



Introduction to Safety

Summative Exam 2

- 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





Introduction to Safety

Summative Exam 2

8. Fires fueled by ____ liquids are more easily started.
 - a. flammable
 - b. Combustible

9. Flammable liquids are different from combustible liquids in that ____ .
 - a. flammable liquids are OSHA-approved for use in the workplace, while combustible liquids are not.
 - b. flammable liquids have flashpoints below 100°F and combustible liquids have flashpoints above 100°F.
 - c. Flammable liquids will burn by themselves, but combustible liquids will only burn if their vapors interact with air.
 - d. 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.
 - a. True
 - b. False

11. Fire safety regulations and codes are provided by ____ .
 - a. OSHA
 - b. NFPA
 - c. Both a and b
 - d. Neither a or b

12. Which flammable and combustible information is not listed on a material Safety Data Sheet (MSDS)?
 - a. Proper storage
 - b. Proper dispensing
 - c. Spill response procedures
 - d. None of the above

13. On the ____ portion of an NFPA label, a product's hazard flashpoint is listed.
 - a. white
 - b. blue
 - c. red
 - d. Yellow



Introduction to Safety

Summative Exam 2

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



Introduction to Safety

Summative Exam 2

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





Introduction to Safety

Summative Exam 2

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





Introduction to Safety

Summative Exam 2

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





Introduction to Safety

Summative Exam 2

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





Introduction to Safety

Summative Exam 2

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





Introduction to Safety

Summative Exam 2

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





Introduction to Safety

Summative Exam 2

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





Introduction to Safety

Summative Exam 2

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





Introduction to Safety

Summative Exam 2

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



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PAGE 13 of 13

Introduction to Safety
Summative Exam 2

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