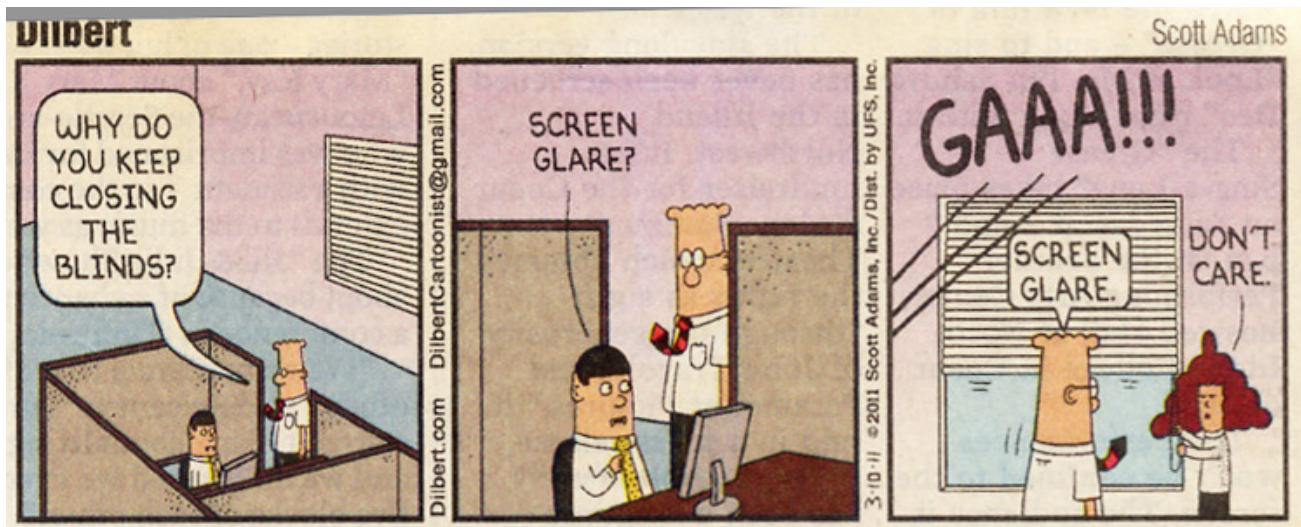


30 Multiple Choice Questions



1. What's "the best text book in the universe"?
  - A. Sun Wind and Light
  - B. The Green Studio Handbook
  - C. MEEB
  - D. Heating Cooling and Lighting
2. The vela in the Renzo Piano addition to Atlanta's High Museum are a great example of
  - A. take a bioregional approach
  - B. shape form to guide flow
  - C. use technology that is appropriate
  - D. address health and well-being
3. Richard Meier's Jubilee Church in Rome is
  - A. similar to Holl's St. Ignatius Chapel
  - B. a tribute to Aalto's Riola Church
  - C. as adaptable as Legoretta's Managua Cathedral
  - D. all of the above
4. Diffuse reflectors play a significant role in daylighting
  - A. Palladio's Canova Museum
  - B. Maybeck's Christ Science Church in Berkeley
  - C. the Atlantic Center for the Arts in New Smyrna Beach, FL
  - D. none of the above

5. Weber's Law is pertinent to the relationship of
- stimulus to sensation
  - reception to perception
  - quantitative to qualitative
  - all of the above
6. The color temperature of a light source
- is an objective measurement
  - is related to its perceived coolness
  - can be plotted against footcandles to determine acceptable color rendering
  - all of the above

7. Glare
- can be measured in footcandles
  - is only caused by specular surfaces
  - is an issue of perception
  - all of the above

8. You could easily estimate the luminous intensity of
- the sun
  - TLC 28 with all the lights on
  - the Sam Wanamaker Theatre
  - Labrouste's Bibliothecque National in Paris

9. A 5 candela light source creates
- 1 footcandle of illumination on a surface 5 feet away
  - about 60 lumens
  - 5 foot lamberts of luminance from a 50% reflective surface 1 foot away
  - an objective measurement of heat

10. The two most important sources for an effectively daylighted room are
- the sun component + the sky component
  - the sky component + the exterior reflected component
  - the sky component + the internal reflected component
  - the sun component + the external reflected component

11. We test physical daylight model under a perfectly overcast sky because
- it's a worst case scenario for amount of illumination
  - it's easy to do
  - most days are perfectly overcast
  - direct sun is not desired in a daylighting scheme

12. The original 1950s classrooms at Del Mar School in El Cerrito, CA, illustrate that
- north-facing clerestories are most effective
  - south-facing clerestories are most effective
  - well-shaded north- and south-facing clerestories are equally effective
  - none of the above



13. Glare can be mitigated by
- A. apertures in two room surfaces
  - B. splayed apertures
  - C. high IRCs
  - D. none of the above
14. You can improve your lighting intuition by
- A. memorizing the age-old adages
  - B. memorizing the rules-of-thumb
  - C. sketching lighting scenarios on a neutral background
  - D. by using magic arrows in your sectional drawings
15. For designers, the most valuable aspect of a hand or computer based prediction of daylighting is
- A. calculation of footcandles
  - B. showing the relationship between light and architectural space
  - C. photorealistic renderings
  - D. all of the above
16. The “footprints” used in the Graphic Daylight Design Method (GDDM)
- A. represent light distribution patterns
  - B. are keyed to aperture geometry
  - C. can be added to find total light levels
  - D. all of the above
17. The advantage that AGi32 holds over the daylight analysis in Sefaira is that AGi32
- A. gives both illumination values and surface renderings
  - B. is easier to use
  - C. calculates values needed for LEED points
  - D. none of the above
18. The UI daylighted artificial sky can simulate a perfectly cloudy sky distribution
- A. when the outdoor sky is cloudy
  - B. when the outdoor sky is partly cloudy
  - C. when the outdoor sky is perfectly clear
  - D. all of the above
19. A physical lighting model can be assessed by
- A. measuring surface luminance
  - B. photographing the distribution of light in space
  - C. translating illuminance readings to daylight factors
  - D. all of the above
20. The least critical part of a physical daylight model to model accurately is
- A. apertures and their surrounds
  - B. interior surfaces
  - C. exterior wall surfaces
  - D. all of the above are critical

21. Building form was designed to allow for good daylighting until

- A. electric lighting was invented
- B. after fluorescent lighting became commonplace
- C. the energy crisis of the 1970s
- D. triple pane glazing was available

22. In 1936 the first edition of MEEB gave illuminance levels for school classrooms of 10 to 20 footcandles, which is

- A. too dark for reading
- B. liable to give little Johnny headaches
- C. reasonable for most tasks
- D. more light than is necessary --beyond the point of diminishing

returns for performing tasks

23. In real time (vs. operational hours) fluorescent lamps will last longer if

- A. they are never turned off
- B. only on from 9 to 5 each day
- C. they are on during the work day for only a short time before and/or after daylight is sufficient
- D. a photosensor switches them on and off throughout the work day based on the availability of daylight

24. Incandescent lamps are currently banned in the US and Europe because

- A. they're out-dated technology
- B. they're terribly inefficient
- C. their color rendering is too orange
- D. all of the above

25. Compared to a fluorescent lamp with a color temperature of 3000°K, one rated at 4200°K

- A. is more energy efficient
- B. gives off warmer light
- C. gives off cooler light
- D. renders colors more accurately

26. LED lamps run on AC electricity save money over CFLs in the long term because

- A. they have a much greater efficacy
- B. they have a much longer operating life
- C. they improve worker productivity
- D. all of the above

27. General Electric

- A. ran advertisements aimed at guilt tripping parents to buy higher wattage lamps
- B. has stopped manufacturing incandescent lamps
- C. has stopped manufacturing compact fluorescent lamps
- D. all of the above



28. The most efficient way to electrically light the top floor of AAS for working at the desks is
- A. with the current direct lighting scheme at 7.5 feet above the floor
  - B. by replacing the direct fixtures with indirect direct fixtures that illuminate the ceiling
  - C. by replacing the direct fixtures with indirect fixtures mounted near the ceiling
  - D. by replacing the direct fixtures with diffusing fixtures in key locations

29. Diffusing fixtures in a room with all white surfaces
- A. will produce a fairly evenly illuminated space
  - B. will be less likely to cause glare
  - C. will be very efficient
  - D. all of the above

30. The electric lighting scheme in the catacombs cafe at St. Paul's in London is successful because
- A. it uses indirect lighting components for ambient light
  - B. it uses direct lighting components for task lighting
  - C. the rhythm of the vaulted space is emphasized by the lighting scheme
  - D. all of the above

In closing...stay happy my friends!

## SALLY FORTH/ by Francesco Marciuliano & Jim Keefe

