

LEED GREEN ASSOCIATE 35 QUESTION SAMPLE EXAM



Introduction

GreenStep is committed to empowering members of the building community with the knowledge and skills necessary to understand and successfully apply the LEED Rating System to their projects. One of the first steps towards understanding how to effectively implement LEED is to become a LEED Green Associate, demonstrating a basic understanding of the LEED Rating System and related concepts. In addition to our LEED-specific educational programs, study material and full length practice exams, GreenStep offers this free LEED Green Associate Sample Exam to help you prepare to pass the test with confidence – the first time.

The following compilation of test questions accurately reflects the types of questions you will encounter on the LEED Green Associate Exam. To get the most benefit out of this sample exam, we recommend taking it under exam-style conditions (less than one and a half minutes per question) while practicing good test taking strategies such as eliminating incorrect answers and focusing on selecting the *best* of the remaining answer(s). Although there is not a defined number of questions you must get right to pass the real exam, you should be able to correctly answer at least 90% of the questions in this sample exam in order to feel confident going into the test. As with the real exam, there is no partial credit given for questions with multiple-choice format. Once you've completed all the questions, send an email to GAanswerkey@greenstepeducation.com to receive the answer key.

In addition to this free sample exam, GreenStep's industry-leading LEED Exam Training workshops and full length LEED Practice Exams have proven highly effective in preparing people to pass the LEED exam. Our courses deliver the material in a clear and concise format while presenting the types of exam questions that are asked so you know what and how to study. We also review example scenarios from real world projects to help you better understand and remember the material while giving you an opportunity to put the concepts to practice. See the back page of this exam for a list of what participants are saying about our workshops and related study material. With a pass rate of over 95%, the results speak for themselves.

To purchase our full-length LEED Green Associate practice exam or study guide, schedule a LEED Exam Training workshop or Continuing Education course for your organization, or to inquire about GreenStep's Professional Project Experience Program, please visit our website at www.greenstepeducation.com.



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1. Which of the following are possible consequences of lowering the Lighting Power Density on a project? (Choose 2)
 - a) Reduce heating loads.
 - b) More controllability over indoor lighting.
 - c) Reduce cooling loads.
 - d) Energy savings associated with less energy required for lighting.

2. Which refrigerant is environmentally preferable?
 - a) CFC.
 - b) HCFC.
 - c) HFC.
 - d) All of the above.

3. Which of the following factors is NOT included in the calculations for Indoor Water Use Reduction? (Choose 2)
 - a) Whether or not lavatory sinks have automatic controls.
 - b) The total number of water-efficient water closets and urinals in the building.
 - c) The total number of Full Time Equivalents.
 - d) The flow rate of the showerheads.
 - e) The Average Gallons per Use (AGU) of dishwashers.

4. When submitting Design phase credits, which of the following represent possible review responses issued by the USGBC? (Choose 2)
 - a) Accepted.
 - b) Denied.
 - c) Anticipated.
 - d) Not approved.
 - e) Earned.
 - f) Achieved.

5. Which of the following standards relates specifically to carpets?
 - a) Green Seal Standard 37.
 - b) South Coast Air Quality Management District, Rule 1113.
 - c) Green Label Plus Program.
 - d) ASHRAE 55 – 2004.
 - e) Green Label Program.



6. Which of the following strategies might be applied towards achieving Construction Waste Management? (Choose 2)
- a) Using materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project.
 - b) Crushing existing concrete foundations on-site to reuse as baserock.
 - c) Donating excavated soil to an adjacent Habitat for Humanity building undergoing construction.
 - d) Diverting wood scraps from the landfill by selling them to a nearby facility that produces particleboard.
 - e) Diverting lead-based paint found on-site from the landfill by taking it to a hazardous materials facility.
7. A new 6 story apartment complex is being constructed in an urban setting. Due to budget concerns, the project team has chosen to replace bamboo cabinets with cabinets made from particleboard produced mainly from discarded wood chips. Based on the information above, which of the following credits would most likely be affected (either positively or negatively) by this decision? (Choose 3)
- a) Certified Wood.
 - b) Low Emitting Materials, Composite Wood and Agrifiber Products.
 - c) Building Reuse, Non-structural elements.
 - d) Recycled Content.
 - e) Rapidly Renewable Materials.
8. Which of the following are covered under Low Emitting Materials with respect to LEED? (Choose 3)
- a) Clear finishes on interior cabinets.
 - b) Carpet.
 - c) Insulation.
 - d) Medium Density Fiberboard used on interior doors.
 - e) Roofing adhesive.
9. Which of the following represents xeriscaping?
- a) Planting trees that can provide food for the building occupants such as apple or orange trees.
 - b) An advanced drip irrigation system that responds to water demand by sensing soil moisture content.
 - c) A landscape design that directs the flow of rainwater on-site to the area that requires the most irrigation.
 - d) A landscape design that requires little or no irrigation or maintenance.
 - e) Using artificial turf in place of real grass.
10. A 5 story multifamily residential building built in the 1950's is undergoing a major renovation. The existing air-conditioning equipment contains CFCs-based refrigerants that are known to be harmful to the environment. In order to comply with Fundamental Refrigerant Management, what is required timeline for phasing out CFCs in all air conditioning equipment?
- a) CFCs must be phased out no later than 10 years after project completion.
 - b) CFCs must be phased out prior to project completion.
 - c) CFCs must be phased out no later than 1 year after project completion.
 - d) CFCs must be phased out before construction breaks ground.
 - e) None of the above. There is no required timeline for phasing out CFCs in buildings built before 1973.

11. "Tertiary treatment" is a term that refers to which of the following?
- a) FSC Certified Wood.
 - b) Water Efficient Landscaping.
 - c) Waste water.
 - d) Construction Indoor Air Quality Management.
 - e) Low Emitting Materials.
12. A reduction in overall water quality due to an increase in the concentration of chemical nutrients would be an example of which of the following?
- a) Xeriscaping.
 - b) Eutrophication.
 - c) Denitrofication.
 - d) Osmosis.
 - e) Hypoalimentation.
13. Which of the following account for the most energy usage in buildings according to the USGBC? (Choose 2)
- a) Space heating.
 - b) Cooling.
 - c) Domestic hot water.
 - d) Lighting.
 - e) Plug-in electronics such as computers, copiers and fax machines.
14. Which of the following constitutes pre-consumer recycled content?
- a) A tile facility that reuses shards of tile broken during the manufacturing process to make new tile.
 - b) A steel manufacturing facility that uses recycled steel melted down from old cars.
 - c) A steel manufacturing facility that recycles rebar from old construction projects to make steel beams.
 - d) A curtain manufacturer that purchases scrap trimmings from a carpet manufacturing facility.
 - e) All of the above.
15. Which pieces of information are required to complete FSC Certified Wood? (Choose 3)
- a) The volume of wood used on the project and the exact location where the wood was harvested.
 - b) The appropriate Chain of Custody (COC) Certification number.
 - c) The name of the product manufacturer.
 - d) The cost of each wood product.
 - e) A list of paints and/or coatings used on each FSC Certified product.
16. Which of the following standards listed in the LEED Reference Manual relate to Low Emitting Materials, Paints & Coatings? (Choose 2)
- a) Green Seal Standard 11.
 - b) South Coast Air Quality Management District (SCAQMD) Rule 1113.
 - c) Green Label Plus Program.
 - d) Green Seal Standard 35.
 - e) 2003 EPA Construction General Permit.



17. Which of the following refrigerants generally has a lower Global Warming Potential?
- PVCs.
 - HFCs.
 - HCFCs.
 - DDT.
18. Which of the following will help allow you to size smaller cooling systems? (Choose 3)
- Larger R Values.
 - Larger U Values.
 - Higher Solar Heat Gain Coefficient.
 - Lower Lighting Power Density.
 - Energy Recover Systems on equipment.
19. Which of the following does NOT constitute 'process energy' according to the LEED Reference Manual?
- Computers.
 - Miscellaneous office equipment.
 - Cooling towers.
 - Elevators.
 - Kitchen refrigeration.
20. Which of the following statements is TRUE regarding Credit Interpretation Requests? (Choose 2)
- They must be no more than 400 words.
 - They may only reference one credit.
 - They may not include plans or drawings.
 - They must be submitted by the project owner.
 - They must be no more than 6,000 characters.
21. In general, what is the advantage of accomplishing the LEED goal-setting meeting early on in the project? (Choose 2)
- To evaluate costs of pursuing various credits & strategies.
 - To begin testing Indoor Air Quality.
 - To determine feasibility of design strategies and associated credits.
 - To earn an ID Credit for completing the Integrated Design Process.
 - To receive discounted project registration fees.
22. Why would it be important to start working on Recycled Content Materials, early in the process?
- To determine if recycled wood may contain phenol formaldehyde.
 - To select mechanical equipment with a high recycled content.
 - To minimize the Ozone Depletion Potential of certain materials that contain high amount of recycled content.
 - To submit Recycled Content Materials during the design phase review.
 - To be able to specify materials with recycled content during schematic design.

23. Which of the following strategies would apply towards a reduction in potable water usage for Water Efficient Landscaping with respect to LEED? (Choose 2)
- a) Use of municipally supplied, non-potable water.
 - b) Elect to build the project in a location that has a sufficient amount of rainfall.
 - c) Minimize the amount of overall landscaped area.
 - d) Select plants with low microclimate factors.
 - e) Use of a rainwater catchment system to irrigate landscaping.
24. Which site would most likely qualify for Community Connectivity?
- a) A parking lot located in a dense urban area.
 - b) A suburban Brownfield site located within 1/4 mile of light rail public transportation.
 - c) An empty lot located near several onramps to a large freeway intersection.
 - d) A 7 story food processing facility that includes commercial office space located near the center of a 15 acre farm.
 - e) A Greenfield site located within short walking distance of many common amenities.
25. What is the relationship between Credit Interpretation Rulings and Innovation in Design credits?
- a) All ID Credits must be established via the CIR process.
 - b) Some ID credit strategies have been established via the CIR process.
 - c) An ID credit is not guaranteed unless it has been established via the CIR process.
 - d) Any product being applied to an ID credit, must first be submitted and approved via a CIR.
 - e) The primary purpose of CIRs is to establish acceptable strategies for ID credits.
26. Renewable Energy Certificates contribute to which of the following?
- a) Offset for water usage.
 - b) Reduced energy costs for the building.
 - c) Increased building energy efficiency.
 - d) A reduction in overall global emissions.
 - e) Utility based incentive programs.
27. Which of the following is true regarding regional materials with respect to LEED?
- a) They must be manufactured locally.
 - b) They must be transported across no more than 1,500 miles.
 - c) They must be FSC Certified.
 - d) They must not have traveled via plane or boat.
 - e) They must be assembled onsite.
28. Which of the following water sources must be contained and treated before it may be used to irrigate landscaping? (Choose 2)
- a) Approved greywater from lavatory sinks & showers where non-toxic soaps were used.
 - b) Blackwater from urinals.
 - c) Rainwater collected on site.
 - d) Cooling tower water.
 - e) Non-potable water supplied by a public agency.



29. Which of the following is true regarding exemplary performance thresholds?
- a) Points for exemplary performance are always counted under the category where the credit is listed.
 - b) All exemplary performance points should always be counted under the Innovation in Design category.
 - c) All Innovation in Design points are achieved via an exemplary performance.
 - d) The exemplary performance thresholds are always double the base level thresholds for achieving a credit.
30. Which of the following are true regarding costs? (Choose 2)
- a) Certification fees are waived for Platinum projects.
 - b) Recertification fees are the same as initial certification fees for Existing buildings.
 - c) Certification fees changed in 2002 and again in 2005.
 - d) Certification fees are based on project location.
 - e) Certification fees for a LEED Silver project differ from those of a LEED Gold Project.
31. Which of the following represents an example of heat island effect? (Choose 2)
- a) Increased local temperatures caused by green house effect from air pollution.
 - b) Heat radiated from an urban area with impervious surfaces.
 - c) Incorporating water into building design to cool local temperature.
 - d) Increased local temperatures due to highly reflective materials.
 - e) Increased cooling loads during summer months due to dark colored roof surfaces.
32. Which would most likely help the project team earn points for Green Power?
- a) Solar panels on the roof.
 - b) Wind towers located in the parking lot.
 - c) Renewable Energy Certificates.
 - d) Geo exchange systems located under the parking lot.
 - e) Geothermal systems located under the building.
33. A concrete building is completely de-constructed on-site and the concrete is crushed and reused as base rock for the new foundation. This strategy might apply to which credits? (Choose 3)
- a) Building Reuse.
 - b) Regional Materials.
 - c) Construction IAQ Management.
 - d) Construction Waste Diversion.
 - e) Materials Reuse.
34. Which of the following represents a benefit of using greywater for landscape irrigation? (Choose 2)
- a) Less water sent to the Wastewater Treatment Facility.
 - b) Reduces stormwater runoff onsite.
 - c) Reduces soil erosion from vegetation areas.
 - d) Reduced demand on potable water for irrigation.
 - e) Reduces potable water used for flush fixtures.
35. Which reduces outdoor air pollution the most? (Choose 2)
- a) Eliminating CFCs from refrigerants.
 - b) Incentivizing employees to carpool or take public transportation.
 - c) Installing CO2 sensors throughout project space.
 - d) Selecting a site within walking distance of amenities.
 - e) Implementing a thermal comfort survey.

Congratulations – you’re finished! For instructions on obtaining the answer key, see the Introduction section at the beginning of this exam. Once you pass the LEED Green Associate exam, if you’re interested in moving on to take one of the LEED AP with specialty exams see below regarding how to gain LEED project experience in order to satisfy the LEED AP exam application requirements.

Gain LEED Project Experience through GreenStep’s unique program

With the launch of LEED v3 in 2009, any candidate wishing to take the LEED AP exam must have previous experience on a LEED Registered Project within the past 3 years. This experience must be documented in the form of a letter of attestation from a supervisor, client or project manager that describes the candidate's involvement in the project and verifies the candidate’s project role on LEED Online.

GreenStep’s LEED Project Experience Program, in partnership with Green-Buildings.com, provides LEED AP exam candidates with an opportunity to actively work on a live LEED registered project, thus qualifying participants to take the LEED AP exam while providing hands-on LEED project experience.

“GreenStep’s Professional Project Experience Program provided great hands-on, real world experience on an actual LEED project. It helped me better understand the entire LEED process including credit calculations, LEED templates and LEED Online. Alex, the Project Team Administrator, was very knowledgeable of everything LEED and conveyed the information in an efficient manner. His letter of attestation provided upon completion of the program was comprehensive and effective. GBCI approved my application within one day of submittal and I passed the LEED AP exam on my first try several weeks later.”

- Sterling Steele

Program participants not only qualify to take the LEED AP exam, they gain the real-world experience necessary to guide future projects through the LEED certification process. As an added benefit, the practical knowledge developed throughout the program has proven effective at preparing candidates to pass the LEED AP specialty exams.

For more information on GreenStep’s LEED Project Experience Program please visit www.greenstepeducation.com.

