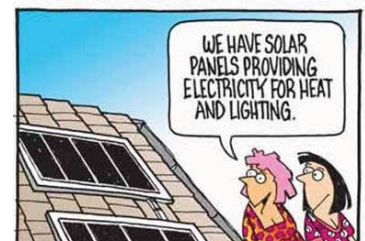


40 Multiple Choice Questions – Select the **best** answer for each one.

New Questions

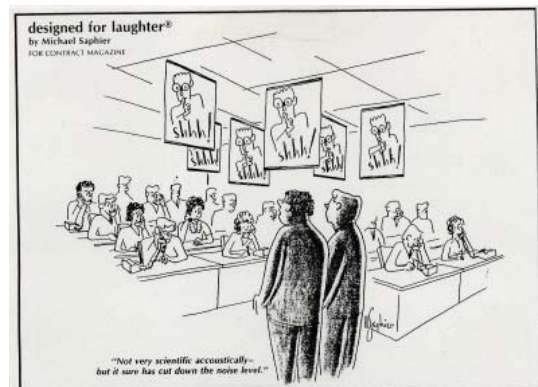
1. Which of the following site energy generation methods is not used in the Trout Farm project near San Luis Obispo?
 - A. a roof-top photovoltaic array
 - B. residential scale wind turbines
 - C. a micro-hydro generator
 - D. all of the above are used
2. The smallest residential PV array (in terms of kilowatts) that can provide as much electricity as the home requires is only possible when
 - A. it's in a desert location
 - B. it's grid connected with net metering
 - C. it has a large bank of storage batteries
 - D. none of the above
3. Besides causing carbon emissions to the atmosphere, burning coal causes
 - A. acid rain
 - B. air pollution
 - C. environmental degradation
 - D. all of the above
4. The combustion fuel that currently makes the least significant contribution to greenhouse gas build-up, which causes global climate change is
 - A. coal
 - B. natural gas
 - C. bio-fuels
 - D. gasoline
5. The energy source that has the potential to easily meet Mazria's goal of achieving carbon-neutrality by 2030 is
 - A. wind power
 - B. photovoltaics
 - C. nuclear power
 - D. none of the above



6. Solar energy can be used to generate
- electricity at the utility scale
 - electricity at the residential scale
 - domestic hot water and space heating
 - all of the above
7. We measure sound intensity in Decibels
- to honor Wallace Sabin
 - because the decibel scale is related to perception of sound
 - because intensities in w/cm^2 are very large numbers
 - all of the above
8. Even though sound levels are about 70 dB in Paley Park, NYC, users believe it to be a quiet, peaceful refuge because
- its fountain delivers masking white noise at 70 dB
 - 70 dB is quiet
 - the sight of water and vegetation is more powerful than the sound of traffic
 - none of the above
9. A vegetated berm between a freeway and residential neighborhood makes a great acoustic buffer because
- it absorbs sound
 - it blocks sound
 - both A and B
 - none of the above
10. Architectural projects that use acoustic barriers as form generators include
- Seattle's Freeway Park
 - Predock's New Mexico Heart Institute
 - Koolhaas' IIT Campus Center
 - all of the above
11. When considering siting a building near a noisy line source or equally noisy point source, setting the building back from the source will most effectively mitigate
- the line source
 - the point source
 - both A and B
 - neither A nor B

12. One would most likely find the quietest conditions in a room with the acoustic goal of

- silence
- quiet
- cacophony
- masking sounds



"Not very scientific acoustically—but it sure has cut down the noise level!"

13. Given two rooms, the one with the longest reverberation time will have
- a larger volume
 - more total absorption
 - a higher volume to absorption ratio
 - more reflective surfaces
14. The effectiveness of a wall as a sound barrier is described by
- the number of penetrations in it
 - its noise reduction factor (NR)
 - its sound transmission classification (STC)
 - its composite transmission loss (TL)
15. Performance hall acoustics can be improved by
- providing non-parallel side walls
 - shaping the ceiling to enhance reflections to the audience
 - providing absorptive surfaces in the rear of the room
 - all of the above
16. Symphony halls that have been remodeled to improve acoustic performance include
- Boston Symphony Hall
 - Carnegie Hall, NYC
 - John F. Kennedy Symphony Hall, Washington DC
 - all of the above

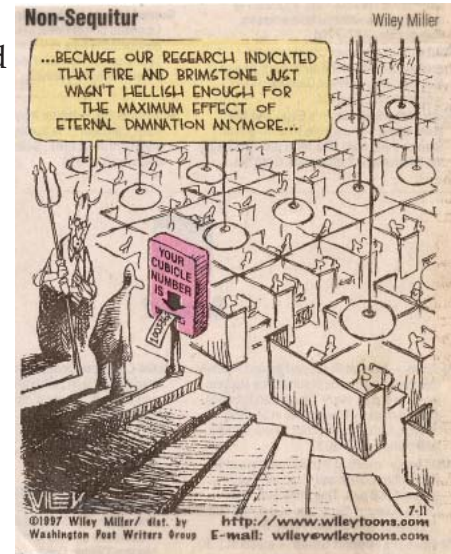


17. Performance hall reverberation times can be adjusted
- electronic reflected energy systems (ERES)
 - assisted resonance
 - movable ceilings and walls
 - all of the above
18. The shape of a traditional bandshell enhances acoustics by
- focusing the sound on the middle seats in the audience
 - providing a long reverberation time
 - sending a wave of reflected sound to the audience
 - all of the above

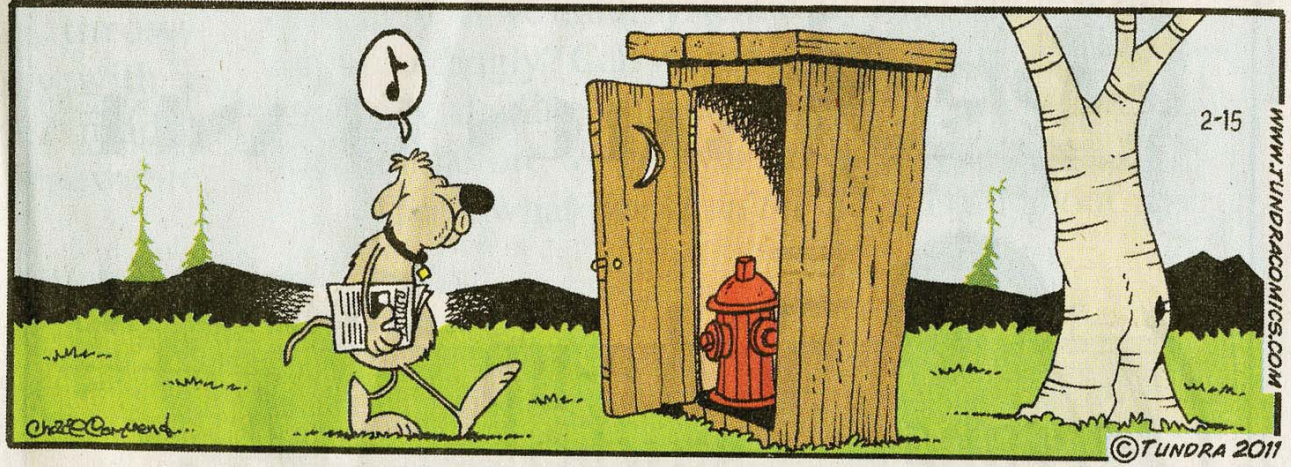
19. The only effective acoustic model for a performance space is
- a 1:10 physical model
 - a corrugated cardboard and foil model
 - a computer-generated model
 - all of the above can be effective
20. Percussion instrument-dominated music is most effective in
- Santa Maria in Florence, Italy
 - Taj Mahal in Agra, India
 - The Globe Theatre in London, England
 - Phillips Pavilion in Brussels, Belgium

Review Questions

21. A lamp with a color temperature of 3500°K is considered
- a warm source
 - an infrared source
 - a cool source
 - close to daylight in quality
22. To assure even distribution of daylight within a space
- provide apertures in two surfaces
 - employ a light shelf
 - provide highly reflective walls and ceiling
 - none of the above
23. Effective daylighting can save energy in elementary schools because
- lighting loads can be reduced
 - they are rarely used during non-daytime hours
 - cooling loads can be reduced
 - all of the above
24. To minimize glare in a daylighted space,
- use a diffusely transmitting window wall
 - use vertical fins to shade south-facing windows
 - provide apertures in two or more surfaces
 - all of the above
25. Artificial skies are better for testing daylighting models than the natural sky because they
- provide consistent light distribution
 - provide accurate color rendering
 - give accurate illumination levels
 - all of the above



26. Computer modeling of daylighting schemes is helpful because
- A. it accurately predicts all possible scenarios
 - B. it allows you to compare design options rather quickly
 - C. both A and B
 - D. none of the above
27. Beginning in 1936, recommended office lighting levels increased each decade for 40 years because
- A. lamps and fixtures became more effective
 - B. the recommenders were dominated by those who sell energy and equipment
 - C. scientific evidence argued for higher illumination
 - D. all of the above
28. Which of the following is a high intensity discharge lamp?
- A. a cool white fluorescent
 - B. an LED
 - C. an incandescent
 - D. none of the above
29. The efficacy of today's LED lamps running on AC current rates
- A. better than CFLs
 - B. about the same as CFLs
 - C. worse than CFLs
 - D. undetermined, the technology is too new
30. An effective, low glare luminous ceiling can be most efficiently delivered by
- A. indirect lighting
 - B. direct/indirect lighting
 - C. direct lighting
 - D. none of the above
31. A water supply problem pertinent to the western U.S. is
- A. excessive groundwater extraction
 - B. xeriscaping
 - C. over zealous toilet size regulation
 - D. all of the above
32. The best design for a downspout in a roof catchment scheme intended for providing potable water is
- A. a scupper that directs water to a bioswale
 - B. one that incorporates vegetation
 - C. one that rejects initial run-off, then sends ensuing run-off to the cistern
 - D. all of the above



33. The biggest expense for a ULF toilet that uses compressed air can be off-set by
- water savings in a few months
 - serving ten toilets with one compressor
 - using recycled grey water for flushing
 - all of the above
34. A system that is effective in treating black water in an urban setting is
- a composting toilet
 - a waterless urinal
 - a block-scale living machine
 - all of the above
35. The recent Paradise Creek restoration projects aim to
- reduce downstream flooding
 - provide viable wildlife habitat
 - reduce pollution entering the stream
 - all of the above
36. Entities with ambitious recycling goals include
- the City of Seattle
 - the Eden Project
 - Audubon House in New York, NY
 - all of the above
37. SBSE's revision of Malcolm Wells' wilderness-based checklist for design and construction is
- an objective assessment of sustainability
 - more accurate than the LEED checklist in assessing sustainable design
 - a means for easy comparison of site and building issues in regenerative design
 - all of the above

38. Idaho architects have access to energy-efficiency and sustainability education through

- A. the Integrated Design Lab (IDL) in Boise
- B. the Idaho chapter of USGBC
- C. Buildinggreen.com
- D. all of the above

39. A building with a low life cycle cost may have

- A. the lowest first cost
- B. the lowest maintenance and operating costs
- C. alternative energy systems that payback over a relatively short period
- D. any of the above

40. Opting for a LEED Platinum building over a comparable conventional building will

- A. most likely cost several percent more to build
- B. guarantee superior energy efficiency
- C. be more sustainable
- D. all of the above

Catch some rays, catch some *Zzzzzzzzzzzs!*
Come back with new energy next fall!

