

LEED AP BD+C V4- Practice Exam #2

Power Jam Study – Lori Brown

1. A 6-hour waste stream study identified a LEED for Building Design and Construction Retail project's top four recyclable waste streams. What is the first thing the LEED AP should tell the project?
 - A. Identify the project's top-five recyclable waste streams.
 - B. Identify the project's top-five recyclable waste streams and three hazardous waste
 - C. Install storage and collection infrastructure for all waste
 - D. Conduct a waste stream study for a 24-hour period and identify the project's top-five recyclable waste streams.
2. A LEED for Building Design and Construction Schools project is locating a new building on a site that has already had a Phase I ESA. Updates to the ESA must be made if the site's Phase 1 ESA is
 - A. more than 30 days old
 - B. more than 180 days old
 - C. the Phase 1 ESA never expires
 - D. more than
3. An Innovation credit for exemplary performance can be earned by
 - A. Placing signage around the building
 - B. Doubling the credit requirement
 - C. achieving all credits in one category
 - D. having a LEED AP with specialty on the project team
4. The Integrative Process credit requires the project team to research and analysis which of these building systems to inform the owner's project requirements?
 - A. Fire suppression and Energy
 - B. Lighting and Indoor Water
 - C. Irrigation and Energy
 - D. Energy and Water
5. A LEED for Building Design and Construction School project has 35,000 ft² of photovoltaic panels on their building. Which of these is required for LEED Building Design and Construction EA Prerequisite Fundamental Commissioning and Verification?
 - A. The contractor must commission the PV system
 - B. The PV installer oversees the installation and Cx of the PV system
 - C. The CXA must verify installation and performance of the Cx PV system
 - D. Renewable energy systems do not have to be commissioned
6. A LEED for Building Design and Construction project has 20-tons of total waste. Determine the percent (%) diverted from landfill for the following material streams.
 - 8 tons recycled concrete and steel
 - 2 tons of soil sent to another job site
 - 3 tons construction waste 40% diverted
 - 6 tons of furniture donated to a local school
 - 1 ton of ceiling tiles and carpet returned to the supplier
 - A. 90%
 - B. 60%
 - C. 75%
 - D. 46%

7. A 1000 ft² project with 10 ft ceilings requires how much total air for EQ Credit Indoor Air Quality Assessment Option 1. Flush-Out?
- A. 3,500 CF
 - B. 3,500,000 CF
 - C. 14,000,000 CF
 - D. 14,0000,000 CF
8. What must be completed by the LEED AP to register the project and accept the certification agreement?
- A. Confirmation of Agent's Authority Form
 - B. AIA document 1503
 - C. FSC
 - D. COC Agreement
9. Which of these would help a project to earn credit for Innovation, Option 1. Innovation?
- A. Recycling 100% of the plastic water bottles used by building occupants
 - B. Implement a program that engages and educates building users
 - C. Reduce building indoor water use by 55%
 - D. Do not install a landscape irrigation system
10. The baseline case for LT Credit Reduced Parking Footprint is determined by earning 1 or more points under either LT Credit Access to Quality Transit or LT Credit
- A. Sensitive Land Protection
 - B. High Priority Site
 - C. Surrounding Density and Diverse Uses
 - D. Green Vehicles
11. Which of these could be used as an incentive for building users to allow the project team to reduce the number of available parking locations on a project site?
- A. Free parking passes for one-year
 - B. 20% discount at a local parking garage
 - C. Provide building occupants with a subsidy to help pay for transit trips
 - D. Provide covered bicycle storage
12. Evapotranspiration (ET_o) is
- A. higher in cooler climates
 - B. amount of heat lost in BTU
 - C. amount of water lost in depth
 - D. higher during winter months
13. A LEED Building Design and Construction project is planning to capture and store rainfall to be reused on site. Which Water Efficiency prerequisites and credits could this strategy help?
- A. WE Prerequisite Outdoor Water Use Reduction and WE Credit Indoor Water Use Reduction
 - B. WE Prerequisite Outdoor Water Use Reduction and WE Prerequisite Indoor Water Use Reduction
 - C. WE Credit Outdoor Water Use Reduction and WE Credit Indoor Water Use Reduction
 - D. WE Credit Outdoor Water Use Reduction and WE Prerequisite Indoor Water Use Reduction
14. WE Prerequisite Indoor Water Use Reduction requires projects with cooling towers and evaporative condensers to
- A. Perform an alkalinity test
 - B. have once-through cooling with potable water
 - C. Eliminate drift
 - D. Equip them with makeup water meters, conductivity controllers, and overflow alarms

15. Which of these could help a LEED for Building Design and Construction School project to earn WE Prerequisite Indoor Water Use Reduction?
- A. Food Waste Disposal
 - B. Energy Star Commercial Dishwasher
 - C. Open-loop cooling ice machine
 - D. Janitor sink with a separate drain system
16. A LEED for Building Design and Construction project has a 30,000 ft² building footprint. The project is located on 100,000 ft² of previously disturbed land. Additional area includes a 35,000 ft² asphalt parking lot and 35,000 ft² of open space using native or adapted vegetation. How large must a vegetated roof surface be for the project to earn an exemplary performance point for SS Credit Site Development – Protect or Restore Habitat?
- A. 15,000 ft²
 - B. 35,000 ft²
 - C. 25,000 ft²
 - D. 55,000 ft²
17. A USGBC LEED International goal is to
- A. Reduce construction costs
 - B. Expand the green building market
 - C. Provide global alternative compliance paths to address projects outside the U.S.
 - D. Challenge other countries to reduce resource use
18. Which of these would help a LEED project to achieve compliance with LT Credit Surrounding Density and Diverse Uses, Option 2. Diverse Uses?
- A. Located near five restaurants
 - B. School, bike trail, sidewalks
 - C. Grocery store, restaurant, park, two bus stops
 - D. Bus rapid transit stop
19. Which of these is considered in the energy-related systems analysis for the Integrative Process credit?
- A. Motion sensors for faucets
 - B. Thermal comfort ranges
 - C. Carbon Offsets
 - D. Green Power
20. Which of these would help a project with the LT Credit Bicycle Facilities, Bicycle Network requirement?
- A. Located near a bus rapid transit stop
 - B. Parking underground
 - C. Roads with minimum speeds of 30 mph
 - D. Provide bicycle repair coupons to all building users
21. What information is included in the site survey or assessment for the LEED SS Credit Site Assessment?
- A. HVAC, Plumbing Fixtures, Waste Providers
 - B. Topography, Hydrology, Human Use
 - C. HVAC, Climate, local parkland
 - D. Plumbing fixtures, wetlands, local waterbodies

22. Which of these strategies could help with LEED WE Prerequisite Outdoor Water Use Reduction? Choose three
- A. Turf grass
 - B. Mulching around plants
 - C. Annual fertilizing program
 - D. Efficient Irrigation
 - E. Captured rainwater
 - F. Temporary irrigation systems for two-years
23. A LEED for Building Design and Construction project has installed indoor flush and flow fixtures that achieved a water savings of 24%. Which of these applies to the project?
- A. They can earn WE Prerequisite Indoor Water Use Reduction and WE Credit Indoor Water Use Reduction
 - B. They can earn WE Prerequisite Indoor Water Use Reduction and WE Prerequisite Outdoor Water Use Reduction
 - C. They can earn one point in Innovation for WE Credit Indoor Water Use Reduction
 - D. They can earn WE Prerequisite Indoor Water Use Reduction, but not WE Credit Indoor Water Use Reduction
24. What is the requirement for achieving exemplary performance for SS Credit Rainwater Management?
- A. Manage 100% of the total volume of runoff calculated for the 95th-percentile rainfall event
 - B. Manage 95% of the total volume of runoff calculated for the 85th-percentile rainfall event
 - C. Manage 100% of the total volume of runoff calculated for the 98th-percentile rainfall event
 - D. Manage 100% of rainwater that falls within the project boundary
25. A LEED project has earned 2 points for LT Credit Surrounding Density and Diverse Uses. What is the required reduction from baseline for LT Credit Reduced Parking Footprint?
- A. 15%
 - B. 20%
 - C. 40%
 - D. 95%
26. What is the referenced standard for LEED EA Optimize Energy Performance?
- A. ASHRAE 62.1 – 2010
 - B. ASHRAE 90.1 – 2007
 - C. ASHRAE 90.1 – 2010
 - D. ASHRAE 55 – 2010
27. Installing permanent water meters for which of these systems could help a project to earn WE Credit Water Metering? Choose two
- A. Toilets and Urinals
 - B. Irrigation
 - C. Process water
 - D. Municipal supplied Steam

28. Which of these individual energy end uses must be metered for LEED EA Credit Advanced Energy Metering?
- | | |
|-----------------------|-----|
| Exterior Lighting | 13% |
| Interior Lighting | 11% |
| Garage Fans | 6% |
| Space Heating | 19% |
| Space Cooling | 15% |
| Service Water Heating | 8% |
- A. Exterior Lighting, Interior Lighting, Garage Fans, Space Heating
B. Exterior Lighting, Interior Lighting, Space Heating, Space Cooling,
C. Exterior Lighting, Interior Lighting, Space Cooling, Service Water Heating,
D. Interior Lighting, Garage Fans, Space Heating, Service Water Heating
29. An office building receives hot water from a district utility plant. The office building pays a flat fee for hot water, included as part of the lease. The district does not meter or invoice for actual hot water consumption. To meet the requirements for EA Prerequisite Building-Level Energy Metering, the building must
- A. report their monthly bill for indoor water use
B. install a hot water meter at each service point
C. ask the utility to install a meter
D. participate in a demand response program for one year
30. Where is the best location for using demountable partitions for a LEED for Building Design and Construction Healthcare project?
- A. Cafeterias, corridors, Interstitial space, ER waiting rooms
B. Cafeterias, corridors, private offices, administration desk
C. Cafeterias, corridors, Interstitial space, main lobby
D. Cafeterias, corridors, Interstitial space, private offices
31. What scope is required for MR Credit Building Product Disclosure and Optimization – Environmental Product Declarations, Option 1, Environmental Product Declaration?
- A. Cradle to Cradle
B. Gate to Cradle
C. Cradle to Gate
D. Gate to Gate
32. What scope is required for MR Credit Building Product Disclosure and Optimization – Material Ingredients, Option 2, Material Ingredient Optimization?
- A. Gate to Cradle
B. Cradle to Gate
C. Gate to Gate
D. Cradle to Cradle
33. What tool could a LEED AP use during schematic design to generate a basic distribution of energy uses and evaluate energy load reduction strategies?
- A. SMACNA
B. ASHRAE
C. Simple Box Energy Model
D. Energy Star

34. A maintenance employee cleaning a hardscape surface is
- A. Wasting water
 - B. Increasing the Heat Island Effect
 - C. Reducing the Heat Island Effect
 - D. Creating a Heat Island Effect
35. What must be included in the LEED project boundary?
- A. Non-contiguous parcels of land near the project
 - B. All contiguous land that is associated with the project
 - C. Nearby parking structures associated with other buildings
 - D. Public rights-of-way within one-mile of the property line
36. A subcontractor is unable to use an adhesive that meets the requirements for EQ Credit Low-Emitting Materials. What can the project team do?
- A. Not earn the credit
 - B. Do not include the product in the calculation
 - C. Use the budget calculation method
 - D. Replace the subcontractor
37. Which LEED for Building Design and Construction rating system is required to hold a preliminary LEED meeting to determine the LEED certification level, the LEED credits targeted, and the responsible parties?
- A. Schools
 - B. Retail
 - C. Healthcare
 - D. Data Centers
38. Which of these would help a project the most for achieving EQ Credit Thermal Comfort and EQ Credit Interior Lighting?
- A. Architectural drawings, mechanical plans, electrical plans
 - B. Site plans, landscape drawings, local code
 - C. Architectural drawings, plumbing plans, electrical plans
 - D. Plumbing plans, electrical plans, mechanical plans
39. Where can project teams find the Regional Priority credits that apply to their project's area?
- A. LEED Reference Guide
 - B. GBCI
 - C. USGBC Web Site
 - D. LEED Online
40. How are Regional Priority credits determined?
- A. Zip code
 - B. Longitude and latitude
 - C. City and state
 - D. Address
41. When earning a Pilot Credit for Innovation what must be provided by the project team?
- A. Name of the LEED AP
 - B. Owner's Agreement Form
 - C. Credit's Intent
 - D. Credit's feedback survey

42. A project team is working with a school that has indicated to the design team that saving money operating the building is very important to them. The design includes floor to ceiling windows on all four sides of the building. What can the project team tell them about this design decision?
- The south side will be warmer than the north side of the building
 - The life expectancy of the building will be decreased
 - Reducing the need for electric lights saves money
 - Building maintenance cost will be lower
43. Which of these are eligible bio-fuels for EA Credit Renewable Energy Production? Choose three
- Landfill gas
 - Crop and plant waste
 - Combustion of municipal solid waste
 - Animal waste
 - Forest biomass waste other than mill residue
44. Which of these could help a facilities manager to maintain the efficiency of the building systems over the life of the project?
- Owner's Project Requirements
 - Preventative maintenance plan
 - As-built drawings and copies of material submittals
 - A copy of the credit documentation for the credits that were approved through LEED Certification
45. Materials that contribute to LEED MR Credit Building Life-Cycle Impact Reduction, Option 3. Building and Material Reuse can also contribute to
- MR Credit Building Product Disclosure and Optimization—Material Ingredients
 - LT Credit High-Priority Site
 - MR Credit Building Product Disclosure and Optimization – Sourcing of Raw Materials
 - MR Credit Building Product Disclosure and Optimization—Environmental Product Declarations
46. For MR credit Construction and Demolition Waste Management what is excluded from the calculation?
- Concrete
 - Hazardous waste
 - Carpet
 - Asphalt shingles
47. A developer is planning to renovate three buildings located on a site to achieve the MR Credit Building Life-Cycle Impact Reduction, Option 3. Building and Material Reuse. What documentation is required?
- Submit separate documentation for each building.
 - All buildings in the group may be documented as one.
 - Provide a separate spreadsheet of materials reused for each building documented as one.
 - Nothing is required
48. What LEED for Building Design and Construction rating system is being used for a project that is earning:
- LT Credit Reduced Parking Footprint
 - SS Credit Rainwater Management
 - LT Credit Sensitive Land Protection
 - MR Credit PBT Source Reduction – Lead, Cadmium, and Copper
- Schools
 - Retail
 - Healthcare
 - Data Centers

49. Which of these must the Cx Authority do for the EA Prerequisite Fundamental Commissioning and Verification? Choose two
- A. Review contractor submittals
 - B. Review the OPR, BOD, and project design
 - C. Verify inclusion of systems manual requirements in construction documents
 - D. Verify system test execution
 - E. Verify seasonal testing
50. Which of these is included in the Owner's Project Requirements?
- A. Overview of the building systems
 - B. Owner's overall goals
 - C. Responsible parties and roles
 - D. Codes and standards specific to the project
51. What is the purpose of the Basis of Design (BOD)?
- A. To explain how the OPR will be accomplished
 - B. To explore and generate design options
 - C. To harness the talents and insights of all participants on the design team
 - D. To explain major system operating parameters and limits
52. What is required for the SS Prerequisite Construction Activity Pollution Prevention ESC plan?
- A. Protect wildlife habitat
 - B. To minimize land consumption
 - C. To access site conditions before design
 - D. Protect storm drains and receiving streams from sedimentation
53. A vegetated roof installed for achieving of SS Credit Heat Island Reduction can also contribute to which of these credits?
- A. LT Credit Reduced Parking Footprint
 - B. SS Credit Rainwater Management
 - C. SS Credit Site Assessment
 - D. LT Credit Sensitive Land Protection
54. A project located in an arid climate would like to incorporate in the design the project for open spaces. Which of these landscape strategies would you recommend?
- A. Large maple trees to provide shade
 - B. Use Xeriscape in the landscaped areas
 - C. Exotic flowers
 - D. Tropical flowers and plants
55. What type of faucet is found in a hospital waiting room?
- A. Open Flow
 - B. Public lavatory
 - C. Private lavatory
 - D. Metered flow

56. What is the difference in the requirements for LEED WE Indoor Water Use Reduction for New Construction vs Schools?
- A. Percentage reduction required to achieve the prerequisite
 - B. Percentage reduction required to achieve the credit
 - C. All flush fixtures must be WaterSense labeled
 - D. Appliance and process water-use equipment
57. What is the minimum required gross floor area for a LEED for Building Design and Construction project?
- A. 250 ft²
 - B. 750 ft²
 - C. 1000 ft²
 - D. 2500 ft²
58. Where are signs required for EQ Prerequisite Environmental Tobacco Smoke Control for a project that has a main building entrance and two building entry doors from an alley?
- A. Posted within 10 feet of the main building entrance
 - B. Posted within 10 feet of the main building entrance and two doors in the alley
 - C. Posted within 25 feet of the main building entrance
 - D. Posted within 25 feet of the main building entrance and two doors in the alley
59. A LEED for Building Design and Construction Schools project has a laundry facility adjacent to the gymnasium. To meet the requirements for EQ Credit Enhanced Indoor Air Quality Strategies which of these strategies for the laundry room could help with earning the credit?
- A. Move it to the basement
 - B. Install a separate ventilation system with no air recirculation
 - C. Adopt a green cleaning policy for the laundry room
 - D. Naturally ventilate the laundry room
60. A LEED for Building Design and Construction project is designing a multi-floor project to have 100 regular office spaces, restrooms, and a conference room on each floor. How many lighting controls with at least three levels are required per floor for EQ Credit Interior Lighting?
- A. 103
 - B. 90
 - C. 91
 - D. 100
61. A LEED for Building Design and Construction Hospitality project is located in an area that has a beautiful view to an outdoor lake. Designers utilized a large percentage of window to wall area to provide direct views to the outside. The project needs to consider one additional credit to achieve platinum level of certification. Which of these should the project team consider pursuing?
- A. EA Credit Optimize Energy Performance
 - B. EQ Credit Daylight
 - C. EA Credit Interior Lighting
 - D. Exemplary performance for EQ Credit Quality Views
62. A design team has significantly increased the glazing size on the south wall of the building. Who is the most impacted by this design change?
- A. Owner
 - B. LEED AP
 - C. Mechanical and Electrical Engineer
 - D. Landscape Architect

63. Which of these must stay the same when performing the baseline and proposed design energy model?
- A. Window size and HVAC system
 - B. Insulation and Solar Heat Gain Coefficients
 - C. U-Factor and Window Size
 - D. Schedules and occupancy
64. Which of these must a LEED for Building Design and Construction Healthcare project use for EA Prerequisite Minimum Energy Performance?
- A. SMACNA
 - B. Whole-Building Energy Simulation
 - C. EPA Energy Star
 - D. Advanced Buildings Core Performance Guide
65. The Cx Authority must have commissioning process experience on how many building projects of similar scope of work?
- A. None required
 - B. 1
 - C. 2
 - D. 4
66. For a project >20,000 square feet the Cx Authority can be a
- A. member of the design team
 - B. member of the construction team
 - C. employee of the owner
 - D. subcontractor to the construction firm
67. For MR Credit Building Life-Cycle Impact Reduction, Option 4. Whole-Building Life-Cycle Assessment the data sets must be compliant with
- A. IESNA
 - B. SMACNA
 - C. ISO 14044
 - D. IGCC
68. Which of these strategies would affect LEED EA Credit Optimize Energy Performance?
- A. Increased ventilation and vegetated roof
 - B. Walkable sidewalks and pedestrian paths
 - C. Low-Emitting Vehicles and Reduced Building Footprint
 - D. Increase insulation and Captured Rainwater
69. For LT Credit Sensitive Land Protection where can minor improvement be undertaken to enhance appreciation?
- A. Anywhere necessary for access
 - B. Within 1/2 -mi of the property boundary
 - C. Within wetlands and water body buffers
 - D. Along stream banks and lake shores
70. A LEED project has reduced the parking area for a project and planted it with vegetation. What credit would this design change help the project to achieve?
- A. SS Credit Site Assessment
 - B. SS Credit Rainwater Management
 - C. LT Credit Green Vehicles
 - D. MR Credit Building Life-Cycle Impact Reduction

71. For LT Credit Reduced Parking Footprint which of these parking locations must be included in the calculation?
- A. On-street parking in public rights-of-way
 - B. Off-street parking leased by the project
 - C. All parking within ½-mile of the LEED Boundary
 - D. Only parking within the LEED Boundary
72. A contractor on a LEED project won't use native or adapted plants. What credit would this affect?
- A. SS Credit Rainwater Management
 - B. SS Credit Site Development - Protect or Restore Habitat
 - C. SS Credit Site Assessment
 - D. SS Credit Heat Island Reduction
73. What is a project team doing when they are determining the LEED credits to pursue and the responsible parties?
- A. Having a Team Meeting
 - B. Preparing the LEED Credit Templates
 - C. Developing the LEED Scorecard
 - D. Determining if they should register the Project for LEED
74. For WE Prerequisite Outdoor Water Use Reduction projects can
- A. Offset landscape irrigation using captured rainwater
 - B. Include or exclude food gardens
 - C. Exclude turf areas
 - D. Use all non-native plants
75. What tool is approved by the USGBC for energy analysis and tracking?
- A. SMACNA
 - B. ASHRAE
 - C. Energy Star
 - D. FSC
76. MR Credit Building Product Optimization and Disclosure – Sourcing of Raw Materials, Option 1. Raw Material Source and Extraction Reporting uses what to provide frameworks that allow transparency and environmental impacts to be assessed, improved, and compared with other companies?
- A. Environmental Product Declarations (EPD)
 - B. Corporate Sustainability Reports (CSR)
 - C. Green Seal Certification (GSC)
 - D. Rain Forest Alliance (RFA)
77. A LEED project has achieved a significant, measurable, environmental performance using a strategy not addressed in the LEED green building rating system. Where can they earn credit for this?
- A. Regional Priority (RP)
 - B. Integrative Project (IP)
 - C. Indoor Environmental Quality (EQ)
 - D. Innovation (IN)

78. What qualifies as a LEED for Neighborhood Development location for earning the credit LT LEED for Neighborhood Development Location?
- A. LEED 2009 Stage 1 Conditional Approval of LEED ND Plan
 - B. LEED v4 LEED for Neighborhood Development Conditional Approval
 - C. LEED v4 LEED for Neighborhood Development Certified Plan
 - D. LEED ND Pilot Stage 1 LEED for Neighborhood Development Pre-Reviewed Plan
79. The Owner's Project Requirements (OPR) is
- A. Created during the predesign stage, and updated throughout the project
 - B. Created during the design stage, and not updated
 - C. Created during the design stage, and updated once before construction begins
 - D. Created during the predesign stage, and not updated
80. What must be included in the WE Prerequisite Indoor Water Use Reduction?
- A. Fixture cutsheets
 - B. Flow meters
 - C. Water metering controls
 - D. Site plans
81. Which of these strategies could help to reduce the energy demand for a building?
- A. Shift occupants to another location in the building
 - B. Install additional Air Handling Units
 - C. Have occupants share office spaces
 - D. Have an appropriate seasonal dress policy
82. Which of these should be taken into consideration when preparing SS Credit Site Assessment?
- A. Number of restaurants within one-mile of the project
 - B. Proximity of vulnerable Populations
 - C. Available parking garages
 - D. Lawn fertilizers appropriate for the location
83. Which of these would have a negative impact on building energy use?
- A. Reduce occupied hours from 7am – 6pm to 8am to 6pm
 - B. Increase occupied hours from 8am – 6pm to 7am – 6pm
 - C. Reduce occupied hours from 7am – 6pm to 8am to 5pm
 - D. Reduce outdoor lighting from 10pm – 6am to 11pm to 6am
84. The city is building a new botanical garden and is attempting LEED® certification. What could the educational program include to earn an Innovation in Design Credit?
- A. Present the building's sustainable features at the grand opening
 - B. Present the building's sustainable features at a town hall meeting
 - C. Provide on-going weekly tours highlighting the building's sustainable features
 - D. Publish a press release to the local newspaper outlining the building's sustainable features
85. How should athletic fields be treated in the calculations for WE Credit, Outdoor Water Use Reduction?
- A. Must be calculated using 100% potable water
 - B. May be included or excluded from the calculations
 - C. May be calculated using a standard 20% reduction from baseline
 - D. Must be calculated using at least 20% from an alternative water source