



Introduction to Safety

Summative Exam 2 Answer Key

- Each exit discharge must lead directly outside or to a street, walkway, refuge area, or public way.
 - ** True**
 - False
- The width of an emergency exit path must be at least _____ wide.
 - 2 feet
 - ** 28 inches**
 - 36 inches
 - 4 feet
- A refuge area that has a barrier must withstand a fire for at least _____.
 - 15 minutes
 - 30 minutes
 - ** 1 hour**
 - 2 hours
- A General Fire Protection Plan does not include _____.
 - evacuation procedures
 - an account for all evacuated employees
 - fire equipment procedures specific to the facility
 - equipment shutdown procedures
 - ** None of the above**
- When a fire is discovered, the first action should be to _____.
 - put out the fire
 - ** notify others about the fire**
 - shut down the fuel source of the fire
 - evacuate the premises
- Fires that burn _____ are hotter and more difficult to extinguish than other fuel sources.
 - paper
 - ** liquids**
 - oil
 - wood
- A liquid with a _____ flashpoint is a more flammable substance.
 - ** low**
 - high





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8. Fires fueled by ____ liquids are more easily started.
- ** flammable**
 - Combustible
9. Flammable liquids are different from combustible liquids in that ____ .
- flammable liquids are OSHA-approved for use in the workplace, while combustible liquids are not.
 - ** flammable liquids have flashpoints below 100°F and combustible liquids have flashpoints above 100°F.**
 - Flammable liquids will burn by themselves, but combustible liquids will only burn if their vapors interact with air.
 - Nothing, the words flammable and combustible mean the same thing.
10. If a chemical spill occurs, it should only be cleaned up by an emergency response team.
- ** True**
 - False
11. Fire safety regulations and codes are provided by ____.
- OSHA
 - NFPA
 - ** Both a and b**
 - Neither a or b
12. Which flammable and combustible information is not listed on a material Safety Data Sheet (MSDS)?
- Proper storage
 - Proper dispensing
 - Spill response procedures
 - ** None of the above**
13. On the ____ portion of an NFPA label, a product's hazard flashpoint is listed.
- white
 - blue
 - ** red**
 - Yellow





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14. The primary concern when dispensing liquids is starting on fire from ____ .
- ** static electricity**
 - spontaneous combustion
 - elevated heat
 - Both c and d
15. Housekeeping is only important because it keeps the facility looking nice.
- True
 - ** False**
16. ____ burns in a Class B fire.
- Wood
 - ** Gasoline**
 - Metal
 - Deep fat fryer
17. A class “A” extinguisher is used for putting out combustible metal fires.
- True
 - ** False**
18. Water can be used on what type of fuel source that is on fire?
- Wood
 - Kerosene
 - Metal
 - ** a and c**
 - Electrical wires
19. The term PASS is an acronym that pertains to the ____.
- first aid procedure applied to a fire victim
 - ** use of a fire extinguisher**
 - four types of fire hazards
 - classifications of fire extinguishers
20. Heat from the fire is the only fire-fighting danger.
- True
 - ** False**





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21. Portable fire extinguisher maintenance includes checking to ensure that:
- The extinguisher is fully charged
 - Is in its designated place
 - It is accessible
 - ** All of the above**
22. Which type of fire gives off white smoke?
- Class A
 - Class B
 - Class C
 - ** a or c**
23. It is possible for a fire to consume enough oxygen from the air to cause suffocation to humans who are in the vicinity.
- ** True**
 - False
24. The nucleus of an atom consists of _____.
- electrons
 - neutrons
 - protons
 - ** Both b and c**
25. A material made up of atoms with _____ electrons in its outer orbit is a conductor.
- ** 1**
 - 4
 - 8
 - 16
26. An atom that has more protons than electrons is a _____ charged ion.
- negative
 - ** positive**
27. Current always takes the path of least resistance
- ** True**
 - False





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28. Voltage can exist without current.
- ** True**
 - False
29. Current is capable of flowing through a chassis ground.
- ** True**
 - False
30. In a series circuit, the sum of the _____ equals the total value of the same circuit value.
- ** Current**
 - Voltage
 - Resistance
 - Both b and c
31. Ohm's law verifies that the current is _____ proportional to the voltage if the resistance in the circuit remains constant.
- ** directly**
 - Inversely
32. Which statement is true about a series circuit?
- A series circuit is configured so that current has **one** or more paths for current to flow through.
 - ** The total current in a series circuit is equal to the current that flows through individual components.**
 - In a series circuit the current at each component is proportional to its resistance.
 - The source voltage is equal to the sum of all the voltage drops across each component in a series circuit
33. AC current flows in a _____ manner through a circuit.
- unidirectional
 - ** bidirectional**
34. The _____ axis of a sine wave represents time.
- vertical
 - ** horizontal**





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35. What is the voltage applied to a circuit with 10 ohms of resistance when 2 amps flows through it?
- 0.5 volts
 - 5 volts
 - 2 volts
 - ** 20 volts**
36. A letter that represents current measurements is _____.
- C
 - ** A**
 - I
 - J
37. The amount of current that flows in a circuit is determined by the amount of _____.
- wattage
 - applied voltage
 - resistance
 - ** Both b and c**
38. A _____ produces electricity when heat is applied to the junction of two different metals that are twisted together.
- generator
 - piezoelectric device
 - ** thermocouple**
 - Photovoltaic
39. A _____ is an example of a load in an electrical circuit.
- switch
 - ** lightbulb**
 - battery
 - wire
40. The letter _____ is used to represent voltage when using Ohm's law calculations.
- I
 - V
 - R
 - ** E**



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41. The current through each branch in a parallel circuit _____.
a. is the same as the total current
b. is inversely proportional to the voltage
c. **** adds to the other branches to equal the total current**
d. is directly proportional to the resistance
42. Most of the circuitry inside electronic equipment, such as consumer electronics, computers, monitors in hospitals, and automobiles are powered by _____ power supplies.
a. **** DC**
b. AC
c. Portable
d. High voltage
43. The function of a switch is to complete or break a circuit.
a. **** True**
b. False
44. An amperage as small as 100milliamps can cause death.
a. **** True**
b. False
45. According to the NEC (National Electrical Code), a voltage less than ____ volts is defined as a Low Voltage.
a. 50
b. 120
c. 240
d. **** 600**
46. The primary function of a _____ is to prevent people from receiving an electrical shock.
a. circuit breaker
b. Ground Fault Interrupter
c. three-prong plug
d. **** Both b and c**
47. Static electricity only flows through a conductor.
a. True
b. **** False**





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48. Flammable materials can easily be ignited by static electricity.
- a. **** True**
 - b. False
49. The primary function of fuses and circuit breakers is to protect equipment and prevent a fire from starting.
- a. **** True**
 - b. False
50. When a circuit breaker trips, you should immediately reset it.
- a. True
 - b. **** False**
51. What is the condition caused by an electrical shock in which the beating pattern in the heart becomes elevated to a level that is too fast for normal pumping action?
- a. **** Ventricular fibrillation**
 - b. Respiratory center paralysis
 - c. Cardiac oscillations
 - d. Cardiac arrest
52. What is the primary factor that determines the severity of a shock?
- a. The amount of current flowing through the body
 - b. The path the current takes through the body
 - c. The length of time the body is in the path of electrical flow
 - d. **** All of the above**
53. Only ____ workers are permitted to work on or near exposed electrical components.
- a. **** qualified**
 - b. unqualified
 - c. Both A and B
 - d. None of the above





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54. Arc flashes can cause harm to anyone nearby due to ____.
- high temperatures
 - a shock wave
 - burns from molten metal
 - ** Any of the above**
55. A fuse opens more ____ than a circuit breaker when it trips.
- ** quickly**
 - slowly
56. The larger the diameter of a wire, the more resistance it will have and the smaller the amount of current it will conduct.
- True
 - ** False**
57. The third prong of a three-prong plug is connected to ____.
- the neutral conductor
 - the metal chassis of an appliance or power tool enclosure
 - ground
 - ** Both b and c**
58. How many feet should a technician stay away from high voltage power lines?
- 5
 - ** 10**
 - 50
 - 100
59. When a conductor inside an electronic piece of equipment is broken, there is a/n ____.
- short
 - ** open**





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60. The National Electrical Code (NEC) requires that any electrical systems with live parts operating _____ volts and over need to be inside an enclosure.
- ** 50**
 - 115
 - 230
 - 480
61. An extension cord should never be used as a permanent power source.
- ** True**
 - False
62. Pneumatic tools get their power from:
- Fluid pressure
 - Hand pumps
 - ** Compressed Air**
 - Water pressure
63. Hydraulic tools get their power from:
- Rotary engines
 - Air pressure
 - ** A pressurized liquid**
 - Solar panels
64. What is the primary reason arc flashes occur?
- A circuit becomes overloaded
 - Non-insulated conductors with different potentials become shorted in some way
 - Connection points become loose
 - ** Either b or c**
65. What is the first step that should be taken when approaching a victim when they are receiving a shock.
- Sound an alarm
 - Shut off the power
 - ** Remove the person from the energy source**
 - Yell for help





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66. What is the primary function of a three-prong electrical plug?
- Prevent a circuit protection device from blowing or tripping
 - Prevent a fire
 - ** Prevent electrical shock**
 - Provide a more secure mechanical connection than a two-prong plug
67. When using pneumatic tools, you should always wear:
- ** Appropriate PPE**
 - Sun shades
 - Short pants
 - Rubber soled shoes
68. ____ should be worn when operating a drill press.
- Goggles
 - ** A face shield**
 - Long pants
 - Safety toed shoes
69. The function of an interlock _____.
- Is to enable a momentary switch to remain on permanently after it is pressed
 - Prevents a tripped circuit breaker from being reset until the circuit malfunction is corrected
 - ** Is a safety device which prevents someone from being harmed by shutting off equipment if a part of their body enters a space that could hurt them**
 - A mechanism that can only be unlock with a passcode
70. A hammer's striking surface should be _____ the face of a tool being struck.
- 0.5 inches larger than
 - ** 0.5 inches smaller than**
 - the same size as
 - There is no rule
71. An _____ wrench is used for SEA nut and bolts.
- metric
 - ** English**
 - adjustable
 - Both A and B





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72. The projectile of a powdered handtool should be penetrated into which type of material?
- a. very hard and brittle
 - b. soft
 - c. **** Hard such as a brick**
 - d. Any of the above
73. A ground-fault circuit interrupter (GFCI) should be use with all electrical tools.
- a. **** True**
 - b. False
74. You can exceed recommended operating pressure for a short time if required to get the job done when using a pneumatic tool.
- a. True
 - b. **** False**
75. A _____ is used to clean a file.
- a. Wire brush
 - b. **** File card**
 - c. Moustache brush
 - d. Rasp



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