DHM 3453

Name: KEY

SP 2020

Test #2

True or False (Mark A for True and B for False)

1. _____Occupancy Sensors automatically switch luminaires on and off to reduce energy use.
2. _____A cost analysis should include initial lamp and luminaire costs; installation costs; electricity costs; and labor costs.
3. _____F An acoustical ceiling material with an NRC of 0.60 will absorb up to 40% of sound that strikes it.
4. _____NRC indicates ability of a surface to absorb sound.
5. _____Noise Reduction Coefficient deals with sound absorption in closed plan spaces.
6. _____Any sound energy not absorbed by a material or transmitted through a material will be reflected back into space.
7. _____Motion Sensors automatically switch luminaires on and off to reduce energy use.
8. _____Loudness is measured in decibels (dB).
9. _____F The less porous a material, the more easily it will absorb sound.
10. _____F A manual toggle switch breaks the flow of electricity in a circuit when the switch is on.
11. _____F A manual toggle switch provides variation in the intensity of an electric light source.
12. _____Some systems allow wireless remote control and can interface to audiovisual and other systems in commercial applications.
13. _____Photosensors automatically switch electric luminaires off when the daylight contribution at selected locations reaches prescribed levels.
14. _____Solid state dimmers are predominant today.
15. _____The base of the light emitting element of an LED chip is a crystalline wafer that acts as a substrate on which the different layers of the chip are grown.
16. _____F LEDs have poorer energy efficiency than filament sources.
17. _____In electric discharge lamps, light is produced by the passage of an electric current through a vapor or gas.
18. _____Because light emanates from the phosphors, light from a fluorescent lamp is emitted from the surface of the bulb so the entire tube is the actual light source.
19. _____F In electric discharge lamps light is produced by the passage of an electric current through a tungsten wire.
20. _____F T5 lamps are bigger in diameter than T8 lamps.
21. _____In addition to better color rendering, rare earth phosphors provide a substantial increase in lighting efficiency.
22. _____LED's blue component may interrupt the human circadian rhythm.
23. _____LED exposure after 4pm can disturb sleep.
24. _____F LEDs are currently cheaper per lumen on an initial cost a basis than conventional lighting technologies.
25. _____White noise devices can mask sound from discussions that take place in nearby workspaces thus creating more speech privacy.

26. _____The beam of light from an LED luminaire is cool.
27. _____Walls may serve as smoke barriers keeping smoke from migrating into other parts of the building.
28. _____The International Building Code (IBC) is the most widely adopted building code in US
29. _____F OLEDs have a very wide profile.
30. _____F High partitions cause people to talk quieter.
31. _____Products such as Smoke Guard® smoke containment systems control the spread of vertical smoke through elevator shafts, thereby limiting and/or preventing the risk of smoke spreading throughout the building.
32. _____Goal of the IBC is to ensure that if a fire occurs in a building, fire won't grow too rapidly & occupants will have the ability to escape.
33. _____F Long reverberation times are good for speech intelligibility.
34. _____STC is a measure for rating the performance of a wall system as a barrier to airborne sound transmission between closed spaces and in many open plan spaces.
35. _____Reverberation is the buildup of sound within an architectural space, such as a room, as a result of repeated sound reflections at the surfaces of the room.
36. _____F When a door is closed it will always prevent sound from coming into a room.
37. _____Wood ceiling panels can achieve high NRC values when an infill panel is used.
38. _____F LED luminaires do not generate heat.
39. _____F If an incandescent lamp is broken, a very small amount of mercury can contaminate the surrounding environment.
40. _____F Fluorescent lamps do not emit UV radiation.
41. _____Solid state lighting is a family of semiconductor light sources that includes LEDs and OLEDs.
42. _____The first The U.S. Energy Policy Act of 1992 (EPACT) established minimum efficacy standards for certain kinds of fluorescent lamps.
43. _____The EPA recommends airing out the location of a broken fluorescent tube and using wet paper towels to help pick-up the broken glass and fine particles.
44. _____Generally, the cost of electricity is the single largest cost in lighting.
45. _____Watts Per Square Foot = Lighting Power Density.
46. _____F Projects should always strive to have the highest levels of watts per square foot that are possible.
47. _____Solid state dimmers limit current flow.
48. _____F Dimming incandescent decreases the life of the lamp.
49. _____F LED lamps may not ever be dimmed.
50. _____Passive fire protection systems manage fire spread by dividing a building into distinct fire containment compartments.
51. _____Fire Extinguishing Systems = suppression.
52. _____Active protection is provided by systems which combat a fire.
53. _____Sprinkler systems activate and extinguish a fire before exposing passive systems to a fire.
54. _____In some fires, the volume of smoke is so great that it may fill an entire building.
55. _____Smoke may obscure visibility.
56. _____F NFPA develops, publishes, and disseminates only one code intended to minimize the possibility and effects of fire and other risks.

57. _____NFPA = National Fire Protection Association.
58. _____The intended use or occupancy of a building is a fundamental consideration for building codes.
59. _____The desired use of a facility determines the occupancy group for codes.
60. _____Dimming fluorescent lamps requires the use of special dimming ballasts.
61. _____One important function of building codes is providing of safe means of egress for all anticipated occupants
62. _____Smoke & fire gases are dangerous products of combustion
63. _____Where buildings have Mixed Occupancies, codes require fire-rated partitions to separate occupancies.

Choose the best answer:

64. _____E Occupancy can be sensed by which method?
    a. Ultrasonic
    b. Audio
    c. Passive infrared
    d. Optical
    e. All of the above

65. _____C Dimming systems can operate on which principle?
    a. Varying the voltage
    b. Varying the length of time that the current flows during each alternating current cycle
    c. All of the above
    d. Gravity
    e. None of the above

66. _____d Types of Smoke Detectors include:
    a. Ionization
    b. Photoelectric
    c. Combination Ionization/Photoelectric
    d. All of the above
    e. None of the above

67. _____e.Typical NRC values:
    a. Concrete Wall: 0.00
    b. Typical Acoustical Ceiling: 0.50 – 0.75
    c. High Performance Acoustical Ceiling: 0.80 - 1.00
    d. Commercial Carpet: 0.20 - 0.25
    e. All of the above

68. _____D Means of egress components include:
    a. An exit access
    b. An exit
    c. An exit discharge
    d. All of the above
    e. None of the above

69. _____B LED requires a
    a. Ballast
    b. Driver
    c. Filament
    d. All of the above
    e. None of the above

70. _____A A fluorescent lamp requires a
    a. Ballast
    b. Driver
    c. Filament
    d. All of the above
    e. None of the above

71. _____B What is the diameter of a T8 lamp?
    a. 1/8 inch
    b. 1 inch
    c. 1-1/2 inches
    d. 2 inches
    e. 8 inches

72. _____E IBC establishes the following occupancies:
    a. Assembly (A)
    b. Business (B)
    c. Educational (E)
    d. Mercantile (M)
    e. All of the above

73. _____A Suppression may include
    a. Sprinklers
    b. Strobe lights
    c. Exit Lights
    d. All of the above
    e. None of the above

(Note questions 74 leads into question 75.)

74. _____D In a fire, openings between floors including
    a. Stairs...
    b. Elevators...
    c. Mechanical shafts...
    d. All of the above...
    e. None of the above...

75. _____D can allow for passage of

f. Smoke
g. Heat
h. Flames
i. All of the above
j. None of the above