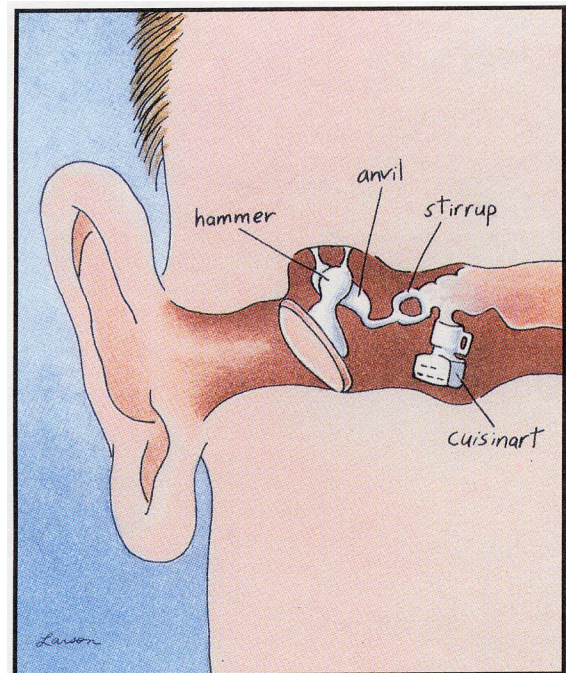


40 Multiple Choice Questions—Select the best answer for each one

New Questions

1. Your ear is most sensitive to the sound of
 - A. the bass notes thumping from the low-rider stopped twenty feet away (150 Hz)
 - B. whispered human speech (2000 Hz)
 - C. the cries of infants (4000 Hz)
 - D. an operatic soprano screeching the highest note in her repertoire (6500 Hz)
2. Imagine that you're 20 feet from a rushing locomotive and the sound you hear is 70 dB. In order to perceive the sound as half as loud you'd have to move to a distance of
 - A. 40 feet
 - B. 80 feet
 - C. 90 feet
 - D. 160 feet
3. At the site scale, sound can be blocked by
 - A. solid walls
 - B. vegetated berms
 - C. thick swathes of trees and shrubs
 - D. all of the above
4. In an office setting speech privacy can be assured by
 - A. providing masking white noise
 - B. making all the wall surfaces absorptive
 - C. using base isolators where the structure meets the ground
 - D. all of the above
5. The site that acts most like a free field is
 - A. a Palouse wheat field
 - B. a small town center (Moscow Main Street)
 - C. A metropolitan center (London Picadilly Street)
 - D. all of the above



Professor Harold Rosenbloom's diagram of the middle ear, proposing his newly discovered fourth bone.

6. The room with an acoustic goal of quiet is
- A. a lecture hall
 - B. a library reading room
 - C. a grocery store
 - D. all of the above
7. If you know the total absorption and the volume of a room you can determine its
- A. decibel level
 - B. liveliness or deadness
 - C. reverberation time
 - D. B and C above
8. The STC rating of a wall can be degraded by
- A. an adjacent acoustic ceiling
 - B. electrical outlets that are placed back-to-back
 - C. exterior sound sources
 - D. all of the above
9. A bandshell is effective in an amphitheater because it
- A. focuses the sound on the audience
 - B. focuses the sound on the performers
 - C. adds a reflected sound
 - D. all of the above
10. Flutter echoes are most likely to occur in
- A. a Gothic cathedral
 - B. a small splayed-wall classroom
 - C. a wide, reflective corridor
 - D. an amphitheater



11. The earliest acoustic models were
 - A. made of clay
 - B. ray tracing diagrams
 - C. totally theoretical
 - D. none of the above

12. The most accurate acoustic physical models are
 - A. full scale sectional models
 - B. 1:10 scale models of the entire space
 - C. 1:40 corrugated cardboard models
 - D. cardboard and foil models for use with laser pointers

13. The biggest problem with multipurpose halls is
 - A. they are multipurpose with diverse acoustic needs
 - B. electronic acoustic enhancements must be used
 - C. they feature moveable seating
 - D. all of the above

14. Surround halls are designed
 - A. for sound that encompasses the audience
 - B. optimum acoustic performance
 - C. proximity of the audience to the performers
 - D. a near outdoor experience

15. A shoebox hall that has been successfully remodeled to improve its acoustics is
 - A. Boston Symphony Hall
 - B. Carnegie Hall
 - C. John F. Kennedy Center
 - D. all of the above

16. A hall whose exterior form is dictated by good acoustic practice is
 - A. Sydney Opera House
 - B. Walt Disney Concert Hall
 - C. Joseph Mayerhoff Symphony Hall
 - D. none of the above

17. Music that is written for successful outdoor performances features
 - A. percussion
 - B. high frequency sounds
 - C. little need for reverberation
 - D. all of the above

18. Milan's La Scala and the Festival Theatre in Bayreuth demonstrate that opera requires a reverberation time of
- about 2 seconds
 - less than 1 second
 - more than 4 seconds
 - anywhere from 0.2 to 1.6 seconds
19. The most live space on the acoustic tour of campus was
- St. Augustine's sanctuary
 - the Taj Mahal
 - the SUB ballroom
 - the Music recital hall
20. In order to attain optimum acoustics the aisles in the Music recital hall are made of
- concrete
 - wood
 - cork
 - linoleum



Review Questions

21. The Musee d'Orsay in Paris can be considered green architecture because
- it's daylighted
 - it's an example of reused space
 - both of the above
 - none of the above
22. The sender that provides the most reliable and consistent source of daylight is
- the sun
 - the sky
 - reflected light from the ground
 - daylight fluorescent lamps

23. The light emitted by a 20 candela source
- A. is equivalent to a 20-watt CFL
 - B. will provide 5 footcandles of illumination 2 feet away
 - C. causes glare
 - D. all of the above
24. For a 20' x 40' room, rule-of-thumb indicates that the maximum aperture size for horizontal skylights would be
- A. 20 sqft
 - B. 40 sqft
 - C. 200 sqft
 - D. 800 sqft
25. Lumen-Micro can accurately predict daylight levels in
- A. rooms with sidelights only
 - B. rooms with skylights only
 - C. rectilinear rooms with sidelights and skylights
 - D. all rooms, no matter how complex
26. A physical daylighting model will give accurate results
- A. under a real sky (outdoors)
 - B. under an artificial sky (mirror box)
 - C. at scales from 1/16" = 1' to full size
 - D. all of the above
27. The most efficient fluorescent lamp in the four-foot tube configuration
- A. employs tri-phosphors
 - B. has a magnetic ballast
 - C. is a T-5 lamp
 - D. all of the above
28. The lamp whose color rendering capabilities are most flattering to human skin is
- A. incandescent
 - B. compact fluorescent with tri-phosphors
 - C. metal halide HID
 - D. mercury vapor HID



29. In order to prevent eye strain in school children it is prudent to illuminate the desktops in a classroom to
- A. over 1 foot-candle
 - B. over 30 foot-candles
 - C. over 100 foot-candles
 - D. over 250 foot-candles
30. To predict the illumination level of an office with a luminous ceiling you should use
- A. the point-source method
 - B. the line-source method
 - C. the lumen or zonal cavity method
 - D. a high end computer program
31. The purity of water collected in a cistern via a roof catchment system is affected by
- A. the type of roofing used
 - B. its filtering system
 - C. the roof wash-down feature that allows the initial run-off to bypass the cistern
 - D. all of the above
32. Biological waste water treatment can be accomplished by
- A. bio-swales
 - B. constructed wetlands
 - C. living machines
 - D. all of the above
33. The primary value of green roof systems is
- A. to slow and reduce stormwater run-off
 - B. to treat gray water on site
 - C. intensify the building's microclimate
 - D. all of the above
34. The ultimate low-energy, waterless toilet is
- A. a composting toilet
 - B. waterless urinal
 - C. an incinerating composter
 - D. all of the above
35. Recycling programs in urban centers help
- A. avoid the cost of creating new landfills
 - B. cities earn money through sales to manufacturers
 - C. control the disposal of hazardous wastes
 - D. prevent cross-media pollution of the water table

36. A European project that demonstrates some aspects of green architecture is
- London's city hall (GLA Building)
 - Comerz Bank in Stuttgart
 - Bill Dunster's BedZed housing project
 - all of the above
37. The best source for site energy generation on an urban site is
- low head hydro power from the creek at the site's edge
 - horizontal axis wind generators
 - sun powered PVs
 - all of the above
38. The fuel that has the fewest pollution and health problems associated with its extraction, use, and disposal is
- nuclear
 - coal
 - wind
 - natural gas
39. The most holistic method of assessing the cost of a new building is
- the bot tom line--cost-expense=savings
 - life cycle costing
 - rating it with a Wellsian checklist
 - determining its LEED rating
40. Green buildings pay off through
- greater worker productivity
 - lower energy bills
 - higher market values at resale
 - all of the above



Catch some rays, catch some Zzzzzzzzzs, catch the Giants at a green cathedral near you!
Come back with new energy next fall!