LEED for Neighborhood Development (LEED ND)
Quiz #4 – Green Infrastructure and Buildings (GIB)   **Answers**

1. How many certified green buildings are required for a LEED ND project?
    A. All buildings must be LEED-certified
    B. None
    C. One
    D. One for every five buildings within the project site boundary

2. Projects using GIB Prerequisite Minimum Building Energy Performance, Option 1. Whole-Building Energy Simulation must use which of these standards to calculate baseline building performance?
    A. ASHRAE 62.1-2010
    B. ASHRAE 55-2010
    C. ASHRARE 90.1-2010
    D. ASHRAE 90.1-2010, Appendix G

3. Which of these is used when following the prescriptive compliance: ASHRAE 50% Advanced Energy Design Guide?
    A. Area code
    B. Zip code
    C. Climate zone
    D. Project address

4. A LEED ND project includes a large warehouse. Which option would you recommend they use for GIB Prerequisite Minimum Building Energy Performance?
    A. Whole-Building Energy Simulation
    B. ASHRAE 50% Advanced Energy Design Guide for Large Warehouses
    C. Advanced Buildings Core Performance Guide
    D. CA Title 24

5. What is a net zero-energy home HERS index score?
    A. 0
    B. 25
    C. 50
    D. 100

6. What standard meets the requirement for dishwashers for LEED for Homes v4 EA Prerequisite Minimum Energy Performance?
    A. WaterSense
    B. WaterWise
    C. EnergyStar
    D. AHSRAE

7. A home built to the specifications of the HERS reference home achieves a HERS score of
    A. 0
    B. 25
    C. 50
    D. 100

8. Which of these fixtures are included in the Green Infrastructure and Buildings (GIB) Prerequisite Indoor Water Use Reduction?
   A. Water Closet, Urinal, Lav Faucet, Dishwasher
   B. Water Closet, Urinal, Lav Faucet, Janitor sink
   C. Water Closet, Urinal, Lav Faucet, Showerhead
   D. Water Closet, Urinal, Lav Faucet, Clothes washer

9. What is the purpose of the WaterSense label for building fixtures and fittings?
   A. Guarantee that the Water Efficiency prerequisite will be achieved
   B. Help design team to select fixtures that meet the EPAct
   C. Ensure that fixtures are water efficient and high performing
   D. Helps the project team determine the total process water consumption for the building

10. What unit is used to measure the water used by the building flush fixtures?
    A. GPM
    B. GPF
    C. CFM
    D. FPS

11. What is the baseline flow rate for a public lavatory faucet?
    A. 2.2 gpm
    B. 1.0 gpf
    C. 0.4 gpm
    D. 0.5 gpm

12. Which of these is a BMP for controlling sedimentation during construction?
    A. Silt fencing
    B. Water trucks
    C. Temporary seeding
    D. Soil stockpiling

13. Projects applying renewable energy system savings must use which of these?
    A. ASHRAE 50% Advanced Energy Design Guide
    B. Advanced Buildings Core Performance Guide
    C. MLO
    D. Whole-Building Energy Simulation

14. Alternatives to potable water include
    A. graywater, rainwater, treated seawater,
    B. blackwater, graywater, well water
    C. streams, rivers, lakes
    D. open-loop geothermal, graywater, rainwater

15. For GIB Credit Outdoor Water Use reduction
    A. Athletic fields must be included
    B. Food gardens may be included or excluded
    C. Permanent irrigation is not allowed
    D. Use sod in all landscaped areas for the baseline calculation

16. In areas that have a high Evapotranspiration (ET$_0$) which of these would apply for the site's landscaped areas?
    A. No irrigation would be needed
    B. Irrigation requirement for all vegetated areas is reduced
    C. Rainfall is higher in the area and plants will need minimal irrigation
    D. Requires more irrigation

17. What percentage reduction from baseline in Landscape Water Required (LWR) can projects take for the use of weather-based irrigation controls?
    A. 5%
    B. 10%
    C. 15%
    D. 20%

18. Which of these alternative water sources may not be suitable for landscape irrigation due to high salinity?
    A. Treated seawater
    B. Chilling tower blowdown
    C. Ice machine condensate
    D. Stormwater

19. For GIB Credit Outdoor Water Use Reduction, Option 2. Reduced Irrigation Required, the project team uses the EPA WaterSense water budget data finder and begins by entering the project's
    A. zip code
    B. area code
    C. climate zone
    D. geographic center

20. Which of these is excluded from the calculations for Building Reuse?
    A. window assemblies, nonstructural roofing material, gypsum board
    B. window assemblies, nonstructural roofing material, roof decking
    C. window assemblies, nonstructural roofing material, hazardous materials
    D. window assemblies, nonstructural roofing material, framing

21. Which of these must be used to determine tree condition ratings?
    A. Ecologist
    B. Biologist
    C. Naturalist
    D. Arborist

22. A project is using a graywater system, captured rainwater, and on-site sewage treatment to offset potable water use. Which of these could this help the project to earn?
    A. GIB Prerequisite Outdoor Water Use Reduction
    B. GIB Credit Outdoor Water Use Reduction
    C. GIB Credit Rainwater Management
    D. GIB Credit Heat Island Reduction

23. A commercial infill project includes several new office buildings totaling 750,000 square feet. The project is complying with GIB Credit Optimize Building Energy Performance through the prescriptive path and is installing an on-site renewable energy system. To achieve GIB Credit Renewable Energy Production, the team must determine the total annual energy cost using data from
    A. CBECS
    B. BOMA
    C. FEMA
    D. ASHRAE

24. A gas-fired boiler's minimum efficiency is 80%. What must the improved efficiency be to qualify as eligible equipment installed as part of a DES system?
    A. 84%
    B. 88%
    C. 92%
    D. 96%

25. How could a project achieve exemplary performance for GIB Credit Infrastructure Energy Efficiency?
    A. Achieve a 20% reduction in energy use from the baseline.
    B. Achieve a 25% reduction in energy use from the baseline.
    C. Achieve a 30% reduction in energy use from the baseline.
    D. Achieve a 50% reduction in energy use from the baseline.

26. Which of these does not produce wastewater?
    A. Lavatory sinks
    B. Showers
    C. Wash machines
    D. Landscape Irrigation

27. What standard defines the recycled content for materials?
    A. Green Seal
    B. NatureServe
    C. ISO
    D. SMACNA

28. In additional to postconsumer recycled content and on-site reused content, what else contributes to earning GIB Credit Recycled and Reused Infrastructure?
    A. Preconsumer recycled content
    B. New asphalt
    C. Soil from a Brownfield
    D. New concrete curbs

29. Which of these could help a project to earn the Green Infrastructure and Buildings (GIB) credit Solid Waste Management?
    A. Recycle, reuse, or salvage at least 25% of nonhazardous construction, demolition, and renovation debris.
    B. Recycle 10% of all mercury containing lamps and 15% of all toner cartridges
    C. Recycle, reuse, or salvage at least 50% of nonhazardous construction, demolition, and renovation debris.
    D. Provide compost containers at all work stations

30. On every mixed-use or nonresidential block a recycling infrastructure must have recycling contains at least every
    A. 800 feet
    B. 1000 feet
    C. 1200 feet
    D. 1500 feet

31. Which of these is not included in the Green Infrastructure and Buildings (GIB) credit Solid Waste Management?
    A. Brick
    B. Stone
    C. Gypsum board
    D. Land-clearing debris

32. Which of these is used to determine a projects lighting zone?
    A. ISO
    B. BUG
    C. MLO
    D. ASTM

33. Which of these can be used to calculate the GIB credit Light Pollution Reduction for Exterior Lighting for Residential Areas?
    A. ISO
    B. ASHRAE
    C. MLO
    D. BUG

34. For GIB credit Light Pollution Reduction, Option 2. Calculation Method what unit is used to verify compliance?
    A. Watts
    B. Foot Candles
    C. Lumens
    D. Square Feet

35. When the property line is adjacent to a public area that is a walkway, bikeway, plaza, or parking lot, the lighting boundary may be moved within how many feet for GIB credit Light Pollution Reduction?
    A. 10 feet from the center line
    B. 3 feet from the building perimeter
    C. 5 feet from the sidewalk
    D. 5 feet beyond the property line

36. For GIB credit Light Pollution Reduction which of these external lights are exempt from the requirements?
    A. Building-mounted lights that are > 2 mounting heights from any lighting boundary
    B. Illuminated bollards
    C. Lighting used for theatrical purposes
    D. Landscape lighting