

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

New Questions (20)

1. US first law energy efficiency was 48% in the 1960 Sankey diagram, since then energy efficiency

- A. has greatly increased
- B. has slightly increased
- C. remained constant
- D. has decreased

2. Among all the combustible fuels the only one showing a decline in use in the last decade is

- A. coal
- B. natural gas
- C. biofuels
- D. nuclear



3. Fracking to mine natural gas has caused

- A. an increase in natural gas-fueled electricity generation
- B. pollution of water tables in West Virginia
- C. a huge amount of water used and polluted in the process
- D. all of the above

4. The non-fossil fuel source with the most potential to generate carbon free energy is

- A. nuclear
- B. wind
- C. solar
- D. bio-mass

5. New York State's plan to be 100% renewable by 2030 depends on

- A. onshore and offshore wind
- B. various solar options
- C. geothermal
- D. a mixture including all of the above

6. Hydroelectric dams produce clean energy but their biggest problem is

- A. disrupting fish migration routes
- B. variable seasonal output
- C. zero potential for increased production
- D. none of the above

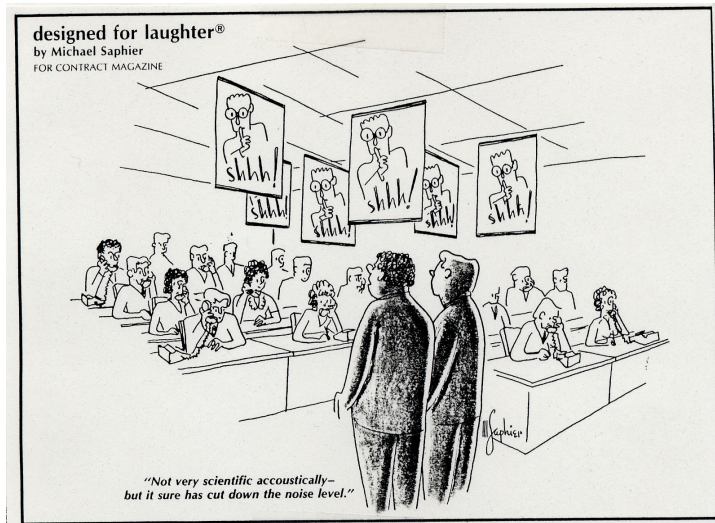
7. Low notes are thus named because they have
- A. low frequencies
 - B. short wave lengths
 - C. low volumes
 - D. none of the above
8. A room with a total absorption of 1000 sabins can be considered
- A. dead
 - B. neutral
 - C. live
 - D. any of the above
9. Paley Park in New York City is a great example of masking to provide a pleasant space because
- A. it's adjacent to an extremely noisy urban street
 - B. it has trees and seating for New Yorkers
 - C. it inspires Idaho student poets
 - D. all of the above

10. The most effective strategy for mitigating sounds on site is
- A. distance
 - B. barriers
 - C. masking
 - D. absorption

11. Creep and focusing can potentially be experienced in
- A. a barrel-vaulted space
 - B. a rotunda
 - C. beneath a dome
 - D. all of the above

12. Reflected sound can be diffused by
- A. concave surfaces
 - B. prime root panels
 - C. sloped ceilings
 - D. all of the above

13. Architectural acousticians use the dBA scale versus raw dBs because
- A. it's option A
 - B. it's adjusted for human ear sensitivity
 - C. it's a logarithmic scale
 - D. all of the above



14. A wall's STC indicates its ability to
- absorb sound
 - reflect sound
 - block sound transmission
 - all of the above
15. Impulse response diagrams
- show direct sound
 - show many orders of reflected sound
 - can be used to detect acoustic problems
 - all of the above
16. The earliest example of a successful surround hall is
- Boettcher Hall in Denver
 - Symphony Hall in Boston
 - Carnegie Hall in New York
 - Royal Albert Hall in London

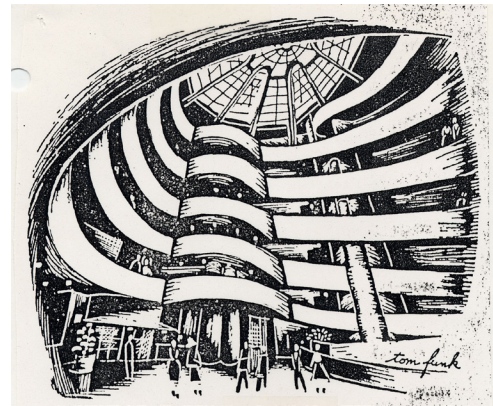


17. Auditoria with concave geometry compensate by making those surfaces
- totally absorptive
 - hollow
 - diffusely reflective
 - very reflective
18. Successful multipurpose auditoria adjust their acoustic properties by
- using electronic enhancement
 - adjusting their volume
 - using moveable wall panels
 - all of the above

19. Gehry's Millennium Park Bandshell in Chicago enhances outdoor performance by
- focusing sound on the audience
 - providing a first order reflection
 - providing many first order reflections
 - using electronic enhancement
20. The best way to understand the acoustic performance of a proposed hall is through
- auralization
 - computer-based acoustic analyses
 - physical models for acoustic analysis
 - visiting a similar hall

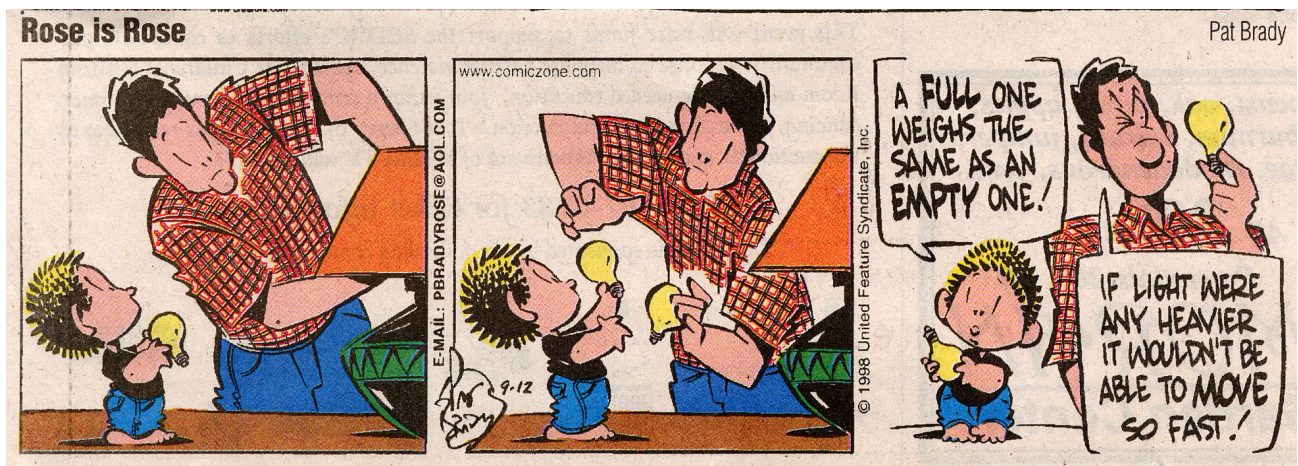
Review Questions (20)

21. The daylighted spaces in the Managua Cathedral by Legoretta are great examples of
- design to adapt to external conditions
 - brilliant adaptive reuse
 - use of appropriate technology
 - all of the above



22. Glare may be caused by
- extreme contrast of adjacent surfaces
 - sun striking translucent apertures
 - direct electric light fixtures
 - all of the above
23. The use of light shelves in a daylighted office
- allows daylight to penetrate further into the space
 - blocks the sun component
 - reduces lighting levels near the apertures
 - all of the above
24. A top-lighted art gallery would be most suitable for display of paintings if
- walls and ceiling were white
 - only diffuse light were allowed to enter
 - the apertures were equal to 1/4 of the floor area
 - all of the above
25. A Sefaira model of a daylighted space can
- show daylight factors in the space
 - demonstrate daylight/electric light integration
 - accurately render the space's surface luminance
 - show sun penetration on a specific day

26. Our naturally lighted artificial sky provides
- a means to test sunlight penetration
 - consistent distribution of light like a perfectly overcast sky
 - consistent light levels during daytime hours
 - all of the above
27. Electric lighting guidelines were most in line with optimum human performance
- in 1910
 - as depicted in MEEB in 1936
 - in 1970
 - now
28. The incandescent lamp, although well-liked, is no longer produced in the U.S. because
- it's CRI has been bettered by newer lamps
 - it is horribly inefficient
 - it's lamp life is very short
 - all of the above



29. The rationale for replacing CFL lamps with LEDs is
- to avoid flicker
 - save energy
 - to provide more illumination
 - to reduce lamp replacement costs
30. Full spectrum electrical lighting
- renders colors accurately
 - can be used to mitigate SAD
 - is similar to daylight
 - all of the above
31. To reduce water use in a new home
- install low-flush toilets
 - reuse gray water
 - capture storm water
 - all of the above

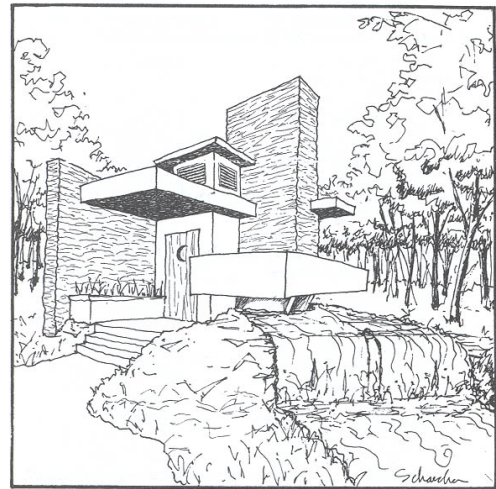
32. A common element in the stormwater strategies for BedZED and Village Homes is
- A. a neighborhood retention pond
 - B. on-site living machine
 - C. pervious pavement
 - D. none of the above

33. Green roofs are effective in stormwater management because
- A. they treat water biologically
 - B. they retain water on the roof
 - C. provide wildlife habitat
 - D. they reduce the urban heat island effect

34. Constructed wetlands treat black water
- A. that is nutrient rich
 - B. by biological means
 - C. to potable or near potable quality
 - D. all of the above

35. High efficiency toilets
- A. are extremely expensive
 - B. are minimally code-compliant
 - C. are also known as low-flush
 - D. none of the above

Oblique View by Steve Schaecher, AIA



Outhouses by Famous Architects: Frank Lloyd Wright's Flushing Water.

36. The strategy most responsible for mitigating flooding in the Paradise Creek restoration project was
- A. restoring beaver habitat
 - B. widening the creek bed and its benches
 - C. eliminating flow under Paradise Creek Street
 - D. all of the above

37. LEED Platinum rating assures you that the building
- A. is regenerative
 - B. meets the energy code
 - C. employs passive architectural strategies
 - D. all of the above

38. A prominent European building that use indoor gardens to improve ventilation air quality is
- A. the John Hope Gateway at the RBGE
 - B. Scottish Parliament
 - C. London's "Shard"
 - D. Commerz Bank in Frankfurt

39. The on-site electricity generation system with the shortest payback time is
- A. a building mounted wind turbine
 - B. solar thermal
 - C. small flow hydro
 - D. photovoltaics
40. A photovoltaic system in Moscow, ID,
- A. requires battery storage
 - B. will not generate energy in the winter
 - C. would benefit from Avista's net metering scheme
 - D. none of the above

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