

Quiz #8 - LEED Green Associate

GA02 – Pgs. 319-320

GA09 – Pgs. 64-85

GBLCC Section 4: Green Building Core Concepts and Application Strategies: Energy and Atmosphere

1. A study by the New Buildings Institute found that in green buildings, average energy use intensities (energy consumed per unit of floor space) are what percentage lower than in typical buildings.
 - A. 2%
 - B. 15%
 - C. 24%
 - D. 50%

2. How is energy use intensity measured?
 - A. KWh
 - B. KBtu/sf/yr
 - C. gpm
 - D. therms/sf/yr

3. By improving the efficiency of buildings and communities, what environmental impact can be significantly reduce?
 - A. Greenhouse Gas Emissions (GHGs)
 - B. Acidification
 - C. Landfill Gas
 - D. Erosion and sedimentation in receiving streams

4. According to the LEED Core Concepts Guide a typical code-compliant 135,000-square-foot office building in a car-oriented suburban location will be responsible for approximately how many tons of carbon?
 - A. 4.6 T per person
 - A. 11.8 T per person
 - B. 25.0 T per person
 - C. 3,233 T per person

5. Which of these describes a net-zero energy project?
 - A. Emitting no more carbon emissions than they can either sequester or offset
 - B. Use no more electricity from the grid than they generate on site
 - C. Using only grid source electricity
 - D. Purchasing 100% of all electricity used as RECs

6. What program set up by EPA as a part of the ENERGY STAR program, is an interactive, online management tool that supports tracking and assessment of energy and water consumption?
 - A. ENERGY SENSE
 - B. ENERGY WISE
 - C. Target Finder
 - D. ENERGY STAR Portfolio Manager

7. Which of these design strategies could help a project to reduce their demand for energy?
 - A. Building Orientation
 - B. Increased FAR
 - C. On-site energy production
 - D. Monitor consumption

8. What program encourages electricity customers to reduce their usage during peak demand times, helping utilities optimize their supply-side energy generation and delivery systems?
 - A. Demand Reduction (DR)
 - B. Renewable Energy Certificates (RECs)
 - C. Demand Response (DR)
 - D. ENERGY STAR

9. The building envelope, the space between exterior and interior environments of a building typically includes?
 - A. Roof; basement; foundation
 - B. Windows; walls; roof
 - C. Ceilings; floors; doors
 - D. Attics; Basements; walls

10. Appliances meeting or exceeding what standard will help a project to reduce plug load demands?
 - A. ENERGY WISE
 - B. ENERGY SMART
 - C. ENERGY STAR
 - D. ENERGY SENSE

11. Which of these is an effective strategy to help a project to identify and prioritize energy efficiency design opportunities?
 - A. Select High Efficiency Air Conditioners
 - B. Use Energy Simulation
 - C. Survey the building occupants
 - D. Reduce plug loads

12. How can a project purchase off-site renewable energy to offset the buildings energy use if it is not available from a local utility provider?
 - A. Install PV panel's on-site equal to the off-site electricity the project wants to purchase
 - B. Purchase renewable energy certificates (RECs)
 - C. Purchase the excess electricity generated by a project within 100 miles of the site
 - D. Buy Green Power on the Internet

13. What is the process called that systematically investigates by skilled professionals who compare building performance with performance goals, design specifications, and most importantly, the owner's requirements?
 - A. Energy Modeling
 - B. Commissioning
 - C. Whole-Building Analysis
 - D. Performance Feedback

14. A Lawrence Berkeley National Laboratory study found that commissioning new construction had a median payback time based on energy savings of how many years?
 - A. 0.7
 - B. 1.7
 - C. 3.6
 - D. 4.8

15. Which of these treaties banned the production of chlorofluorocarbon (CFC) refrigerants and is phasing out hydrochlorofluorocarbon (HCFC) refrigerants?
- A. The Kyoto Treaty
 - B. The Montreal Protocol
 - C. ASHRAE
 - D. SMACNA
16. What refrigerant can be used by a LEED project?
- A. Halon
 - B. Hydropentachlorodimethyl (HPD)
 - C. Chlorofluorocarbons (CFC)
 - D. Hydrofluorocarbons (HFC)
17. Where can projects purchase renewable energy certificates (RECs)?
- A. Almost anywhere
 - B. Only in locations that have deregulated power
 - C. In areas that have a wind farm within 100 miles of the project
 - D. Only from a utility company that has a green pricing program
18. What does renewable electricity refer to?
- A. Eco-friendly electricity
 - B. Indirect greenhouse gas emissions associated with the generation of purchased electricity
 - C. Grid electricity
 - D. Energy from residential windmills
19. Green power is
- A. Only produced by a PV array or wind turbine, owned by a third party
 - B. Less expensive than conventional power
 - C. Only available for new construction projects
 - D. Typically purchased at a premium price
20. Which of these is a natural refrigerant?
- A. Ammonia (NH₃)
 - B. HFC-134A
 - C. CFC-11
 - D. HCFC-123