

PRACTICE EXAM 28: LEED GREEN ASSOCIATE SIMULATION (100 QUESTIONS)

This practice exam contains 100 multiple-choice questions modeled on the LEED Green Associate (v5) exam administered by GBCI. The official exam has a 2-hour time limit and requires a score of 170 out of 200 to pass. Select the single best answer for each question. Answers and full explanations follow the exam.

1. A church's fellowship hall wants to reduce peak cooling load before selecting HVAC capacity. Which strategy delivers the BEST combined cost and carbon outcome?

- A. Oversizing the HVAC system to handle any possible load
- B. Reducing load through envelope and orientation first
- C. Adding supplemental resistance heating
- D. Ignoring load calculations until construction is complete

2. A synagogue's social hall wants to select a refrigerant for its kitchen walk-in cooler minimizing Fundamental Refrigerant Management compliance risk. Which choice is generally best?

- A. The least expensive refrigerant regardless of GWP
- B. A refrigerant banned under international agreements
- C. Whichever refrigerant the previous system used
- D. A refrigerant with zero ODP and low GWP

3. A mosque's ablution room wants to select an alternative water source requiring minimal treatment for its cooling equipment. Which source is generally BEST?

- A. Raw water from a nearby stream
- B. Untreated groundwater from an on-site well
- C. Condensate from cooling equipment

D. Discharge from an open-loop geothermal system

4. A temple's meditation hall wants regularly occupied spaces to combine thermal comfort, daylighting, quality views, and acoustic performance. Which credit evaluates all four together?

- A. Occupant Experience
- B. Reduce Parking
- C. Biodiverse Habitat
- D. Rainwater Management

5. A cathedral's restoration project wants to retain 70% of its existing structural stonework rather than full demolition. Which credit does this decision most directly support?

- A. Access to Transit
- B. Rainwater Management
- C. Light Pollution Reduction
- D. Building and Materials Reuse

6. A chapel's memorial garden wants to eliminate permanent irrigation entirely using native drought-tolerant landscaping. Which pathway does this support?

- A. Reduced Irrigation via the WaterSense Water Budget Tool
- B. Cooling Tower Water Use
- C. No Irrigation Required
- D. Water Metering and Reporting

7. A meditation center's silent hall wants exceptional acoustic isolation from an adjacent parking area. Which Occupant Experience component is most directly relevant?

- A. Acoustic performance
- B. Quality views

- C. Thermal comfort
- D. Humidity control exclusively

8. A cultural center's exhibit hall wants to reduce contaminants from off-gassing display casework. Which credit category evaluates this material selection?

- A. Sustainable Sites
- B. Materials and Resources
- C. Water Efficiency
- D. Location and Transportation

9. A community hall's kitchen wing wants to verify installed energy systems match design intent before staff occupy the facility. Which prerequisite governs this?

- A. Fundamental Commissioning
- B. Minimized Site Disturbance
- C. Fundamental Refrigerant Management
- D. Water Metering and Reporting

10. A tribal center's ceremonial lodge wants to identify its top embodied carbon hotspot materials before pursuing any reduction. Which prerequisite governs this first step?

- A. Fundamental Commissioning
- B. Minimized Site Disturbance
- C. Water Metering and Reporting
- D. Quantify and Assess Embodied Carbon

11. A heritage center's archive wing wants to select a pathway for Reduce Embodied Carbon given a team without dedicated life-cycle assessment staff. Which pathway is generally BEST?

- A. Whole-Building Life-Cycle Assessment exclusively

- B. Skipping embodied carbon documentation entirely
- C. EPD Analysis (Option 2)
- D. Relying solely on manufacturer marketing claims

12. A history museum's gallery wing wants to combine strong daylighting with minimal echo and reverberation. Which credit balances both goals?

- A. Light Pollution Reduction
- B. Occupant Experience
- C. Rainwater Management
- D. Biodiverse Habitat

13. A natural history museum's fossil hall wants direct sightlines to a courtyard garden from its lobby. Which Occupant Experience component does this satisfy?

- A. Thermal comfort
- B. Acoustic performance
- C. Humidity control exclusively
- D. Quality views

14. An arboretum's visitor center wants to protect a documented population of a locally significant pollinator species on site. Which credit rewards this protection?

- A. Rainwater Management
- B. Biodiverse Habitat
- C. Heat Island Reduction
- D. Light Pollution Reduction

15. A living history farm's blacksmith shop wants to reduce its cooling tower's blowdown volume. Which strategy directly achieves this?

- A. Decreasing cycles of concentration
- B. Switching to a closed refrigerant loop exclusively
- C. Increasing cycles of concentration
- D. Ignoring the makeup water source entirely

16. A memorial hall's reflection room wants its exterior lighting to avoid disrupting a nearby dark-sky preserve. Which credit addresses this concern most directly?

- A. Light Pollution Reduction
- B. Rainwater Management
- C. Heat Island Reduction
- D. Biodiverse Habitat

17. A veterans memorial's visitor pavilion wants to demonstrate genuine barrier-free access with ramps, seating, and public-facing entry. Which credit does this design satisfy?

- A. Rainwater Management
- B. Heat Island Reduction
- C. Accessible Outdoor Space
- D. Light Pollution Reduction

18. An interfaith center's shared prayer room wants to select recycled-content flooring over virgin material alternatives. What is the primary embodied carbon benefit?

- A. Reprocessing existing material typically requires less energy than mining
- B. It automatically qualifies the project for LEED Platinum
- C. It eliminates the need for any EPD documentation
- D. It satisfies the Fundamental Refrigerant Management prerequisite

19. An ashram's yoga hall wants to combine garden views, natural wood finishes, and a small water feature. Which credit rewards this combination?

- A. Heat Island Reduction
- B. Rainwater Management
- C. Light Pollution Reduction
- D. Connecting with Nature

20. A gurdwara's community kitchen (langar hall) wants to reuse rinse water from food preparation for a subsequent cycle. Which credit category evaluates this alternative water source strategy?

- A. Sustainable Sites
- B. Water Efficiency
- C. Materials and Resources
- D. Indoor Environmental Quality

21. A Buddhist temple's meditation garden wants shading provided by tree canopy rather than structural coverings. Which credit rewards this specific strategy?

- A. Rainwater Management
- B. Heat Island Reduction
- C. Light Pollution Reduction
- D. Biodiverse Habitat

22. A Quaker meeting house's silent worship room wants to select a refrigerant qualifying automatically under Enhanced Refrigerant Management Option 1. What must be true of this refrigerant?

- A. It must have moderate GWP and standard ODP
- B. It must be banned under international agreements
- C. It must have zero ODP and GWP below the defined low threshold
- D. It must require extensive leak detection

23. A genealogy center's records room wants to identify which specific materials contribute most to its total embodied carbon. Which prerequisite governs this?

- A. Quantify and Assess Embodied Carbon
- B. Fundamental Commissioning
- C. Minimized Site Disturbance
- D. Water Metering and Reporting

24. A funeral home's viewing room wants to verify air quality remains below defined VOC thresholds continuously. Which credit addresses this specifically?

- A. Enhanced Building Accessibility
- B. Rainwater Management
- C. Reduce Parking
- D. Indoor Air Quality Performance

25. A cemetery chapel's reception room wants to select a site with authority-mandated remediation requirements from a prior industrial use. Which pathway does this support?

- A. Access to Transit
- B. Brownfield remediation under Equitable Development
- C. Surrounding Density
- D. Diverse Uses

26. A church's youth wing wants to reduce peak cooling load as cost-effectively as possible. Which strategy is generally the BEST first step?

- A. Improving envelope insulation and glazing performance during early design
- B. Installing a larger chiller to compensate for the existing envelope
- C. Waiting until construction is complete to evaluate options
- D. Adding supplemental electric resistance heating

27. A synagogue's library wants to identify which specific materials contribute most to its total embodied carbon. Which prerequisite governs this?

- A. Fundamental Commissioning
- B. Minimized Site Disturbance
- C. Water Metering and Reporting
- D. Quantify and Assess Embodied Carbon

28. A mosque's minaret support building wants to reduce blowdown volume from its process cooling system. Which strategy directly achieves this?

- A. Decreasing cycles of concentration
- B. Disconnecting the cooling system entirely
- C. Increasing cycles of concentration
- D. Switching to potable makeup water exclusively

29. A temple's administrative office wants to reduce reliance on fossil-fuel-generated electricity as effectively as possible. Which combination of strategies is generally strongest?

- A. Ignoring electricity source considerations entirely
- B. Combining on-site generation, off-site PPA, and REC purchases together
- C. Relying exclusively on carbon offsets with no direct strategy
- D. Pursuing only one strategy and avoiding all others

30. A cathedral's bell tower support building wants to select the best pathway for identifying its embodied carbon hotspot materials. Which is generally strongest?

- A. Guessing based on general industry assumptions with no calculation
- B. Relying solely on a single manufacturer's claims
- C. Systematically calculating GWP for structure, enclosure, and hardscape materials
- D. Skipping hotspot identification entirely

31. A chapel wants to select a refrigerant for its reception hall kitchen minimizing compliance burden. Which choice is generally best?

- A. A refrigerant with zero ODP and low GWP
- B. The least expensive refrigerant regardless of GWP
- C. A refrigerant banned under international agreements
- D. Whichever refrigerant the previous system used

32. A meditation center wants to verify installed energy systems match design intent before guests occupy the facility. Which prerequisite governs this?

- A. Minimized Site Disturbance
- B. Fundamental Refrigerant Management
- C. Water Metering and Reporting
- D. Fundamental Commissioning

33. A cultural center wants to document a genuine mix of civic, educational, and recreational uses within walking distance of its site. Which pathway does this support?

- A. Diverse Uses
- B. Access to Transit
- C. Surrounding Density
- D. Reduce Parking

34. A community hall wants to reduce its cooling tower's environmental footprint. Which combined strategy is generally strongest?

- A. Reducing cycles of concentration to the lowest number
- B. Increasing potable water makeup volume without adjustment
- C. Increasing cycles of concentration and using alternative makeup water
- D. Ignoring cooling tower water use entirely

35. A tribal center wants to select a pathway for Reduce Embodied Carbon given strong in-house life-cycle assessment expertise. Which pathway is generally BEST?

- A. Skipping the credit entirely to save time
- B. Relying solely on manufacturer marketing claims
- C. Referenced Standard Compliance exclusively
- D. Whole-Building Life-Cycle Assessment (Option 1)

36. A heritage center wants to document a site within a half-mile walk of a bus stop with frequent all-day service. Which pathway does this support?

- A. Diverse Uses
- B. Access to Transit
- C. Surrounding Density exclusively
- D. Reduce Parking exclusively

37. A history museum wants to reduce contaminants from off-gassing exhibit casework. Which credit category evaluates this material selection?

- A. Sustainable Sites
- B. Materials and Resources
- C. Location and Transportation
- D. Water Efficiency

38. A natural history museum wants to select an alternative water source requiring minimal treatment for equipment rinse water. Which source is generally BEST?

- A. Raw water from a nearby stream
- B. Untreated groundwater from an on-site well
- C. Condensate from cooling equipment
- D. Discharge from an open-loop geothermal system

39. An arboretum's greenhouse wants to eliminate on-site fossil fuel combustion in favor of heat pump systems for space heating. What does this represent?

- A. Grid-interactive operation
- B. Enhanced Commissioning
- C. A refrigerant management strategy exclusively
- D. Full electrification

40. A living history farm's visitor center wants to reduce peak cooling load before selecting new HVAC equipment. Which strategy delivers the BEST combined cost and carbon outcome?

- A. Reducing load through envelope and orientation first
- B. Oversizing the HVAC system to handle any possible load
- C. Adding supplemental resistance heating
- D. Ignoring load calculations until construction is complete

41. A memorial hall's baseline peak cooling load is 220 tons. Envelope improvements reduce this to 176 tons. What percentage reduction is this?

- A. 15%
- B. 10%
- C. 20%
- D. 25%

42. A veterans memorial's baseline annual energy use is 300,000 kWh. A combination of on-site and off-site renewable strategies offsets 90,000 kWh. What percentage does this represent?

- A. 20%
- B. 25%
- C. 35%
- D. 30%

43. An interfaith center's baseline indoor water use is 2,400 gallons per day; after upgrades, use drops to 1,920 gallons per day. What percentage reduction is this?

- A. 15%
- B. 20%
- C. 25%
- D. 30%

44. An ashram's baseline peak cooling load is 60 tons. Envelope improvements reduce this to 48 tons. What percentage reduction is this?

- A. 20%
- B. 10%
- C. 25%
- D. 15%

45. A gurdwara's baseline annual energy use is 210,000 kWh. On-site solar generates 31,500 kWh annually. What percentage of energy use does this offset?

- A. 15%
- B. 20%
- C. 25%
- D. 10%

46. A Buddhist temple's baseline indoor water use is 1,600 gallons per day; after upgrades, use drops to 1,280 gallons per day. What percentage reduction is this?

- A. 15%
- B. 25%
- C. 20%
- D. 30%

47. A Quaker meeting house's baseline peak cooling load is 45 tons. Envelope improvements reduce this to 36 tons. What percentage reduction is this?

- A. 10%
- B. 20%
- C. 25%
- D. 15%

48. A genealogy center's baseline annual energy use is 160,000 kWh. A combination of on-site and off-site renewable strategies offsets 56,000 kWh. What percentage does this represent?

- A. 30%
- B. 20%
- C. 25%
- D. 35%

49. A funeral home's baseline indoor water use is 1,200 gallons per day; after upgrades, use drops to 960 gallons per day. What percentage reduction is this?

- A. 15%
- B. 25%
- C. 30%
- D. 20%

50. A cemetery chapel's baseline peak cooling load is 35 tons. Envelope improvements reduce this to 28 tons. What percentage reduction is this?

- A. 20%
- B. 10%
- C. 25%
- D. 15%

51. A church wants to select the best pathway for identifying its embodied carbon hotspot materials. Which is generally strongest?

- A. Guessing based on general industry assumptions with no calculation
- B. Relying solely on a single manufacturer's claims
- C. Systematically calculating GWP for structure, enclosure, and hardscape materials
- D. Skipping hotspot identification entirely

52. A synagogue wants to choose the BEST approach for its exterior lighting balancing safety and Light Pollution Reduction. Which strategy is generally strongest?

- A. Maximizing total lighting output regardless of direction
- B. Calibrating shielded fixtures to genuine functional need
- C. Eliminating all exterior lighting regardless of safety
- D. Leaving lighting decisions entirely to chance

53. A mosque wants to select the best approach for its Fundamental Refrigerant Management compliance path. Which factor should genuinely drive this decision?

- A. Whichever path a competing nearby facility happened to use
- B. The facility's actual mechanical system requirements
- C. A coin flip between the two available compliance paths
- D. Whichever path requires the least paperwork regardless of system needs

54. A temple wants to time its renewable energy PPA to match its actual measured load profile rather than a design-phase estimate. What must happen first?

- A. Benchmarking data must establish the actual load profile first
- B. Multiple redundant PPAs must be signed simultaneously
- C. The temple must avoid any PPA regardless of circumstances
- D. The PPA must be signed before any load data exists

55. A cathedral wants to choose the BEST approach for pursuing both material reuse and low-carbon new material procurement together. Which is generally strongest?

- A. Pursuing only reuse and ignoring new material selection entirely
- B. Pursuing only new material selection and ignoring reuse potential
- C. Pursuing both reuse and low-carbon new material strategies together
- D. Avoiding both strategies to minimize documentation effort

56. A chapel wants to select a pathway for Reduce Embodied Carbon given limited technical capacity. Which pathway is generally BEST?

- A. Attempting a full WBLCA despite lacking necessary expertise
- B. Skipping the credit entirely due to capacity constraints
- C. Guessing at embodied carbon figures with no actual documentation
- D. Pursuing EPD Analysis (Option 2) as a more accessible pathway

57. A meditation center wants to reduce its reliance on fossil-fuel electricity while managing budget constraints. Which strategy sequence is generally strongest?

- A. Waiting for full capital availability before pursuing any strategy
- B. Ignoring renewable strategies entirely due to budget constraints
- C. Combining modest on-site generation with off-site procurement
- D. Pursuing only the most expensive strategy regardless of fit

58. A cultural center wants to reduce blowdown volume from its process cooling system. Which strategy directly achieves this?

- A. Decreasing cycles of concentration
- B. Disconnecting the cooling system entirely
- C. Switching to potable makeup water exclusively
- D. Increasing cycles of concentration

59. A community hall wants secure bicycle storage alongside showers for commuting staff. Which credit rewards this combination?

- A. Reduce Parking
- B. Active Travel Facilities
- C. Surrounding Density
- D. Diverse Uses

60. A tribal center wants to reduce peak cooling load protecting sensitive ceremonial artifacts. Which strategy is generally the BEST first step?

- A. Improving envelope insulation during early design
- B. Installing a larger dehumidifier to compensate
- C. Waiting until construction is complete to evaluate options
- D. Adding supplemental electric resistance heating

61. A heritage center wants to select a refrigerant compliance path. Which factor should genuinely drive this decision?

- A. The center's actual mechanical system requirements
- B. A coin flip between the two available compliance paths
- C. Whichever path requires the least paperwork regardless of system needs
- D. Whichever path a competing nearby facility happened to use

62. A history museum wants to identify its top embodied carbon hotspot materials before pursuing any reduction. Which prerequisite governs this first step?

- A. Fundamental Commissioning
- B. Quantify and Assess Embodied Carbon
- C. Minimized Site Disturbance
- D. Water Metering and Reporting

63. A natural history museum wants to reduce nighttime light disruption to a nearby bird migration corridor. Which combination of credits is most directly relevant?

- A. Water Metering and Reduce Parking
- B. Reduce Peak Thermal Loads and Ventilation Performance
- C. Light Pollution Reduction and Biodiverse Habitat
- D. Enhanced Building Accessibility and Diverse Uses

64. An arboretum wants to select the best pathway for Reduce Embodied Carbon given limited technical capacity. Which pathway is generally BEST?

- A. Attempting a full WBLCA despite lacking necessary expertise
- B. Skipping the credit entirely due to capacity constraints
- C. Guessing at embodied carbon figures with no actual documentation
- D. Pursuing EPD Analysis (Option 2) as a more accessible pathway

65. A living history farm wants to verify formaldehyde and VOC levels remain below defined thresholds on an ongoing basis. Which credit addresses this?

- A. Indoor Air Quality Performance
- B. Rainwater Management
- C. Enhanced Building Accessibility
- D. Reduce Parking

66. A memorial hall wants to select the best pathway for identifying its embodied carbon hotspot materials. Which is generally strongest?

- A. Guessing based on general industry assumptions with no calculation
- B. Relying solely on a single manufacturer's claims
- C. Systematically calculating GWP for structure, enclosure, and hardscape materials
- D. Skipping hotspot identification entirely

67. A veterans memorial wants to select a refrigerant qualifying automatically under Enhanced Refrigerant Management. What determines whether a calculation is required?

- A. The building's total floor area
- B. The number of LEED APs on the project team
- C. The facility's certification level target
- D. Whether the refrigerant qualifies automatically under Option 1's threshold

68. An interfaith center wants to select a site with existing density and use variety already present nearby rather than an isolated parcel. What does this reflect?

- A. A requirement that the project itself must create this density
- B. Selecting a location where surrounding conditions already support multiple pathways
- C. An approach unrelated to any Location and Transportation credit
- D. A strategy disqualifying the project from certification

69. An ashram wants to reduce peak cooling load as cost-effectively as possible. Which strategy is generally the BEST first step?

- A. Improving envelope insulation and glazing performance during early design
- B. Installing a larger chiller to compensate for the existing envelope
- C. Waiting until construction is complete to evaluate load reduction options
- D. Adding supplemental electric resistance heating

70. A gurdwara wants to identify which specific materials contribute most to its total embodied carbon. Which prerequisite governs this?

- A. Fundamental Commissioning
- B. Minimized Site Disturbance
- C. Quantify and Assess Embodied Carbon
- D. Water Metering and Reporting

71. A Buddhist temple wants to verify installed energy systems match design intent before visitors occupy the facility. Which prerequisite governs this?

- A. Minimized Site Disturbance
- B. Fundamental Refrigerant Management
- C. Water Metering and Reporting
- D. Fundamental Commissioning

72. A Quaker meeting house wants to select recycled-content countertops over virgin stone alternatives. What is the primary embodied carbon benefit?

- A. Reprocessing existing material typically requires less energy than mining
- B. It automatically qualifies the project for LEED Platinum
- C. It eliminates the need for any EPD documentation
- D. It satisfies the Fundamental Refrigerant Management prerequisite

73. A genealogy center wants to reduce its total parking supply while ensuring transit remains realistic for staff. Which combination reflects this strategy?

- A. Maximizing parking supply regardless of transit access
- B. Reduce Parking paired with genuine Access to Transit qualification
- C. Ignoring parking demand analysis entirely
- D. Offering unlimited free parking to attract staff

74. A funeral home wants to reduce contaminants from off-gassing casket display materials. Which credit category evaluates this material selection?

- A. Sustainable Sites
- B. Location and Transportation
- C. Materials and Resources
- D. Water Efficiency

75. A cemetery chapel wants to document that its site sits within a designated transit priority area. What practical effect does this have on VMT documentation?

- A. The documentation burden increases significantly
- B. The project must hire a third-party transportation auditor
- C. VMT documentation is eliminated with no exceptions
- D. The project may be exempt from some detailed VMT requirements

76. A church wants to reduce its reliance on fossil-fuel-generated electricity as effectively as possible. Which combination of strategies is generally strongest?

- A. Ignoring electricity source considerations entirely
- B. Combining on-site generation, off-site PPA, and REC purchases together
- C. Relying exclusively on carbon offsets with no direct strategy
- D. Pursuing only one strategy and avoiding all others

77. A synagogue's baseline peak cooling load is 190 tons. Envelope improvements reduce this to 152 tons. What percentage reduction is this?

- A. 15%
- B. 10%
- C. 25%
- D. 20%

78. A mosque wants to select a pathway for Reduce Embodied Carbon given strong in-house life-cycle assessment expertise. Which pathway is generally BEST?

- A. Whole-Building Life-Cycle Assessment (Option 1)
- B. Skipping the credit entirely to save time
- C. Relying solely on manufacturer marketing claims
- D. Referenced Standard Compliance exclusively

79. A temple's baseline indoor water use is 3,600 gallons per day; after upgrades, use drops to 2,880 gallons per day. What percentage reduction is this?

- A. 15%
- B. 25%
- C. 20%
- D. 30%

80. A cathedral wants to reduce nighttime light disruption to a nearby residential neighborhood. Which combination of credits is most directly relevant?

- A. Water Metering and Reduce Parking
- B. Light Pollution Reduction and Biodiverse Habitat
- C. Reduce Peak Thermal Loads and Ventilation Performance
- D. Enhanced Building Accessibility and Diverse Uses

81. A chapel's baseline annual energy use is 130,000 kWh. On-site solar generates 19,500 kWh annually. What percentage of energy use does this offset?

- A. 20%
- B. 10%
- C. 15%
- D. 25%

82. A meditation center wants to select recycled-content shelving over virgin steel alternatives. What is the primary embodied carbon benefit?

- A. It automatically qualifies the project for LEED Platinum
- B. It eliminates the need for any EPD documentation
- C. It satisfies the Fundamental Refrigerant Management prerequisite
- D. Reprocessing existing steel typically requires less energy than mining ore

83. A cultural center's baseline peak cooling load is 280 tons. Envelope improvements reduce this to 224 tons. What percentage reduction is this?

- A. 15%
- B. 20%
- C. 25%
- D. 10%

84. A community hall wants to select a site previously used as an industrial dry-cleaning facility requiring authority-mandated remediation. Which pathway does this support?

- A. Brownfield remediation under Equitable Development
- B. Access to Transit
- C. Surrounding Density
- D. Diverse Uses

85. A tribal center's baseline annual energy use is 380,000 kWh. A combination of on-site and off-site renewable strategies offsets 133,000 kWh. What percentage does this represent?

- A. 30%
- B. 25%
- C. 20%
- D. 35%

86. A heritage center wants to choose the BEST approach for identifying its embodied carbon hotspot materials. Which is generally strongest?

- A. Systematically calculating GWP for structure, enclosure, and hardscape materials
- B. Guessing based on general industry assumptions with no calculation
- C. Skipping hotspot identification entirely
- D. Relying solely on a single manufacturer's claims

87. A history museum's baseline indoor water use is 5,600 gallons per day; after upgrades, use drops to 4,480 gallons per day. What percentage reduction is this?

- A. 15%
- B. 25%
- C. 20%
- D. 30%

88. A natural history museum wants to select a pathway for Reduce Embodied Carbon given limited technical capacity. Which pathway is generally BEST?

- A. Attempting a full WBLCA despite lacking necessary expertise
- B. Pursuing EPD Analysis (Option 2) as a more accessible pathway
- C. Skipping the credit entirely due to capacity constraints
- D. Guessing at embodied carbon figures with no actual documentation

89. An arboretum's baseline peak cooling load is 105 tons. Envelope improvements reduce this to 84 tons. What percentage reduction is this?

- A. 15%
- B. 10%
- C. 25%
- D. 20%

90. A living history farm wants to reduce peak cooling load before selecting new HVAC equipment. Which strategy delivers the BEST combined cost and carbon outcome?

- A. Reducing load through envelope and orientation first
- B. Oversizing the HVAC system to handle any possible load
- C. Adding supplemental resistance heating
- D. Ignoring load calculations until construction is complete

91. A memorial hall's baseline annual energy use is 240,000 kWh. A combination of on-site and off-site renewable strategies offsets 84,000 kWh. What percentage does this represent?

- A. 20%
- B. 25%
- C. 35%
- D. 30%

92. A veterans memorial wants to select the best pathway for identifying its embodied carbon hotspot materials. Which is generally strongest?

- A. Systematically calculating GWP for structure, enclosure, and hardscape materials
- B. Guessing based on general industry assumptions with no calculation
- C. Skipping hotspot identification entirely
- D. Relying solely on a single manufacturer's claims

93. An interfaith center's baseline peak cooling load is 75 tons. Envelope improvements reduce this to 60 tons. What percentage reduction is this?

- A. 10%
- B. 20%
- C. 25%
- D. 15%

94. An ashram wants to reduce its cooling tower's environmental footprint. Which combined strategy is generally strongest?

- A. Reducing cycles of concentration to the lowest number
- B. Increasing potable water makeup volume without adjustment
- C. Increasing cycles of concentration and using alternative makeup water
- D. Ignoring cooling tower water use entirely

95. A gurdwara's baseline indoor water use is 2,800 gallons per day; after upgrades, use drops to 2,240 gallons per day. What percentage reduction is this?

- A. 15%
- B. 25%
- C. 30%
- D. 20%

96. A Buddhist temple wants to select a refrigerant for its kitchen minimizing compliance burden. Which choice is generally best?

- A. The least expensive refrigerant regardless of GWP
- B. A refrigerant with zero ODP and low GWP
- C. A refrigerant banned under international agreements
- D. Whichever refrigerant the previous system used

97. A Quaker meeting house's baseline annual energy use is 95,000 kWh. On-site solar generates 14,250 kWh annually. What percentage of energy use does this offset?

- A. 20%
- B. 10%
- C. 25%
- D. 15%

98. A genealogy center wants to identify which specific materials contribute most to its total embodied carbon. Which prerequisite governs this?

- A. Quantify and Assess Embodied Carbon
- B. Fundamental Commissioning
- C. Minimized Site Disturbance
- D. Water Metering and Reporting

99. A funeral home's baseline peak cooling load is 50 tons. Envelope improvements reduce this to 40 tons. What percentage reduction is this?

- A. 10%
- B. 15%
- C. 20%
- D. 25%

100. Across this exam's cultural, religious, and community facility scenarios, which shared underlying principle connects biophilic design, envelope-first load reduction, and refrigerant threshold qualification?

- A. Each concept functions in complete isolation from community values
- B. Thoughtful, upstream design decisions honor both community purpose and long-term stewardship
- C. Only large institutional facilities can meaningfully apply any of these concepts
- D. None of these concepts share any genuine underlying connection

Practice Exam 28: Answer Key and Explanations

1. B — Reducing load through envelope and orientation before equipment selection delivers the best combined cost and carbon outcome, since smaller resulting HVAC equipment costs less to purchase, install, and operate for the building's entire service life. Oversizing equipment or adding resistance heating both increase cost rather than reducing it. This distinction is frequently tested across multiple LEED domains.

2. D — A refrigerant with zero ozone depletion potential and low global warming potential is generally the best choice, since it minimizes both environmental risk and Fundamental Refrigerant Management compliance burden by potentially qualifying automatically under Enhanced Refrigerant Management's Option 1, avoiding the more detailed calculation entirely for this kitchen equipment. This connects directly to the broader credit category's underlying intent.

3. C — Condensate from cooling equipment generally requires the least treatment before reuse among the listed options, aligning with LEED's explicit direction to prioritize alternative sources requiring minimal processing first. Raw stream water, untreated groundwater, and geothermal discharge are all explicitly ineligible sources under LEED's water efficiency framework. This shared logic runs consistently across several related pathways.

4. A — Combining thermal comfort, daylighting, quality views, and acoustic performance under one evaluation is precisely what the consolidated Occupant Experience credit does under LEED v5, replacing what LEED v4.1 evaluated as four separate, independently point-earning credits. Reduce

Parking, Biodiverse Habitat, and Rainwater Management address entirely unrelated concerns instead. This is a frequently tested structural detail worth remembering precisely.

5. D — Retaining 70% of existing structural stonework rather than full demolition directly supports Building and Materials Reuse, one of two primary reuse pathways alongside procuring salvaged materials, avoiding the embodied carbon a fully new replacement structure would otherwise require. Access to Transit and Rainwater Management address entirely unrelated concerns. No comparable evidence exists through any of the alternative options.

6. C — Eliminating permanent irrigation entirely using native drought-tolerant landscaping specifically satisfies No Irrigation Required, the more ambitious Outdoor Water Use Reduction pathway achieved through climate-appropriate species selection. Reduced Irrigation, Cooling Tower Water Use, and Water Metering address distinct, unrelated pathway concerns instead. Recognizing this connection strengthens overall exam preparation significantly. This distinction matters directly for accurate exam preparation.

7. A — Exceptional acoustic isolation from an adjacent parking area is most directly relevant to acoustic performance, one of the four components consolidated into Occupant Experience under LEED v5, evaluated independently from thermal comfort, quality views, and humidity control within this same broader consolidated credit category structure. This principle applies consistently regardless of facility type or scale.

8. B — Reducing contaminants from off-gassing display casework falls under Low-Emitting Materials, which LEED v5 relocated from Indoor Environmental Quality into Materials and Resources. This structural placement is a frequently tested detail distinguishing current v5 knowledge from earlier rating system versions where this credit previously resided instead. This holds true across every cultural and religious setting tested here.

9. A — Verifying installed energy systems match design intent before staff occupy the facility is precisely governed by Fundamental Commissioning, the mandatory prerequisite requiring OPR and BOD review alongside verification of energy-related system installation. Minimized Site Disturbance, Fundamental Refrigerant Management, and Water Metering address entirely unrelated concerns. This distinction is frequently tested across multiple LEED domains.

10. D — Identifying top embodied carbon hotspot materials before pursuing any reduction is precisely the intentionally baseline-only role of Quantify and Assess Embodied Carbon, requiring GWP calculations before the separate, optional Reduce Embodied Carbon credit is pursued. Fundamental Commissioning and Minimized Site Disturbance address entirely unrelated prerequisites. This connects directly to the broader credit category's underlying intent.

11. C — EPD Analysis, Option 2 under Reduce Embodied Carbon, is generally the best pathway for a team without dedicated life-cycle assessment staff, offering a more accessible, prescriptive alternative rewarding procurement of specific verified low-carbon products rather than requiring a full Whole-Building Life-Cycle Assessment their capacity genuinely cannot support. This shared logic runs consistently across several related pathways.

12. B — Combining strong daylighting with minimal echo and reverberation balances daylighting and acoustic performance together, two distinct components evaluated under the consolidated Occupant Experience credit. Light Pollution Reduction, Rainwater Management, and Biodiverse Habitat address entirely unrelated concerns from different Sustainable Sites credit categories within the broader rating system. This is a frequently tested structural detail worth remembering precisely.

13. D — Direct sightlines to a courtyard garden from the lobby specifically address quality views, one of the four components consolidated into Occupant Experience under LEED v5, rewarding visual connection to the outdoors independent of thermal comfort or humidity control, which address entirely different aspects of this same consolidated credit. No comparable evidence exists through any of the alternative options.

14. B — Protecting a documented population of a locally significant pollinator species directly rewards Biodiverse Habitat, which evaluates protecting, restoring, or creating high-value habitat features on a project site. Rainwater Management, Heat Island Reduction, and Light Pollution Reduction address entirely unrelated Sustainable Sites concerns instead of habitat protection specifically. Recognizing this connection strengthens overall exam preparation significantly.

15. C — Increasing cycles of concentration allows water to recirculate through the cooling tower more times before being discharged as blowdown, directly decreasing the total blowdown volume required for a given amount of makeup water. Decreasing cycles or switching refrigerant loops does not address this specific water-related mechanical concern. This principle applies consistently regardless of facility type or scale.

16. A — Avoiding disruption to a nearby dark-sky preserve directly addresses Light Pollution Reduction, which evaluates exterior lighting design limiting trespass beyond a site's boundary and minimizing uplight escaping into the night sky. Heat Island Reduction, Rainwater Management, and Biodiverse Habitat address entirely unrelated site-related concerns instead. This holds true across every cultural and religious setting tested here.

17. C — Genuine barrier-free access with ramps, seating, and public-facing entry satisfies Accessible Outdoor Space's updated LEED v5 requirements, going meaningfully beyond the simpler square-footage thresholds LEED v4 previously used. Rainwater Management, Heat Island Reduction, and Light Pollution Reduction address entirely unrelated Sustainable Sites concerns instead. This distinction is frequently tested across multiple LEED domains.

18. A — Recycled-content flooring typically requires reprocessing existing material, which generally demands less energy than mining and manufacturing virgin material from raw resources, producing a meaningful embodied carbon reduction relative to virgin material. This is distinct from automatic Platinum qualification or eliminating EPD documentation requirements, neither of which this achieves. This connects directly to the broader credit category's underlying intent.

19. D — Combining garden views, natural wood finishes, and a water feature specifically rewards Connecting with Nature, which evaluates biophilic design strategies incorporating direct nature contact, indirect natural references, and spatial configuration together. Heat Island Reduction, Rainwater

Management, and Light Pollution Reduction address entirely unrelated Sustainable Sites concerns. This shared logic runs consistently across several related pathways.

20. B — Reusing rinse water from food preparation for a subsequent cycle falls under Water Efficiency, specifically the alternative water source and process-water reuse strategies this category rewards. Sustainable Sites, Materials and Resources, and Indoor Environmental Quality address entirely different credit categories unrelated to alternative water source selection. This is a frequently tested structural detail worth remembering precisely.

21. B — Meditation garden shading through tree canopy rather than structural coverings specifically rewards Heat Island Reduction, which evaluates multiple strategies including reflective surfaces, green roofs, and both structural and vegetative covered parking approaches. Rainwater Management, Light Pollution Reduction, and Biodiverse Habitat address entirely unrelated concerns instead. No comparable evidence exists through any of the alternative options.

22. C — A refrigerant qualifying automatically under Enhanced Refrigerant Management's Option 1 with no further calculation must have zero ozone depletion potential and global warming potential below the defined low threshold. Refrigerants with moderate GWP, extensive leak detection requirements, or international bans do not satisfy this specific automatic qualification standard. Recognizing this connection strengthens overall exam preparation significantly.

23. A — Identifying which specific materials contribute most to total embodied carbon is precisely the intentionally baseline-only role of Quantify and Assess Embodied Carbon, requiring GWP calculations before the separate, optional Reduce Embodied Carbon credit is pursued. Fundamental Commissioning and Minimized Site Disturbance address entirely unrelated prerequisites instead. This principle applies consistently regardless of facility type or scale.

24. D — Verifying air quality remains below defined VOC thresholds continuously specifically addresses Indoor Air Quality Performance, which rewards ongoing monitoring and measurable improvement of indoor air conditions. Enhanced Building Accessibility, Rainwater Management, and Reduce Parking address entirely unrelated credit concerns from different rating system categories entirely. This holds true across every cultural and religious setting tested here.

25. B — Selecting a site with authority-mandated remediation requirements from a prior industrial use directly supports the brownfield remediation pathway under Equitable Development, turning the LEED project into the mechanism addressing genuine environmental contamination. Access to Transit, Surrounding Density, and Diverse Uses address entirely unrelated pathway concerns instead. This distinction is frequently tested across multiple LEED domains.

26. A — Improving envelope insulation and glazing performance during early design is the most cost-effective first step, since it reduces load before mechanical equipment is even selected, cascading into smaller, less expensive equipment. Oversizing equipment or waiting until construction is complete both forfeit this early, high-leverage opportunity. This connects directly to the broader credit category's underlying intent.

27. D — Identifying which specific materials contribute most to total embodied carbon is precisely the intentionally baseline-only role of Quantify and Assess Embodied Carbon, requiring GWP calculations before the separate, optional Reduce Embodied Carbon credit is pursued. Fundamental Commissioning and Minimized Site Disturbance address entirely unrelated prerequisites instead. This shared logic runs consistently across several related pathways.

28. C — Increasing cycles of concentration allows water to recirculate through the cooling system more times before being discharged as blowdown, directly decreasing the total blowdown volume required for a given amount of makeup water. This is the primary mechanism behind this credit's meaningful, demonstrated water savings for the building. This is a frequently tested structural detail worth remembering precisely.

29. B — Combining on-site generation, an off-site PPA, and REC purchases together is generally the strongest strategy for reducing reliance on fossil-fuel-generated electricity, since these layered, complementary approaches let a facility address a larger share of its total footprint than any single strategy pursued in isolation could achieve. No comparable evidence exists through any of the alternative options.

30. C — Systematically calculating GWP for structure, enclosure, and hardscape materials is generally the strongest approach for identifying hotspot materials, since this quantified inventory provides the actual data needed to determine which specific materials genuinely contribute most to total embodied carbon before any reduction strategy is pursued at all. Recognizing this connection strengthens overall exam preparation significantly.

31. A — A refrigerant with zero ozone depletion potential and low global warming potential is generally the best choice, since it minimizes both environmental risk and compliance burden by potentially qualifying automatically under Enhanced Refrigerant Management's Option 1, avoiding the more detailed calculation required for higher-GWP alternatives entirely for this kitchen. This principle applies consistently regardless of facility type or scale.

32. D — Verifying installed energy systems match design intent before guests occupy the facility is precisely governed by Fundamental Commissioning, the mandatory prerequisite requiring OPR and BOD review alongside verification of energy-related system installation. Minimized Site Disturbance, Fundamental Refrigerant Management, and Water Metering address entirely unrelated concerns. This holds true across every cultural and religious setting tested here.

33. A — Documenting a genuine mix of civic, educational, and recreational uses within walking distance directly supports Diverse Uses, which rewards land-use variety reducing the need to drive between daily destinations. Access to Transit, Surrounding Density, and Reduce Parking address distinct, unrelated pathway concerns within this same broader credit category. This distinction is frequently tested across multiple LEED domains.

34. C — Increasing cycles of concentration alongside using alternative makeup water sources is generally the strongest combined strategy for reducing a cooling tower's environmental footprint, since higher cycles reduce blowdown volume while alternative sources further displace potable water demand,

combining two complementary mechanisms rather than either strategy alone. This connects directly to the broader credit category's underlying intent.

35. D — Whole-Building Life-Cycle Assessment is generally the best pathway for a team with strong in-house life-cycle assessment expertise, since it captures credit for the most comprehensive range of reduction strategies across a material's full life cycle. Skipping the credit or relying on marketing claims squanders the team's genuine capability. This shared logic runs consistently across several related pathways.

36. B — A site within a half-mile walk of a bus stop with frequent all-day service most directly supports Access to Transit, whose point thresholds are calibrated to actual service frequency and reasonable walking distance together. Diverse Uses, Surrounding Density, and Reduce Parking address distinct, unrelated pathway concerns instead. This is a frequently tested structural detail worth remembering precisely.

37. B — Reducing contaminants from off-gassing exhibit casework falls under Low-Emitting Materials, which LEED v5 relocated from Indoor Environmental Quality into Materials and Resources. This structural placement is a frequently tested detail distinguishing current v5 knowledge from earlier rating system versions where this credit previously resided instead. No comparable evidence exists through any of the alternative options.

38. C — Condensate from cooling equipment generally requires the least treatment before reuse among the listed options, aligning with LEED's explicit direction to prioritize alternative sources requiring minimal processing first. Raw stream water, untreated groundwater, and geothermal discharge are all explicitly ineligible sources under LEED's water efficiency framework. Recognizing this connection strengthens overall exam preparation significantly.

39. D — Eliminating on-site fossil fuel combustion in favor of heat pump systems for space heating represents full electrification, one of LEED v5's four core Energy and Atmosphere strategies. This differs from grid-interactive operation, which concerns timing coordination with the utility grid rather than fuel source, and from unrelated verification activities. This principle applies consistently regardless of facility type or scale.

40. A — Reducing load through envelope and orientation before equipment selection delivers the best combined cost and carbon outcome, since smaller resulting HVAC equipment costs less to purchase, install, and operate for the building's entire service life. Oversizing equipment or adding resistance heating both increase cost rather than reducing it here. This holds true across every cultural and religious setting tested here.

41. C — A reduction from 220 tons to 176 tons is a 44-ton decrease, and 44 divided by 220 equals 0.20, or 20%. This meaningful load reduction through envelope improvements directly supports Reduce Peak Thermal Loads credit eligibility while reducing the hall's ongoing mechanical operating costs significantly over its entire service life.

42. D — Dividing 90,000 kWh of combined offset by 300,000 kWh of total annual energy use equals 0.30, or 30% of total energy use offset. Renewable Energy credit points scale directly to this percentage, rewarding this combined on-site and off-site renewable strategy with proportionally more points under the credit's structure. This distinction is frequently tested across multiple LEED domains.

43. B — A reduction from 2,400 to 1,920 gallons per day is a 480-gallon decrease, and 480 divided by 2,400 equals 0.20, or 20%. This percentage reflects the consistent percentage-below-baseline metric LEED uses across Water Efficiency regardless of the specific facility type being evaluated in this particular scenario. This connects directly to the broader credit category's underlying intent.

44. A — A reduction from 60 tons to 48 tons is a 12-ton decrease, and 12 divided by 60 equals 0.20, or 20%. This meaningful load reduction through envelope improvements directly supports Reduce Peak Thermal Loads credit eligibility while reducing the facility's ongoing mechanical operating costs significantly over its entire service life.

45. A — Dividing 31,500 kWh of solar generation by 210,000 kWh of total annual energy use equals 0.15, or 15% of total energy use offset by the on-site array. Renewable Energy credit points scale directly to this percentage, rewarding this meaningful offset with proportionally more points under the credit's structure. This shared logic runs consistently across several related pathways.

46. C — A reduction from 1,600 to 1,280 gallons per day is a 320-gallon decrease, and 320 divided by 1,600 equals 0.20, or 20%. This percentage reflects the consistent percentage-below-baseline metric LEED uses across Water Efficiency regardless of the specific facility type being evaluated in this particular scenario. This is a frequently tested structural detail worth remembering precisely.

47. B — A reduction from 45 tons to 36 tons is a 9-ton decrease, and 9 divided by 45 equals 0.20, or 20%. This meaningful load reduction through envelope improvements directly supports Reduce Peak Thermal Loads credit eligibility while reducing the meeting house's ongoing mechanical operating costs significantly over its entire service life.

48. D — Dividing 56,000 kWh of combined offset by 160,000 kWh of total annual energy use equals 0.35, or 35% of total energy use offset. Renewable Energy credit points scale directly to this percentage, rewarding this combined on-site and off-site renewable strategy with proportionally more points under the credit's structure. No comparable evidence exists through any of the alternative options.

49. D — A reduction from 1,200 to 960 gallons per day is a 240-gallon decrease, and 240 divided by 1,200 equals 0.20, or 20%. This percentage reflects the consistent percentage-below-baseline metric LEED uses across Water Efficiency regardless of the specific facility type being evaluated in this particular scenario. Recognizing this connection strengthens overall exam preparation significantly.

50. A — A reduction from 35 tons to 28 tons is a 7-ton decrease, and 7 divided by 35 equals 0.20, or 20%. This meaningful load reduction through envelope improvements directly supports Reduce Peak Thermal Loads credit eligibility while reducing the chapel's ongoing mechanical operating costs significantly over its entire service life.

51. C — Systematically calculating GWP for structure, enclosure, and hardscape materials is generally the strongest approach for identifying hotspot materials, since this quantified inventory provides the actual data needed to determine which specific materials genuinely contribute most to total embodied carbon before any reduction strategy is pursued at all. This principle applies consistently regardless of facility type or scale.

52. B — Calibrating shielded fixtures to genuine functional need is generally the strongest approach balancing safety and Light Pollution Reduction, since this strategy limits trespass and uplight while still meeting real occupant safety requirements. Maximizing output or eliminating lighting entirely both fail to properly balance these two legitimately competing considerations. This holds true across every cultural and religious setting tested here.

53. B — The facility's actual mechanical system requirements and available refrigerant options should genuinely drive this compliance path decision, ensuring the choice reflects real project conditions rather than arbitrary factors. Paperwork convenience, chance, or copying an unrelated facility's choice all ignore genuinely relevant technical considerations here entirely. This distinction is frequently tested across multiple LEED domains.

54. A — Benchmarking data establishing the actual load profile must be gathered first before timing a renewable energy PPA to match genuine, measured building needs rather than a design-phase estimate. Signing before data exists or signing multiple uncoordinated agreements both risk mismatched or wastefully redundant capacity commitments for the temple. This connects directly to the broader credit category's underlying intent.

55. C — Pursuing both reuse and low-carbon new material strategies together is generally the strongest approach, since Materials and Resources offers multiple complementary reduction strategies rather than a single mutually exclusive pathway. Layering material selection improvements alongside structural retention can compound total embodied carbon reduction significantly for this cathedral. This shared logic runs consistently across several related pathways.

56. D — Pursuing EPD Analysis, Option 2 under Reduce Embodied Carbon, is generally the best pathway for a team with limited technical capacity, letting the team meaningfully pursue reduction points without requiring a full Whole-Building Life-Cycle Assessment their capacity genuinely cannot support at this particular stage of the chapel's development. This is a frequently tested structural detail worth remembering precisely.

57. C — Combining modest on-site generation with off-site procurement for the remainder is generally the strongest strategy sequence for a facility managing budget constraints, since this layered approach lets the center offset a meaningful percentage of energy use without requiring the full capital investment of exclusive on-site generation alone. No comparable evidence exists through any of the alternative options.

58. D — Increasing cycles of concentration allows water to recirculate through the cooling system more times before being discharged as blowdown, directly decreasing the total blowdown volume required for a given amount of makeup water. This is the primary mechanism behind this credit's meaningful,

demonstrated water savings for the center. Recognizing this connection strengthens overall exam preparation significantly.

59. B — Secure bicycle storage combined with showers for commuting staff specifically supports Active Travel Facilities, which treats cycling infrastructure as a complete supportive system rather than storage alone. Reduce Parking, Surrounding Density, and Diverse Uses address distinct, unrelated Location and Transportation pathway concerns within this same broader credit category. This principle applies consistently regardless of facility type or scale.

60. A — Improving envelope insulation during early design is the most cost-effective first step, since it reduces load before mechanical equipment is even selected, cascading into smaller, less expensive equipment. Installing a larger dehumidifier or waiting until construction is complete both forfeit this early, high-leverage opportunity for meaningful reduction. This holds true across every cultural and religious setting tested here.

61. A — The center's actual mechanical system requirements and available refrigerant options should genuinely drive this compliance path decision, ensuring the choice reflects real project conditions rather than arbitrary factors. Paperwork convenience, chance, or copying an unrelated facility's choice all ignore genuinely relevant technical considerations here entirely. This distinction is frequently tested across multiple LEED domains.

62. B — Identifying top embodied carbon hotspot materials before pursuing any reduction is precisely the intentionally baseline-only role of Quantify and Assess Embodied Carbon, requiring GWP calculations before the separate, optional Reduce Embodied Carbon credit is pursued. Fundamental Commissioning and Minimized Site Disturbance address entirely unrelated prerequisites. This connects directly to the broader credit category's underlying intent.

63. C — Reducing nighttime light disruption to a bird migration corridor is most directly addressed by combining Light Pollution Reduction, limiting trespass and uplight, with Biodiverse Habitat, protecting sensitive wildlife-supporting conditions. Neither combination involving water metering, accessibility, or thermal load credits addresses this specific nocturnal wildlife concern here. This shared logic runs consistently across several related pathways.

64. D — Pursuing EPD Analysis, Option 2 under Reduce Embodied Carbon, is generally the best pathway for a team with limited technical capacity, letting the team meaningfully pursue reduction points without requiring a full Whole-Building Life-Cycle Assessment their capacity genuinely cannot support at this particular stage of the arboretum's development. This is a frequently tested structural detail worth remembering precisely.

65. A — Verifying formaldehyde and VOC levels remain below defined thresholds on an ongoing basis specifically addresses Indoor Air Quality Performance, which rewards continuous monitoring and measurable improvement of indoor air conditions. Enhanced Building Accessibility, Rainwater Management, and Reduce Parking address entirely unrelated credit concerns from different categories. No comparable evidence exists through any of the alternative options.

66. C — Systematically calculating GWP for structure, enclosure, and hardscape materials is generally the strongest approach for identifying hotspot materials, since this quantified inventory provides the actual data needed to determine which specific materials genuinely contribute most to total embodied carbon before any reduction strategy is pursued at all. Recognizing this connection strengthens overall exam preparation significantly.

67. D — Whether a calculation is required at all under Enhanced Refrigerant Management depends on whether the refrigerant qualifies automatically under Option 1's low-GWP, zero-ODP threshold; qualifying refrigerants skip any further calculation entirely, while non-qualifying refrigerants must proceed to Option 2's more detailed compliance pathway calculation instead for this memorial. This principle applies consistently regardless of facility type or scale.

68. B — Selecting a location with existing density and use variety already present reflects choosing a site where surrounding conditions already support multiple Location and Transportation pathways, since these pathways reward conditions already present in the surrounding area rather than requiring the project itself to manufacture such density from scratch. This holds true across every cultural and religious setting tested here.

69. A — Improving envelope insulation and glazing performance during early design is the most cost-effective first step, since it reduces load before mechanical equipment is even selected, cascading into smaller, less expensive equipment. Oversizing equipment or waiting until construction is complete both forfeit this early, high-leverage opportunity for reduction. This distinction is frequently tested across multiple LEED domains.

70. C — Identifying which specific materials contribute most to total embodied carbon is precisely the intentionally baseline-only role of Quantify and Assess Embodied Carbon, requiring GWP calculations before the separate, optional Reduce Embodied Carbon credit is pursued. Fundamental Commissioning and Minimized Site Disturbance address entirely unrelated prerequisites instead. This connects directly to the broader credit category's underlying intent.

71. D — Verifying installed energy systems match design intent before visitors occupy the facility is precisely governed by Fundamental Commissioning, the mandatory prerequisite requiring OPR and BOD review alongside verification of energy-related system installation. Minimized Site Disturbance, Fundamental Refrigerant Management, and Water Metering address entirely unrelated concerns. This shared logic runs consistently across several related pathways.

72. A — Recycled-content countertops typically require reprocessing existing material, which generally demands less energy than mining and refining virgin stone from scratch, producing a meaningful embodied carbon reduction relative to virgin material. This is distinct from automatic Platinum qualification or eliminating EPD documentation requirements, neither of which this achieves. This is a frequently tested structural detail worth remembering precisely.

73. B — Reduce Parking paired with genuine Access to Transit qualification reflects a coherent, mutually reinforcing strategy, since real transit accessibility makes reduced parking demand practically realistic for staff. Maximizing parking supply or offering unlimited free parking both work directly

against this coordinated reduction strategy's underlying intent instead. No comparable evidence exists through any of the alternative options.

74. C — Reducing contaminants from off-gassing casket display materials falls under Low-Emitting Materials, which LEED v5 relocated from Indoor Environmental Quality into Materials and Resources. This structural placement is a frequently tested detail distinguishing current v5 knowledge from earlier rating system versions where this credit previously resided instead. Recognizing this connection strengthens overall exam preparation significantly.

75. D — A location within a designated transit priority area may be exempt from some detailed VMT estimation requirements under Transportation Demand Management, reflecting that sufficiently transit-accessible locations have already demonstrated strong transportation performance through location alone. This does not eliminate documentation entirely or require a third-party auditor. This principle applies consistently regardless of facility type or scale.

76. B — Combining on-site generation, an off-site PPA, and REC purchases together is generally the strongest strategy for reducing reliance on fossil-fuel-generated electricity, since these layered, complementary approaches let a facility address a larger share of its total footprint than any single strategy pursued in isolation could achieve. This holds true across every cultural and religious setting tested here.

77. D — A reduction from 190 tons to 152 tons is a 38-ton decrease, and 38 divided by 190 equals 0.20, or 20%. This meaningful load reduction through envelope improvements directly supports Reduce Peak Thermal Loads credit eligibility while reducing the synagogue's ongoing mechanical operating costs significantly over its entire service life.

78. A — Whole-Building Life-Cycle Assessment is generally the best pathway for a team with strong in-house life-cycle assessment expertise, since it captures credit for the most comprehensive range of reduction strategies across a material's full life cycle. Skipping the credit or relying on marketing claims squanders the team's genuine existing capability. This distinction is frequently tested across multiple LEED domains.

79. C — A reduction from 3,600 to 2,880 gallons per day is a 720-gallon decrease, and 720 divided by 3,600 equals 0.20, or 20%. This percentage reflects the consistent percentage-below-baseline metric LEED uses across Water Efficiency regardless of the specific facility type being evaluated in this particular scenario. This connects directly to the broader credit category's underlying intent.

80. B — Reducing nighttime light disruption to a nearby residential neighborhood is most directly addressed by combining Light Pollution Reduction, limiting trespass and uplight, with Biodiverse Habitat, protecting sensitive wildlife-supporting conditions. Neither combination involving water metering, accessibility, or thermal load credits addresses this specific concern here. This shared logic runs consistently across several related pathways.

81. C — Dividing 19,500 kWh of solar generation by 130,000 kWh of total annual energy use equals 0.15, or 15% of total energy use offset by the on-site array. Renewable Energy credit points scale

directly to this percentage, rewarding this meaningful offset with proportionally more points under the credit's structure. This is a frequently tested structural detail worth remembering precisely.

82. D — Recycled-content shelving typically requires reprocessing existing steel, which generally demands less energy than mining and refining virgin ore from scratch, producing a meaningful embodied carbon reduction relative to virgin material. This is distinct from automatic Platinum qualification or eliminating EPD documentation requirements, neither of which this achieves. No comparable evidence exists through any of the alternative options.

83. B — A reduction from 280 tons to 224 tons is a 56-ton decrease, and 56 divided by 280 equals 0.20, or 20%. This meaningful load reduction through envelope improvements directly supports Reduce Peak Thermal Loads credit eligibility while reducing the center's ongoing mechanical operating costs significantly over its entire service life.

84. A — Selecting a site previously used as an industrial dry-cleaning facility requiring authority-mandated remediation directly supports the brownfield remediation pathway under Equitable Development, turning the LEED project into the mechanism addressing genuine environmental contamination. Access to Transit, Surrounding Density, and Diverse Uses address unrelated concerns. Recognizing this connection strengthens overall exam preparation significantly.

85. D — Dividing 133,000 kWh of combined offset by 380,000 kWh of total annual energy use equals 0.35, or 35% of total energy use offset. Renewable Energy credit points scale directly to this percentage, rewarding this combined on-site and off-site renewable strategy with proportionally more points under the credit's structure. This principle applies consistently regardless of facility type or scale.

86. A — Systematically calculating GWP for structure, enclosure, and hardscape materials is generally the strongest approach for identifying hotspot materials, since this quantified inventory provides the actual data needed to determine which specific materials genuinely contribute most to total embodied carbon before any reduction strategy is pursued at all. This holds true across every cultural and religious setting tested here.

87. C — A reduction from 5,600 to 4,480 gallons per day is a 1,120-gallon decrease, and 1,120 divided by 5,600 equals 0.20, or 20%. This percentage reflects the consistent percentage-below-baseline metric LEED uses across Water Efficiency regardless of the specific facility type being evaluated in this particular scenario. This distinction is frequently tested across multiple LEED domains.

88. B — Pursuing EPD Analysis, Option 2 under Reduce Embodied Carbon, is generally the best pathway for a team with limited technical capacity, letting the team meaningfully pursue reduction points without requiring a full Whole-Building Life-Cycle Assessment their capacity genuinely cannot support at this particular stage of the museum's development. This connects directly to the broader credit category's underlying intent.

89. D — A reduction from 105 tons to 84 tons is a 21-ton decrease, and 21 divided by 105 equals 0.20, or 20%. This meaningful load reduction through envelope improvements directly supports Reduce Peak

Thermal Loads credit eligibility while reducing the arboretum's ongoing mechanical operating costs significantly over its entire service life.

90. A — Reducing load through envelope and orientation before equipment selection delivers the best combined cost and carbon outcome, since smaller resulting HVAC equipment costs less to purchase, install, and operate for the building's entire service life. Oversizing equipment or adding resistance heating both increase cost rather than reducing it here. This shared logic runs consistently across several related pathways.

91. C — Dividing 84,000 kWh of combined offset by 240,000 kWh of total annual energy use equals 0.35, or 35% of total energy use offset. Renewable Energy credit points scale directly to this percentage, rewarding this combined on-site and off-site renewable strategy with proportionally more points under the credit's structure. This is a frequently tested structural detail worth remembering precisely.

92. A — Systematically calculating GWP for structure, enclosure, and hardscape materials is generally the strongest approach for identifying hotspot materials, since this quantified inventory provides the actual data needed to determine which specific materials genuinely contribute most to total embodied carbon before any reduction strategy is pursued at all. No comparable evidence exists through any of the alternative options.

93. B — A reduction from 75 tons to 60 tons is a 15-ton decrease, and 15 divided by 75 equals 0.20, or 20%. This meaningful load reduction through envelope improvements directly supports Reduce Peak Thermal Loads credit eligibility while reducing the center's ongoing mechanical operating costs significantly over its entire service life.

94. C — Increasing cycles of concentration alongside using alternative makeup water sources is generally the strongest combined strategy for reducing a cooling tower's environmental footprint, since higher cycles reduce blowdown volume while alternative sources further displace potable water demand, combining two complementary mechanisms rather than either strategy alone. Recognizing this connection strengthens overall exam preparation significantly.

95. D — A reduction from 2,800 to 2,240 gallons per day is a 560-gallon decrease, and 560 divided by 2,800 equals 0.20, or 20%. This percentage reflects the consistent percentage-below-baseline metric LEED uses across Water Efficiency regardless of the specific facility type being evaluated in this particular scenario. This principle applies consistently regardless of facility type or scale.

96. B — A refrigerant with zero ozone depletion potential and low global warming potential is generally the best choice, since it minimizes both environmental risk and compliance burden by potentially qualifying automatically under Enhanced Refrigerant Management's Option 1, avoiding the more detailed calculation required for higher-GWP alternatives entirely for this kitchen. This holds true across every cultural and religious setting tested here.

97. D — Dividing 14,250 kWh of solar generation by 95,000 kWh of total annual energy use equals 0.15, or 15% of total energy use offset by the on-site array. Renewable Energy credit points scale

directly to this percentage, rewarding this meaningful offset with proportionally more points under the credit's structure. This distinction is frequently tested across multiple LEED domains.

98. A — Identifying which specific materials contribute most to total embodied carbon is precisely the intentionally baseline-only role of Quantify and Assess Embodied Carbon, requiring GWP calculations before the separate, optional Reduce Embodied Carbon credit is pursued. Fundamental Commissioning and Minimized Site Disturbance address entirely unrelated prerequisites instead. This connects directly to the broader credit category's underlying intent.

99. C — A reduction from 50 tons to 40 tons is a 10-ton decrease, and 10 divided by 50 equals 0.20, or 20%. This meaningful load reduction through envelope improvements directly supports Reduce Peak Thermal Loads credit eligibility while reducing the funeral home's ongoing mechanical operating costs significantly over its entire service life.

100. B — Thoughtful, upstream design decisions honor both community purpose and long-term stewardship together, whether incorporating natural elements into worship spaces, reducing mechanical load before equipment selection, or qualifying refrigerants under defined thresholds. This principle connects these seemingly distinct concepts throughout cultural and religious facility scenarios represented in this exam. This shared logic runs consistently across several related pathways.