

Ag Mechanics CDE - General Ag 2

MULTIPLE CHOICE

1. A handbook that sets minimum standards for electrical wiring is called the
- a. Electricians Wiring Book
 - b. Journeyman's Handbook
 - c. National Electrical Code
 - d. Workman's Code

ANS: C PTS: 1

2. A unit of measure of the rate of flow of electricity through a wire is known as
- a. amperage
 - b. voltage
 - c. wattage
 - d. ohms

ANS: A PTS: 1

3. A unit of measure of electrical pressure is known as
- a. amperage
 - b. voltage
 - c. wattage
 - d. ohms

ANS: B PTS: 1

4. A unit of measure of electricity that is derived from multiplying volts and amps is called
- a. PSI
 - b. resistance
 - c. wattage
 - d. ohms

ANS: C PTS: 1

5. The measure of resistance in a circuit to the flow of an electric current is called
- a. amperage
 - b. voltage
 - c. wattage
 - d. ohms

ANS: D PTS: 1

6. A complete path through which electricity flows is called a
- a. conduit
 - b. circuit
 - c. conductor
 - d. fuse

ANS: B PTS: 1

7. A safety device which opens the circuit by tripping a switch is called a
- a. circuit breaker
 - b. fuse
 - c. breaker box
 - d. short circuit

ANS: A PTS: 1

8. A material that permits electricity to flow freely is called a/an
- a. outlet
 - b. circuit
 - c. volt
 - d. conductor

ANS: D PTS: 1

9. A panel located inside the house from which every circuit branches is called a/an
- a. ground fault panel
 - b. service entrance panel
 - c. conductor panel
 - d. outlet panel

ANS: B PTS: 1

10. A laboratory that test electrical wiring materials and devices to assure that the products meet minimum safety standards is called
- a. Underwriters Laboratory
 - b. Electrical Laboratory
 - c. Journeyman's Laboratory
 - d. Electrical Conductors Laboratory

ANS: A PTS: 1

11. GFCI is an electrical device that stands for
- a. Ground Fault Circuit Information
 - b. Ground Fuse Circuit Interrupter
 - c. Ground Fault Circuit Interrupter
 - d. Ground Feeder Circuit Interrupter

ANS: C PTS: 1

12. Steel or plastic pipe used to protect electrical wires
- a. PVC
 - b. CPVC
 - c. conductors
 - d. conduit

ANS: D PTS: 1

13. An improper connection between hot and neutral wires or between hot wires:
- a. short circuit
 - b. blown circuit
 - c. tripped circuit
 - d. branch circuit

ANS: A PTS: 1

14. The circuit between the breaker box and one or more outlets:
- a. feeder circuit
 - b. branch circuit
 - c. short circuit
 - d. fault circuit

ANS: B PTS: 1

15. The circuit between one breaker box and another breaker box:
- a. feeder circuit
 - b. branch circuit
 - c. short circuit
 - d. fault circuit

ANS: A PTS: 1

16. What is the trip level of a GFCI?
- a. 10 - 12 milliamperes
 - b. 5 amperes
 - c. 4 - 6 milliamperes
 - d. 120 volts

ANS: C PTS: 1

17. How fast will a GFCI trip?
- a. 2 seconds
 - b. 5 seconds
 - c. 1/2 of a second
 - d. 1/40 of second

ANS: D PTS: 1

18. The type of cable used for direct burial of underground feeder wires is called
- a. Type NM
 - b. Type UF
 - c. Type UFC
 - d. Type NMB

ANS: B PTS: 1

19. Most residential wiring is made of a material called
- a. copper
 - b. iron
 - c. aluminum
 - d. steel

ANS: A PTS: 1

20. Most common size wire used to wire circuits in homes is
- a. # 14
 - b. # 12
 - c. # 10
 - d. # 16

ANS: B PTS: 1

21. AWG stands for
- a. American Wire Gauge
 - b. Alabama Wire Gauge
 - c. American Wire Ground
 - d. Automatic With Ground

ANS: A PTS: 1

22. An outlet box that can only hold one switch or one receptacle is called a/an:
- a. simple box
 - b. one gang box
 - c. single box
 - d. independent box

ANS: B PTS: 1

23. An outlet box that can hold two switches or two receptacles or one switch and one receptacle is called a/an:
- a. double box
 - b. twin box
 - c. two gang box
 - d. multi-box

ANS: C PTS: 1

24. Single-pole breakers are used for each _____ volt circuit.
- a. 240
 - b. 500'
 - c. 75
 - d. 120

ANS: D PTS: 1

25. Double-pole breakers are used for each _____ volt circuit.
- a. 240
 - b. 500
 - c. 75
 - d. 120

ANS: A PTS: 1

26. Which of the following items would all operate off of 120 volts.
- a. TV, radio, clothes dryer, microwave and dishwasher
 - b. TV, radio, hair dryer, microwave and dishwasher
 - c. computer, lamp, electric razor, ceiling fan and 80 gallon hot water heater
 - d. coffee maker, blender, DVD player, electric razor and large heat pump

ANS: B PTS: 1

27. A single-pole switch has
- a. one conductor terminal
 - b. two conductor terminals
 - c. three conductor terminals
 - d. four conductor terminals

ANS: B PTS: 1

28. A three-way switch has
- a. one conductor terminal
 - b. two conductor terminals
 - c. three conductor terminals
 - d. four conductor terminals

ANS: C PTS: 1

29. A four-way switch has
- a. one conductor terminal
 - b. two conductor terminals
 - c. three conductor terminals
 - d. four conductor terminals

ANS: D PTS: 1

30. A double-pole switch is used for
- a. 120 volt circuits
 - b. 240 volt circuits
 - c. large air-conditioners
 - d. all outside switches

ANS: B PTS: 1

31. Type NM cable stands for:
- a. non-metallic
 - b. new metal
 - c. non-metric
 - d. non-matter

ANS: A PTS: 1

32. Which color of wire is called the “neutral” wire?
- a. red
 - b. white
 - c. black
 - d. bare

ANS: B PTS: 1

33. Which color of wire is called the “hot” wire?
- a. blue
 - b. white
 - c. black
 - d. bare

ANS: C PTS: 1

34. Which color of wire is considered to be an “additional hot” wire?
- a. red
 - b. white
 - c. black
 - d. bare

ANS: A PTS: 1

35. The purpose of the “bare” wire is for:
- a. energy
 - b. conducting electricity during the normal operation of the circuit
 - c. wiring directly to the common terminal
 - d. safety

ANS: D PTS: 1

36. A 12-2 WG cable would have the following:
- a. one black wire, one white wire and one bare wire
 - b. one red wire, one white wire and one bare wire
 - c. one blue wire, one white wire and one bare wire
 - d. one black wire, one red wire and one white wire

ANS: A PTS: 1

37. A 12-3 WG cable would have the following:
- a. one blue wire, one red wire, one white wire and one bare wire
 - b. one black wire, one red wire, one white wire and one blue wire
 - c. one black wire, one red wire, one white wire and one bare wire
 - d. one black wire, one blue wire, one white wire and one bare wire

ANS: C PTS: 1

38. Which two colors of wires would be used to wire a single-pole switch?
- a. black and white
 - b. red and white
 - c. black and red
 - d. red and green

ANS: A PTS: 1

39. Which three colors of wires would be used to wire 3-way switches?
- a. red, black and green
 - b. red, black and blue
 - c. red, black and white
 - d. black, white and blue

ANS: C PTS: 1

40. Which three colors of wires would be used to wire 4-way switches?
- a. red, black and green
 - b. red, black and blue
 - c. red, black and white
 - d. black, white and blue

ANS: C PTS: 1

41. Which type switch would be used to control a light from only one location?
- a. single-pole switch
 - b. 2-way switch
 - c. 3- way switch
 - d. 4-way switch

ANS: A PTS: 1

42. Which type switch would be used to control a light from two different locations?
- a. single-pole switch
 - b. 2-way switch
 - c. 3-way switch
 - d. 4-way switch

ANS: C PTS: 1

43. Which type switches are used in pairs?
- a. single-pole switches
 - b. 2-way switches
 - c. 3-way switches
 - d. 4-way switches

ANS: C PTS: 1

44. If a light is being controlled from three different locations, which combination of switches would be used?
- a. three 3-way switches
 - b. one single-pole and two 4-way switches
 - c. one 3-way and two 4-way switches
 - d. two 3-way and one 4-way switch

ANS: D PTS: 1

45. If a light is being controlled from five different locations, which combination of switches would be used?
- a. three 3-way and two 4-way switches
 - b. two 3-way and three 4-way switches
 - c. one single-pole and four 4-way switches
 - d. five single-pole switches

ANS: B PTS: 1

46. The black wire coming from the breaker box should be connected to which terminal on a 3-way switch?
- a. brass
 - b. silver
 - c. neutral
 - d. common

ANS: D PTS: 1

47. The black wire coming from the breaker box should be connected to which terminal on a single-pole switch?
- a. it doesn't matter
 - b. silver
 - c. neutral
 - d. common

ANS: A PTS: 1

48. A 240 volt grain auger motor draws 17 amps under load, what size breaker should you install?
- a. single pole 20 amp
 - b. single pole 30 amp
 - c. double pole 20 amp
 - d. double pole 15 amp

ANS: C PTS: 1

49. What is the recommended minimum size or capacity of a residential electrical service?
- a. 150 amps
 - b. 100 amps
 - c. 200 amps
 - d. 400 amps

ANS: C PTS: 1

50. Which of the following materials is considered to be a good insulator?
- a. water
 - b. a GFCI
 - c. wire
 - d. rubber

ANS: D PTS: 1

51. An instrument used to measure voltage values is called a/an
- a. voltmeter
 - b. current reader
 - c. volt reader
 - d. volt sensor

ANS: A PTS: 1

52. A regulatory device which "steps up" or "steps down" voltage?
- a. diode
 - b. transformer
 - c. rectifier
 - d. voltmeter

ANS: B PTS: 1

53. A point on an electrical device where connections may be made?
- a. tab
 - b. groove
 - c. terminal
 - d. toggle

ANS: C PTS: 1

54. A station in a power transmission system at which electric power is transformed to a conveniently used form?
- a. substation
 - b. electric station
 - c. transtation
 - d. power station

ANS: A PTS: 1

55. A connection of two or more conductors is called a/an:
- a. terminal
 - b. lug
 - c. joint
 - d. splice

ANS: D PTS: 1

56. An excessive demand on an electric circuit is called a/an:
- a. overdemand
 - b. overwork
 - c. overload
 - d. resistance

ANS: C PTS: 1

57. An electrical instrument used to measure circuit resistance is called a/an:
- a. multimeter
 - b. ampmeter
 - c. voltmeter
 - d. ohmmeter

ANS: D PTS: 1

58. An electrical box which is used to bring the wires to the location where an electrical device is installed is called a/an:
- a. junction box
 - b. outlet box
 - c. power box
 - d. accessory box

ANS: B PTS: 1

59. An electrical box with a blank cover used to contain splices of a circuit is called a/an:
- a. junction box
 - b. outlet box
 - c. terminal box
 - d. splice box

ANS: A PTS: 1

60. The main circuit which supplies all other circuits is called the
- a. main
 - b. supplier
 - c. transformer
 - d. head

ANS: A PTS: 1

61. A unit of measurement for the flow of light.
- a. wattage
 - b. voltage
 - c. amperage
 - d. lumen

ANS: D PTS: 1

62. One thousandth of an ampere can also be called
- a. multiampere
 - b. milliampere
 - c. 1,000 amperes
 - d. .01 amperes

ANS: B PTS: 1

63. A wire 4-6 inches in length used to connect a portion of a circuit is called a/an:
- a. extension wire
 - b. extra wire
 - c. jumper wire
 - d. junction wire

ANS: C PTS: 1

64. The term expressing frequency or cycles per second?

- a. volt
- b. hertz
- c. amp
- d. watt

ANS: B PTS: 1

65. A flexible wire that can be pushed through conduit and around bends that is used to pull electrical wire through conduit?

- a. electrical cable
- b. conduit puller
- c. wire puller
- d. fish tape

ANS: D PTS: 1

66. A threaded sleeve used to join the ends of two lengths of conduit?

- a. coupling
- b. jointer sleeve
- c. pipe connector
- d. threaded connector

ANS: A PTS: 1

67. The ability of a current to flow continuously through a conductor?

- a. free energy
- b. continuity
- c. continuous flow
- d. constant flow

ANS: B PTS: 1

68. The letters that refer to the quantity of heat required to raise one pound of water one degree Fahrenheit is called:

- a. AWG
- b. NEMA
- c. BTU
- d. GFCI

ANS: C PTS: 1

69. BTU stands for

- a. Between The Underground
- b. Boston Torque Unit
- c. Battery Transformer Unit
- d. British Thermal Unit

ANS: D PTS: 1

70. A flexible metal protective covering enclosing electrical conductors is called:

- a. armored cable
- b. conduit
- c. metallic cable
- d. steel cable

ANS: A PTS: 1

71. A beginner in a trade is called a/an:

- a. tradesman
- b. skilled worker
- c. apprentice
- d. journeyman

ANS: C PTS: 1

72. A tradesperson who has served his or her apprenticeship and is qualified to perform the skills of the trade is called a/an:

- a. tradesman
- b. skilled worker
- c. apprentice
- d. journeyman

ANS: D PTS: 1

73. AC stands for:

- a. Alternative Current
- b. Alternating Current
- c. Amp Current
- d. Alternating Cycles

ANS: B PTS: 1

74. DC stands for:

- a. Direct Current
- b. Diode Current
- c. Direct Continuity
- d. Diverse Cycles

ANS: A PTS: 1

75. When attaching a conductor to a device terminal, the curved hook on the conductor must be connected:

- a. so that it has less than a 2/3 wrap
- b. counterclockwise onto the terminal
- c. clockwise onto the terminal
- d. so that it overlaps

ANS: C PTS: 1

76. Conductors are spliced together by twisting the wires together in a _____ direction.

- a. full
- b. non-stop
- c. counterclockwise
- d. clockwise

ANS: D PTS: 1

77. As a general rule, the amount of insulation that should be stripped off of the wire to make a proper connection is:

- a. 7/8 inch
- b. 1/8 inch
- c. 5 inches
- d. 1 foot

ANS: A PTS: 1

78. Which of the following materials is **not** something from which electrical boxes are made?

- a. metal
- b. plastic
- c. fiberglass
- d. rubber

ANS: D PTS: 1

79. Which of the following is **not** a common electrical box shape?

- a. round
- b. rectangle
- c. triangle
- d. octagon

ANS: C PTS: 1

80. Which of the following shapes for electrical boxes is used only for fixtures such as ceiling lights?

- a. round
- b. rectangle
- c. triangle
- d. octagon

ANS: A PTS: 1

81. Which of the following shapes for electrical boxes is preferred for wall receptacles and switches?

- a. round
- b. rectangle
- c. triangle
- d. octagon

ANS: B PTS: 1

82. Metal boxes usually have a _____ finish.

- a. glossy
- b. slick
- c. bright
- d. galvanized

ANS: D PTS: 1

83. Part of an electrical box that may be removed only to provide an opening for a cable, conduit or fitting?
- a. tabs
 - b. inserts
 - c. knockouts
 - d. junction

ANS: C PTS: 1

84. The purpose of electrical boxes having removable sides is so that they can be:
- a. broken down
 - b. stored easily
 - c. ganged
 - d. easily accessible

ANS: C PTS: 1

85. The electrical symbol "S" represents a:
- a. single-pole switch
 - b. safety switch
 - c. solid switch
 - d. special switch

ANS: A PTS: 1

86. The electrical symbol S2 represents a:
- a. single-pole switch
 - b. two-way switch
 - c. double-pole switch
 - d. two sided switch

ANS: C PTS: 1

87. The electrical symbol S3 represents a:
- a. three-way service
 - b. three-way signal
 - c. three-way solenoid
 - d. three-way switch

ANS: D PTS: 1

88. Which of the following is required to have in a bathroom?
- a. breaker box
 - b. GFCI
 - c. wall heater
 - d. water heater

ANS: B PTS: 1

89. Which of the following locations is a requirement to have a GFCI installed?
- a. shower
 - b. dining room
 - c. outside
 - d. bedroom

ANS: C PTS: 1

90. Which of the following locations is a requirement to have a GFCI installed?
- a. living room
 - b. crawl spaces
 - c. hallway
 - d. finished basements

ANS: B PTS: 1

91. Which of the following locations is a requirement to have a GFCI installed?
- a. workout room
 - b. study room
 - c. attic
 - d. within 6 feet of kitchen sink

ANS: D PTS: 1

92. Which of the following locations is a requirement to have a GFCI installed?
- a. living room
 - b. unfinished basements
 - c. within 10 feet of a fireplace
 - d. storm shelter

ANS: B PTS: 1

93. An electrical device used in fluorescent fixtures that furnishes the necessary starting and operating current to the bulb.
- a. solenoid
 - b. rectifier
 - c. relay
 - d. ballast

ANS: D PTS: 1

94. An octagon electrical box would have _____ sides.
- a. 8
 - b. 6
 - c. 5
 - d. 4

ANS: A PTS: 1

95. Which of the following would **not** be covered by the NEC?
- a. the size wire to use
 - b. the color of switches to use
 - c. the number of receptacles used in a room
 - d. the size of conduit to use

ANS: B PTS: 1

96. Which of the following would **not** be covered by the NEC?
- a. the type of tool used to strip wires
 - b. the height of the main disconnect
 - c. the locations where GFCI's are required
 - d. the amount of voltage drop that is permitted in a circuit

ANS: A PTS: 1

97. The decrease in voltage in a circuit is known as
- a. decreased voltage
 - b. dropped voltage
 - c. voltage drop
 - d. current depletion

ANS: C PTS: 1

98. Which of the following tools would be the least used when wiring circuits?
- a. hammer
 - b. screwdriver
 - c. wire strippers
 - d. ratchet and socket

ANS: D PTS: 1

99. Which of the following tools would be the least used when wiring circuits?
- a. drill
 - b. nut driver
 - c. cable rippers
 - d. needle nose pliers

ANS: B PTS: 1

100. An overhead electrical line that runs from the transformer at the utility pole to a building is called the:
- a. service drop
 - b. incoming line
 - c. primary line
 - d. transformer line

ANS: A PTS: 1

101. PVC stands for:
a. polyvinyl calcium
b. polyvinyl copper
c. polyvinyl chloride
d. polyethylene chloride
ANS: C PTS: 1
102. CPVC stands for:
a. covered polyvinyl chloride
b. coated polyvinyl chloride
c. chlorinated polyethylene chloride
d. chlorinated polyvinyl chloride
ANS: D PTS: 1
103. PEX pipe stands for:
a. polyethylene with cross-links
b. polyethylene xanthone
c. polyethylene x-ray
d. polyethylene xerox
ANS: A PTS: 1
104. In plumbing, ID stands for:
a. has no meaning
b. inside die
c. inside diameter
d. internal diameter
ANS: C PTS: 1
105. In plumbing, OD stands for:
a. has no meaning
b. outside die
c. outside diameter
d. outward diameter
ANS: C PTS: 1
106. Tape use on threaded fittings to prevent water leakage at pipe connections is called:
a. sealant tape
b. teflon tape
c. black tape
d. water tape
ANS: B PTS: 1
107. PVC pipe is _____ in color.
a. white
b. red
c. beige
d. black
ANS: A PTS: 1
108. CPVC pipe is _____ in color.
a. white
b. red
c. beige
d. black
ANS: C PTS: 1
109. PVC pipe is used for:
a. drinking water only
b. hot or cold water
c. hot water only
d. cold water only
ANS: D PTS: 1
110. CPVC is used for:
a. drinking water only
b. hot or cold water
c. hot water only
d. cold water only

ANS: B PTS: 1

111. DWV pipe stands for:
- a. ditch, waste and vent
 - b. ditch, weather and vent
 - c. drain, weather and vent
 - d. drain, waste and vent

ANS: D PTS: 1

112. Removing burrs from the inside edge and the end of pipe is known as:
- a. reaming
 - b. deburring
 - c. grinding
 - d. sanding

ANS: A PTS: 1

113. Fittings containing a device that regulates flow or permits flow in only one direction are called:
- a. ferrules
 - b. unions
 - c. valves
 - d. sensors

ANS: C PTS: 1

114. Which of the following types of galvanized fittings would have a 90 degree angle and have male threads on one end and female threads on the other end?
- a. 90 degree elbow
 - b. 90 degree street elbow
 - c. 90 degree tapered elbow
 - d. 90 degree bushing elbow

ANS: B PTS: 1

115. Which of the following types of galvanized fittings would allow two different size pipes to be joined together and has male threads on one end and female threads on the other end?
- a. union
 - b. reducer
 - c. bushing
 - d. coupling

ANS: C PTS: 1

116. Which of the following types of galvanized fittings would allow two different size pipes to be joined together and has female threads on both ends?
- a. union
 - b. reducer
 - c. bushing
 - d. coupling

ANS: B PTS: 1

117. Which of the following types of plastic fittings has threads on one end and has to be glued on the other end?
- a. adapter
 - b. bushing
 - c. coupling
 - d. union

ANS: A PTS: 1

118. Which of the following types of plumbing fittings has male threads and is used to close the end of a pipe?
- a. plug
 - b. cap
 - c. stopper
 - d. bushing

ANS: A PTS: 1

119. Which of the following types of plumbing fittings has female threads and is used to close the end of galvanized pipe?
- a. plug
 - b. cap
 - c. stopper
 - d. bushing
- ANS: B PTS: 1
120. A plumbing fitting used to connect two pieces of similiar plastic pipe is called a:
- a. coupling
 - b. joint
 - c. cap
 - d. clamp
- ANS: A PTS: 1
121. A plumbing fitting used to connect two pieces of similiar galvanized pipe is called a/an:
- a. ferrule
 - b. flange
 - c. union
 - d. plug
- ANS: C PTS: 1
122. Which of the following is true about a plumbing fitting that has male threads?
- a. it has more strength
 - b. it is used only in galvanized pipe
 - c. it has threads on the inside
 - d. it has threads on the outside
- ANS: D PTS: 1
123. Which of the following is true about a plumbing fitting that has female threads?
- a. it has less strength
 - b. it is used only in galvanized pipe
 - c. it has threads on the inside
 - d. it has threads on the outside
- ANS: C PTS: 1
124. Galvanized pipe is coated with _____ to prevent rust.
- a. copper
 - b. calcium
 - c. plastic
 - d. zinc
- ANS: D PTS: 1
125. What is the purpose of the coating on galvanized pipe?
- a. to keep it from bending
 - b. to make it easier to work with
 - c. to keep the sun from damaging it
 - d. to keep it from rusting
- ANS: D PTS: 1
126. A short piece of galvanized pipe threaded at each end is called a/an:
- a. extension
 - b. fitting
 - c. nipple
 - d. pipe
- ANS: C PTS: 1
127. When threading steel pipe, which of the following should be used to reduce heat?
- a. oil
 - b. water
 - c. air
 - d. WD-40
- ANS: A PTS: 1
128. What is the purpose of applying a paste or flux to copper pipe and the fitting before soldering?
- a. to make the process easier
 - c. to make the pipe last longer

- b. to make the process faster
- d. to make the solder penetrate the joint

ANS: D PTS: 1

129. In plumbing, the process of joining two pieces of metal using heat and the application of another metal of a different composition is called:

- a. manufacturing
- c. soldering
- b. pipe joining
- d. welding

ANS: C PTS: 1

130. When soldering copper pipe that is going to be used for drinking water, which of the following types of solder should be used?

- a. 50% lead and 50% tin
- c. 100% lead
- b. 60% lead and 40% tin
- d. lead-free

ANS: D PTS: 1

131. Why must copper pipe be cleaned before soldering?

- a. to make it easier to work with
- c. to make it look better
- b. so solder will stick
- d. to increase the water flow

ANS: B PTS: 1

132. Which of the following is not recommended to be used when cleaning copper pipe before soldering?

- a. steel wool
- c. emery cloth
- b. grinder
- d. special wire brushes

ANS: B PTS: 1

133. When cleaning copper before soldering, what should be cleaned?

- a. the outside of the pipe and the inside of the fitting
- c. only the inside of both pipe and fitting
- b. the inside of the pipe and the outside of the fitting
- d. only the outside of both pipe and fitting

ANS: A PTS: 1

134. When applying heat for soldering copper, which of the following should be done?

- a. apply heat to the pipe only
- c. apply heat to the pipe and fitting
- b. apply heat to the fitting only
- d. apply heat to the solder

ANS: C PTS: 1

135. Which of the following terms is used to describe the wall thickness of plastic pipe?

- a. schedule
- c. gauge
- b. diameter
- d. depth

ANS: A PTS: 1

136. Which of the following types of PVC pipe is thicker?

- a. SCH 20
- c. SCH 60
- b. SCH 40
- d. SCH 80

ANS: D PTS: 1

137. Which type of plastic pipe is recommended for residential plumbing?

- a. SCH 10
- b. SCH 40
- c. SCH 60
- d. SCH 80

ANS: B PTS: 1

138. Water lines should be buried below the _____ so they will not freeze.
- a. top soil
 - b. frost line
 - c. grass roots
 - d. soft soil

ANS: B PTS: 1

139. Most Bureau of Health regulations require a minimum of _____ slope for main house drains.
- a. 1 inch per foot
 - b. 1 inch per yard
 - c. 3/4 inch per foot
 - d. 1/4 inch per foot

ANS: D PTS: 1

140. After digging a trench to bury a water line, it must be refilled. This is known as:
- a. replacing soil
 - b. filling in
 - c. recovering
 - d. backfilling

ANS: D PTS: 1

141. A fitting installed in a drain pipe in order to have easy access to the pipe to clean out obstructions is called a/an:
- a. obstruction fitting
 - b. cleanout fitting
 - c. insert fitting
 - d. drain fitting

ANS: B PTS: 1

142. A flexible auger used to remove clogs in plumbing drains is called a:
- a. twist
 - b. declogger
 - c. plunger
 - d. snake

ANS: D PTS: 1

143. The type tool that is best to use when tightening plumbing fittings that have flat sides is the:
- a. monkey wrench
 - b. pipe wrench
 - c. lineman's pliers
 - d. groove joint pliers

ANS: A PTS: 1

144. The type tool that would be most useful for grabbing and holding galvanized pipe?
- a. monkey wrench
 - b. pipe wrench
 - c. adjustable wrench
 - d. lineman's pliers

ANS: B PTS: 1

145. Which of the following is **not** true about PEX pipe?
- a. quicker to install than plastic pipe
 - b. purchased in rolls instead of joints
 - c. must be glued
 - d. when water freezes, the pipe will expand preventing breakage

ANS: C PTS: 1

146. When cutting copper or galvanized pipe with a hand pipe cutter, the handle should be tightened about _____ turn for each revolution around the pipe.

- a. 1/8
- b. 1/4
- c. 1/2
- d. 1

ANS: B PTS: 1

147. Which type of pipe can be bent easily?

- a. copper tubing
- b. rigid copper
- c. galvanized
- d. PVC

ANS: A PTS: 1

148. Which type of pipe is easiest to repair?

- a. copper tubing that must be flared
- b. rigid copper
- c. galvanized
- d. PVC

ANS: D PTS: 1

149. Before a private sewerage system can be installed on a particular site, the _____ Department must approve the installation and issue a building permit.

- a. Police
- b. Chamber of Commerce
- c. Resource
- d. Health

ANS: D PTS: 1

150. In order for a building permit to be granted, the soil upon which a sewerage system is to be installed must pass a _____ test.

- a. soil
- b. water
- c. disposal
- d. percolation

ANS: D PTS: 1

151. What is the actual size of a 2 x 4?

- a. 1 1/2 x 3 1/2
- b. 1 3/4 x 3 1/2
- c. 1 1/2 x 3 1/4
- d. 1 1/2 x 3 3/4

ANS: A PTS: 1

152. What is the actual size of a 2 x 8?

- a. 1 1/2 x 7 1/2
- b. 1 1/2 x 7 1/4
- c. 1 3/4 x 7 1/4
- d. 1 3/4 x 7 1/2

ANS: B PTS: 1

153. What is the actual size of a 1 x 6?

- a. 1/2 x 5 1/2
- b. 3/4 x 5 1/2
- c. 1/2 x 5 1/4
- d. 1/2 x 5 3/4

ANS: B PTS: 1

154. What is the actual size of a 1 x 12?

- a. 1/2 x 11 1/4
- b. 1/2 x 11 1/2
- c. 3/4 x 11 1/4
- d. 3/4 x 11 1/2

ANS: C PTS: 1

155. What is the nominal size of a 2 x 4?

- a. 1 1/2 x 3 1/2
- c. 1 1/2 x 3 3/4

b. $1\frac{3}{4} \times 3\frac{1}{2}$ d. 2×4

ANS: D PTS: 1

156. What is the nominal size of a 1×8 ?

- a. $\frac{3}{4} \times 7\frac{1}{4}$ c. $\frac{1}{2} \times 7\frac{1}{4}$
b. $\frac{3}{4} \times 7\frac{1}{2}$ d. 1×8

ANS: D PTS: 1

157. How many board feet in a $2 \times 4 \times 12$?

- a. 12 c. 8
b. 96 d. 6

ANS: C PTS: 1

158. How many board feet in a $2 \times 6 \times 10$?

- a. 120 c. 8
b. 10 d. 6

ANS: B PTS: 1

159. How many board feet in a $1 \times 4 \times 6$?

- a. 2 c. 10
b. 24 d. 6

ANS: A PTS: 1

160. How many board feet in 5 pieces of $2 \times 4 \times 12$?

- a. 96 c. 12
b. 480 d. 40

ANS: D PTS: 1

161. How many board feet in 10 pieces of $2 \times 6 \times 8$?

- a. 80 c. 96
b. 8 d. 960

ANS: A PTS: 1

162. What is the price of 10 pieces of $2 \times 4 \times 12$ if the sawmill price is \$250.00/mbdft?

- a. \$2.00 c. \$80.00
b. \$240.00 d. \$20.00

ANS: D PTS: 1

163. What is the price of 5 pieces of $2 \times 6 \times 10$ if the sawmill price is \$200.00/mbdft?

- a. \$1.00 c. \$15.00
b. \$10.00 d. \$100.00

ANS: B PTS: 1

164. The unit of measure used to designate the length of most nails is the word _____.

- a. diameter c. gauge
b. caliber d. penny

ANS: D PTS: 1

165. How long is a 20d nail?

- a. 2"
- b. 3"
- c. 4"
- d. 5"

ANS: C PTS: 1

166. How long is a 16d nail?

- a. 3"
- b. 3 1/2"
- c. 2 1/2"
- d. 4"

ANS: B PTS: 1

167. How long is a 10d nail?

- a. 2 1/2"
- b. 2"
- c. 3 1/2"
- d. 3"

ANS: D PTS: 1

168. How long is a 8d nail?

- a. 2"
- b. 2 1/4"
- c. 2 1/2 "
- d. 3"

ANS: C PTS: 1

169. Which type nail would be used in masonry materials?

- a. duplex nail
- b. plaster board nail
- c. finishing nail
- d. cut nail

ANS: D PTS: 1

170. Which type nail has two heads?

- a. box nail
- b. duplex nail
- c. cut nail
- d. roofing nail

ANS: B PTS: 1

171. Which type nail has the smallest head?

- a. roofing nail
- b. plaster board nail
- c. finishing nail
- d. common nail

ANS: C PTS: 1

172. Which type nail would be used for light household construction?

- a. box nail
- b. common nail
- c. cut nail
- d. lead head nail

ANS: A PTS: 1

173. Which type screw head would have the same shape on top of the head as it does underneath the head?

- a. oval
- b. round
- c. pan
- d. flat

ANS: A PTS: 1

174. Which one of the following are screws **not** classified by:

- a. penny
- c. length

b. gauge d. type material made from

ANS: A PTS: 1

175. Which measurement is bigger?

- a. 3/4"
- b. 7/8"
- c. 1/4"
- d. 1/2"

ANS: B PTS: 1

176. Which measurement is bigger?

- a. 9/16"
- b. 1/4"
- c. 5/8"
- d. 5/16"

ANS: C PTS: 1

177. Which measurement is bigger?

- a. 15/32"
- b. 5/16"
- c. 1/4"
- d. 7/16"

ANS: A PTS: 1

178. Which screw is bigger?

- a. 6 gauge
- b. 8 gauge
- c. 10 gauge
- d. 12 gauge

ANS: D PTS: 1

179. Screw gauge refers to the _____ of the screw?

- a. type
- b. threads
- c. diameter
- d. length

ANS: C PTS: 1

180. Which of the following hand tools would be best suited for cutting the sole plate out of a doorway in a wall section?

- a. miter saw
- b. hand saw
- c. circular saw
- d. coping saw

ANS: B PTS: 1

181. What is another name for a framing square?

- a. builder's square
- b. combination square
- c. try square
- d. carpenter's square

ANS: D PTS: 1

182. What is the longest part of a framing square called?

- a. heel
- b. handle
- c. blade
- d. tongue

ANS: C PTS: 1

183. What is the shortest part of a framing square called?

- a. heel
- b. handle
- c. blade
- d. tongue

ANS: D PTS: 1

184. What is the corner of a framing square called?
- a. heel
 - b. handle
 - c. blade
 - d. tongue

ANS: A PTS: 1

185. How long is the blade of a standard framing square?
- a. 24"
 - b. 20"
 - c. 16"
 - d. 12"

ANS: A PTS: 1

186. How long is the tongue of a standard framing square?
- a. 24"
 - b. 20"
 - c. 16"
 - d. 12"

ANS: C PTS: 1

187. How wide is the blade of a standard framing square?
- a. 2 1/2"
 - b. 2"
 - c. 1 1/2"
 - d. 1"

ANS: B PTS: 1

188. How wide is the tongue of a standard framing square?
- a. 2 1/2"
 - b. 2"
 - c. 1 1/2"
 - d. 1"

ANS: C PTS: 1

189. Which of the following would be found on a standard framing square?
- a. nail sizes
 - b. screw gauges
 - c. lumber sizes
 - d. length of common rafter per foot run

ANS: D PTS: 1

190. Which of the following saws would not be able to cut all the way through a 1 x 12?
- a. sliding compound miter saw
 - b. hand saw
 - c. back saw
 - d. coping saw

ANS: D PTS: 1

191. Which of the following squares would be best suited to layout the slope of a roof on a 2 x 4?
- a. try square
 - b. T square
 - c. speed square
 - d. combination square

ANS: C PTS: 1

192. Which of the following types of hammers has a straighter claw?
- a. ball peen hammer
 - b. blacksmith's hammer
 - c. ripping claw hammer
 - d. curved claw hammer

ANS: C PTS: 1

193. Which of the following types of saws is used with a miter box?

- a. back saw
- b. hand saw
- c. coping saw
- d. hack saw

ANS: A PTS: 1

194. What are the two types of hand saws?

- a. ripping and crosscut
- b. ripping and straight cut
- c. crosscut and straight cut
- d. metal and wood

ANS: A PTS: 1

195. The slit that is made in a piece of wood when cutting all the way through with a saw is called a:

- a. groove
- b. kerf
- c. notch
- d. dado

ANS: B PTS: 1

196. A tool that is used to transfer angles is called a:

- a. combination square
- b. try square
- c. T bevel
- d. awl

ANS: C PTS: 1

197. Which saw would be used when cutting a hole in sheetrock?

- a. coping saw
- b. hand saw
- c. back saw
- d. keyhole saw

ANS: D PTS: 1

198. Which type tool would be used to drill a hole in a door for a door knob?

- a. wood bit
- b. spade bit
- c. hole saw
- d. countersink bit

ANS: C PTS: 1

199. What is the proper name of the tool that is used to drive a nail below the surface of the wood?

- a. nail driver
- b. nail set
- c. nail guide
- d. nail punch

ANS: B PTS: 1

200. Which of the following is **not** another name for a paddle bit?

- a. power bit
- b. spade bit
- c. butterfly bit
- d. twist bit

ANS: D PTS: 1

201. The end of the hammer that makes contact with the nail is called the _____.

- a. head
- b. poll
- c. cheek
- d. face

ANS: D PTS: 1

202. The size of a claw hammer is determined by the:

- a. weight of the head
- b. weight of the entire hammer
- c. length of the handle
- d. length of the head

ANS: A PTS: 1

203. Which of the following tools would be used to check structural members to see if they are horizontal or vertical?
- a. framing square
 - b. level
 - c. jointer plane
 - d. plumb bob

ANS: B PTS: 1

204. Which of the following squares has an adjustable sliding blade?
- a. combination square
 - b. speed square
 - c. rafter square
 - d. try square

ANS: A PTS: 1

205. Which word describes something that is exactly vertical?
- a. even
 - b. upright
 - c. plumb
 - d. level

ANS: C PTS: 1

206. Which word describes something that is exactly horizontal?
- a. even
 - b. flat
 - c. plumb
 - d. level

ANS: D PTS: 1

207. Which size nail is the most common for nailing floor joist, studs, rafters and ceiling joist?
- a. 8d
 - b. 10d
 - c. 16d
 - d. 20d

ANS: C PTS: 1

208. _____ carry the weight of the building across door and window openings.
- a. Trimmers
 - b. Headers
 - c. Studs
 - d. Rafters

ANS: B PTS: 1

209. Header length is equal to the rough opening plus the width of _____ trimmers.
- a. 2
 - b. 3
 - c. 4
 - d. 6

ANS: A PTS: 1

210. To make the thickness of the header match the thickness of the wall, a _____ piece of plywood is inserted between the two outside pieces.
- a. 1/4"
 - b. 1/2"
 - c. 3/4"
 - d. 1"

ANS: B PTS: 1

211. The studs that run the entire height of the wall are called:
- a. full studs
 - b. cripple studs
 - c. trimmer studs
 - d. complete studs

ANS: A PTS: 1

212. The studs that support the weight of the header and are located at each end of the header are called:
- a. full studs
 - b. cripple studs
 - c. trimmer studs
 - d. complete studs
- ANS: C PTS: 1
213. The studs that are positioned above a header or below a window sill are called:
- a. full studs
 - b. cripple studs
 - c. trimmer studs
 - d. complete studs
- ANS: B PTS: 1
214. Driving a nail at an angle in order to permit it to penetrate into a second framing member is known as:
- a. angle nailing
 - b. force driving
 - c. toenailing
 - d. slant driving
- ANS: C PTS: 1
215. To add support under ceiling joists and rafters and to also help tie the wall frames together, the top plate of the walls should be _____.
- a. nailed more
 - b. doubled
 - c. made of 2 x 6's
 - d. glued
- ANS: B PTS: 1
216. OSB stands for:
- a. orientated strand board
 - b. off set board
 - c. official stud board
 - d. over size board
- ANS: A PTS: 1
217. When installing sheathing on walls, the nails along the edge of the sheathing should be placed approximately _____ apart.
- a. 3"
 - b. 6"
 - c. 10"
 - d. 12"
- ANS: B PTS: 1
218. When installing sheathing on walls, the nails in the middle of the sheathing should be placed approximately _____ apart.
- a. 3"
 - b. 6"
 - c. 10"
 - d. 12"
- ANS: D PTS: 1
219. What is the material called that covers the exterior of the walls to prevent air from entering or leaving a building through the cracks of the walls?
- a. insulation
 - b. sheathing
 - c. mortar
 - d. house wrap
- ANS: D PTS: 1
220. When studs are placed 16" O.C., what does the O.C. stand for?
- a. on course
 - b. over center
 - c. on center
 - d. off center

ANS: C PTS: 1

221. The bottom plate of a wall section is known as the:
- a. sole plate
 - b. bottom plate
 - c. bottom board
 - d. bottom piece

ANS: A PTS: 1

222. The first layout to be marked on the plates is the _____ spacing.
- a. trimmer stud
 - b. regular/full stud
 - c. cripple stud
 - d. window

ANS: B PTS: 1

223. What type mark is made on the plates of a wall to designate where full or regular studs are to be installed?
- a. F
 - b. R
 - c. X
 - d. F/R

ANS: C PTS: 1

224. A number related to the efficiency of an insulating material.
- a. 12
 - b. 16
 - c. R value
 - d. I value

ANS: C PTS: 1

225. Horizontal roof members used to support rafters between the plate and ridge board are called:
- a. purlins
 - b. supports
 - c. chords
 - d. stringers

ANS: A PTS: 1

226. The horizontal line at the junction of the top edges of two roof surfaces is called the:
- a. plate
 - b. chord
 - c. sill
 - d. ridge

ANS: D PTS: 1

227. An opening formed by framing members is known as the:
- a. opening space
 - b. door and window opening
 - c. rough opening
 - d. rough space

ANS: C PTS: 1

228. Boards or prefabricated panels that are attached to the exterior of studs or rafters of a structure is called:
- a. siding
 - b. sheathing
 - c. exterior panels
 - d. wall board

ANS: B PTS: 1

229. The vertical distance from the top of the wall to the ridge of a roof is called the:
- a. span
 - b. run
 - c. line length
 - d. rise

ANS: D PTS: 1

230. A structural unit consisting of such members as beams, bars, ties or other support pieces that are usually arranged to form triangles and provides rigid support over wide spans is called a:
- a. purlin
 - b. soffit
 - c. truss
 - d. rafter

ANS: C PTS: 1

231. 6 in 12 is an example of a:
- a. slope of a roof
 - b. pitch of a roof
 - c. concrete mix
 - d. board feet calculation

ANS: A PTS: 1

232. 1/3 is an example of a:
- a. slope of a roof
 - b. pitch of a roof
 - c. concrete mix
 - d. board feet calculation

ANS: B PTS: 1

233. The slope of a roof equals:
- a. the span of a building
 - b. the run of a building
 - c. rise/run
 - d. rise/span

ANS: C PTS: 1

234. The pitch of a roof equals:
- a. the span of a building
 - b. the run of a building
 - c. rise/run
 - d. rise/span

ANS: D PTS: 1

235. What is the pitch of a 6 in 12 roof?
- a. 1/3
 - b. 1/4
 - c. 1/2
 - d. 1/6

ANS: B PTS: 1

236. What is the pitch of a 8 in 12 roof?
- a. 1/3
 - b. 1/4
 - c. 1/2
 - d. 1/6

ANS: A PTS: 1

237. What is the pitch of a 4 in 12 roof?
- a. 1/3
 - b. 1/4
 - c. 1/2
 - d. 1/6

ANS: D PTS: 1

238. The length of the rafter from the center of the ridge to outside edge of the wall is called the:
- a. slope
 - b. pitch
 - c. line length
 - d. overall length

ANS: C PTS: 1

239. The length of the rafter from the center of the ridge to outside edge of the wall plus the overhang is called the:
- a. pitch
 - b. slope
 - c. line length
 - d. overall length

ANS: D PTS: 1

240. A notch cut on the underside of a rafter to fit the top plate. This cut is formed by a seat cut and a plumb cut.
- a. groove
 - b. dado
 - c. plate cut
 - d. bird's mouth

ANS: D PTS: 1

241. When making stick rafters, each one should be shortened at the ridge _____ the thickness of the ridge board.
- a. 3 times
 - b. 1/4
 - c. half
 - d. twice

ANS: C PTS: 1

242. Which square has a rafter table located on it?
- a. combination square
 - b. carpenter's square
 - c. try square
 - d. speed square

ANS: B PTS: 1

243. If the pitch of a roof is 1/4, what is the rise if the span is 40 feet?
- a. 120 inches
 - b. 12 inches
 - c. 10 feet
 - d. 120 feet

ANS: A PTS: 1

244. If the pitch of a roof is 1/3, what is the rise if the span is 20 feet?
- a. 30 inches
 - b. 60 inches
 - c. 80 inches
 - d. 80 feet

ANS: C PTS: 1

245. If the pitch of a roof is 1/6, what is the rise if the span is 50 feet?
- a. 300 inches
 - b. 10 feet
 - c. 100 feet
 - d. 100 inches

ANS: D PTS: 1

246. The lowest member of a truss is called the:
- a. bottom chord
 - b. bottom tail
 - c. girder
 - d. valley

ANS: A PTS: 1

247. A panel or bracket of either wood or metal attached to the corners and intersections of each member of a truss to add strength and stiffness is called a:
- a. girder
 - b. gusset
 - c. fascia
 - d. soffit

ANS: B PTS: 1

248. The correct stud spacing for walls is:

- a. 12" O.C.
- b. 16" O.C.
- c. 18" O.C.
- d. 24" O.C.

ANS: B PTS: 1

249. The correct floor joist spacing is:

- a. 12" O.C.
- b. 16" O.C.
- c. 18" O.C.
- d. 24" O.C.

ANS: B PTS: 1

250. Temporary framework used to assist in locating corners when laying out a foundation is known as:

- a. foundation corners
- b. foundation benchmarks
- c. batter boards
- d. corner boards

ANS: C PTS: 1