well-defined, price-driven requirements. RFI explores the market; RFP evaluates technical solutions; sole-source bypasses competition. Matching the solicitation type to the procurement is a foundational professional decision.
73. D — The CFM credential requires recertification every 3 years with documented qualifying activities across categories. Credential holders must complete at least three activities in a minimum of two of four categories for a total of six activities. Other intervals misrepresent the standard.
74. A — Preventive maintenance compliance is a leading indicator predicting future asset reliability. Leading indicators measure inputs and activities that influence future outcomes. Equipment failure rates and incident counts are lagging indicators describing past results.

75. B — Modified gross lease has the tenant pay base rent plus some operating expenses but not all, with shared expense responsibility. The structure represents a hybrid between gross (landlord pays all) and net (tenant pays all) approaches. Pure gross, triple net, and percentage leases distribute expenses differently.
76. D — Domain F titled Communication addresses communication skills and communication management. The domain encompasses both individual communication competence and organizational communication discipline. Other answer choices describe different domains.
77. C — CMMS data quality discipline directly affects the reliability of analytics and management decisions. Sophisticated platforms with poor data produce dashboards that mislead executives. Aesthetics, marketing, and geographic distribution are not consequences of data quality.
78. A — Risk avoidance eliminates risk by removing the activity that produces it. The strategy is appropriate when activities cannot be safely performed at acceptable risk levels. Mitigation, transfer, and acceptance manage risk differently while continuing the underlying activity.
79. B — Level 3 detailed analysis of capital-intensive modifications supports major capital investment decisions. The audit level matches analytical depth to the decision the audit will inform. Level 1 supports operational improvements; continuous metering and benchmarking inform but do not substitute for capital-decision audits.
80. C — Lessons learned documentation and integration is the project closeout activity most commonly neglected to long-term detriment. Teams move on without capturing institutional learning that should improve future projects. Payment, punch lists, and occupancy filing are typically completed even when lessons learned is skipped.
81. C — IWMS platforms typically replace historically separate CAFM (space and occupancy) and standalone CMMS (maintenance) systems through unified data architecture. The convergence is the defining IWMS innovation. Email, HR, and ERP systems are typically integrated with rather than replaced by IWMS.
82. A — Executive reporting discipline emphasizes Bottom Line Up Front structure with conclusions first. The principle respects executive time and decision orientation. Comprehensive technical documentation, maximum operational detail, and presentation aesthetics over substance fail to match executive consumption patterns.
83. D — Administrative controls through procedures and training sit immediately above PPE in the hierarchy of controls. The full sequence is elimination, substitution, engineering, administrative, PPE. Higher-order controls provide more reliable protection than the lower-order combination of administrative and PPE.
84. B — Commercial general liability coverage addresses third-party bodily injury and property damage claims. The coverage protects against claims by parties outside the organization. Property, business interruption, and workers' compensation address different exposure categories.

85. C — Integrated Project Delivery uses a multi-party contract with shared risk and reward among owner, designer, and contractor. The model fits complex projects where collaboration produces significant value. Design-bid-build, design-build, and P3 distribute risk and responsibility differently.
86. A — The Plan-Do-Check-Act cycle is the iterative continuous improvement framework that systematically tests changes through measured implementation. PDCA treats every change as a hypothesis to be tested. Kotter, Thomas-Kilmann, and Tuckman address different management concepts.
87. D — Master data maintains authoritative records for assets, spaces, vendors, employees, and locations referenced across multiple systems. Disciplined master data management is foundational to integration and analytics. Distribution lists, project schedules, and invoices are operational data, not master data.
88. B — Six Sigma applies the DMAIC framework — Define, Measure, Analyze, Improve, Control — to existing processes. The methodology focuses on reducing variation and defects through structured analytical approach. PDCA, SMART, and ADKAR reference different frameworks.
89. A — The CFM eligibility option requiring no formal FM degree requires 5 years of professional facility management experience covering most of the exam domains. The other option requires 3 years with a bachelor's or master's degree in facility management. Both pathways support certification eligibility.
90. C — Space planning hierarchy progresses from strategy through programming, space standards, planning, and design — increasing in specificity at each level. The cascade ensures detailed design decisions trace back to organizational strategy. Reverse sequences misrepresent the planning logic.
91. D — Resilience capacity addresses the ability to anticipate, absorb, adapt to, and recover from disruption. The definition distinguishes resilience from risk reduction (decreasing likelihood) by emphasizing adaptive response to disruption regardless of cause. Cost reduction, risk elimination, and certification are not resilience definitions.
92. B — Fixed price or lump sum contracting has the contractor deliver defined scope for a fixed total price. The contractor bears cost risk in exchange for clear scope. Cost-plus, T&M, and performance-based contracts allocate risk differently.
93. A — Domain A titled Leadership and Strategy addresses strategic planning, leadership, change management, relationships, individual and team leadership, and political/social/economic factors. The domain sits at the top of the framework because every other domain is shaped by it. Other answer choices describe different domains.
94. C — After-action reviews capture lessons learned for future incident prevention rather than assigning blame, documenting insurance, or generating board reports. Effective AARs distinguish

individual from system performance and produce documented improvements. Blame-focused reviews consistently underperform learning-focused reviews.

95. D — Multi-channel reach across SMS, voice, email, and signage is the most consequential design factor for mass notification effectiveness. Single-channel reliance fails when the channel itself is unavailable. Aesthetics, marketing, and unit cost are secondary to functional reach.
96. A — Price variance reflects changed unit cost differing from the assumed cost in the budget. Volume, efficiency, and timing variances reflect different causal factors. Distinguishing among variance types determines appropriate management response.
97. B — Executive sponsors provide authorization, resources, and ownership of project outcome. Sponsorship is among the most consequential project success factors. Direct supervision, daily management, and technical specification are not sponsor functions.
98. C — Time-based preventive maintenance is appropriate when equipment exhibits predictable wear patterns. Random failure patterns favor reactive maintenance, condition monitoring enables predictive approaches, and low criticality may not justify any maintenance investment. Strategy selection matches asset characteristics.
99. D — Domain J titled Project Management addresses planning, design, execution, delivery, and closeout phases of facility projects. The domain encompasses the full project lifecycle. Other answer choices describe different domains.
100. A — The IFMA Code of Conduct requires facility managers to continually seek new information to maintain professional skills relative to the built environment. Professional development is an explicit ethical obligation. Pre-approval, IFMA-only reading, and fixed cycles are not Code requirements.