WELDING COURSE TEST

Safety

Q1. Be it in the shop or in the field, what is your first priority?

A Safety
B Safety
C Safety
D All of the above

Q2. Which of the following are the major hazards that welders are exposed to: electric shock, radiant energy, fumes, burns and dust?

A Shock, fumes, burns and dust
B Shock, radiant energy, burns and fumes
C Shock, burns and fumes
D All of the above

Q3. When is it OK to dust off yourself with oxygen?

A Anytime
B Never
C To cool down when it gets too hot
D When the supervisor says it is OK

Q4. Fire extinguishers should be kept _____.

A locked away so they will not be stolen
B close to the work site
C immediately accessible
D on your truck

Q5. When storing oxygen/acetylene cylinders, _____.

A oxygen should be stored separately from fuel gases
B empty and full cylinders should be marked and stored separately
C cylinders should be chained when in use and when being stored
D all of the above

Q6. When opening a high pressure cylinder valve, you should _____.

A turn it all the way on
B turn it on part way
C crack the valve first and then open it all the way
D none of the above

Q7. When installing a full, high-pressure cylinder, you should _____.

A take off the cap and install
B set it in place, chain it down, then remove the cap
C lay the cylinder on its side and roll it to the cart or wall so it won't fall over

Q8. The average pressure in a full oxygen cylinder is _____.

A 3,000 to 4,000 PSI @ 70 degrees F (20 degrees C)
B 2,200 to 2,400 PSI @ 70 degrees F (20 degrees C)
C 1,000 to 1,500 PSI @ 70 degrees F (20 degrees C)
D 2,600 to 2,800 PSI @ 70 degrees F (20 degrees C)

Q9. Because H.P. cylinders are heat treated, it's OK to strike an arc on the side to test your heat range.

Yes
No

Q10. If oxygen under pressure comes into contact with grease or oil, it will react violently and can explode.

True
False

Gas Welding

Q11. When moving the oxy/acetylene rig in the back of your truck, it's ok to leave the regulators mounted as long as they are secured in the upright position by chain or other method.

True
False

Q12. When shutting down the oxygen/acetylene rig, you should turn off the _____.

A acetylene first, oxygen second; leave the pressure adjusting screen as is
B oxygen first, acetylene second; leave the pressure adjusting screw as is
C acetylene first, oxygen second; loosen the pressure adjusting screw
D oxygen first, acetylene second; loosen the pressure adjusting screw

Q13. Acetylene cylinders are high-pressure, like oxygen cylinders.

True
False

Q14. Acetylene as a gas is very unstable.

True
False

Q15. Acetylene cylinders are packed with a porous material, and the pores are filled with _____.

A liquid nitrogen
B acetone
C paint thinner
D water

Q16. What function does the acetone perform?

A Stabilizes the acetylene
B Adds weight to the cylinder
C Doubles as paint thinner
D Adds extra energy

Q17. At what pressure will acetylene become unstable?

A 15 PSI
B 45 PSI
C 25 PSI

Q18. Acetylene has a peculiar odor; it smells like _____.

A a rose
B garlic
C roasted potatoes
D soap

Q19. If an acetylene cylinder is laid on its side, the acetone will leak out. Why is this dangerous?

A If the acetone leaks out, it will dissolve the rubber hose allowing acetylene to leak into the atmosphere
B By leaking out, it could cause the acetylene to become unstable
C It will get into the regulator and harden causing the regulator to malfunction
D All of the above

Q20. If you are cutting or welding and you smell acetone, you should immediately shut the acetylene off.

True
False

Q21. While the newer torches may have reverse-flow check-valves and/or spark arrestors built in, the older torches probably will not have them. Is it a good idea to add them to your equipment?

Yes
No

Q22. The adjusting screws on regulators should be backed out before opening cylinders and when shutting down.

True
False

Q23. When checking for leaks, you should _____.

A listen for leaks
B use the soap test
C use your nose
D all of the above

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Q24. Before attaching the regulators, you should _____.

A crack the valve slightly and turn off
B stand to one side of outlet while cracking valve
C check threads to make sure they are OK
D all of the above

Q25. The "rule of thumb" pressure for manual oxygen/acetylene gas welding is _____.

A acetylene 5-6, oxygen 10-12
B acetylene 10-11, oxygen 15-18
C acetylene 15-16, oxygen 20-25
D acetylene 3-4, oxygen 10-12

Q26. The “rule of thumb” pressure for oxygen/acetylene cutting or burning is _____.

A acetylene 5-6, oxygen 20-22
B acetylene 10-12, oxygen 25-30
C acetylene 15-17, oxygen 30-35
D acetylene 5-6, oxygen 30-35

Q27. If popping or back-fire occurs, you can _____.

A turn off the acetylene and let oxygen on to cool
B turn off the acetylene, let oxygen on, and dip in water
C turn oxygen off (after a. and b. above) and relight
D all of the above

Q28. When you are finished using all oxygen acetylene equipment or leaving it unattended, it should be turned off and drained with no pressure or gases left in the hoses.

True
False

Q29. After attaching the rig's, opening the cylinder-valve, and setting to the proper pressures, you should _____.

A turn the acetylene knob on the torch slightly and use a striker to ignite the acetylene. Adjust the flame to eliminate the black soot then add oxygen slowly and adjust to a new flame
B slowly open the oxygen first, then add acetylene; this way there will not be any soot
C turn the acetylene knob and the oxygen knob at the same time and set to an oxidizing flame

Q30. Acetylene fittings are colored green.

True
False

WELDING COURSE TEST

Q31. Acetylene fittings are L.H. threads.

True

False

Q32. When burning or gas welding, you should use a face mask or goggles with a _____.

A #5 shade

B #10 shade

C #12 shade

D either a #5 or a #10 shade

Q33. What type of flame will be used in most gas welding?

A Carburizing

B Oxidizing

C Neutral

D A and B above

Q34. Which can cause the torch to pop or backfire?

A Touching the tip to the work

B Loose or dirty (contaminated tip)

C Improper fuel-gas pressure

D All of the above

Q35. What is the approximate temperature of the torch flame?

A 2,250 degrees F

B 5,800 degrees F

C 3,580 degrees F

D Electric-arc welding

Q36. Ultraviolet rays are _____.

A visible

B invisible

Q37. If the part to be welded has a coating of paint, plating, etc., you can _____.

A grind coatings off area to be welded

B take the torch and burn off what you can

C weld through the coating without removing it

D A or B above

Q38. Extreme caution should be used when welding in a confined space. You should _____.

A have people trained in confined space use stand by

B make sure to have plenty of ventilation, blowers, etc.

C check OSHA guidelines

D all of the above

Q39. Never weld or cut near combustible materials.

True

False

Q40. GMAW is the AWS designation for _____.

A good machines are wired

B gas-metal arc welding

C gas-metal acetylene welding

D gas-machine arc welding

Q41. Welding sparks can cause hidden fires.

True

False

Q42. Welding power sources come in _____.

A 110

B 220 single phase/3 phase

C 440 3 phase

D portable generator rigs

E all of the above

Q43. Which are correct names for types of welding machines?

1. Inverter
2. AC
3. Motor generators
4. CV

A 1. and 2. above

B 1., 3. and 4. above

C 1., 2., 3. and 4. above

D 2. and 4. above

Q44. In welding, there are how many types of joints?

A 8

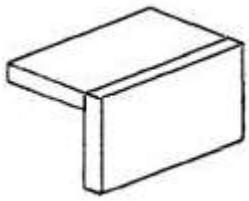
B 9

C 5

D 4

WELDING COURSE TEST

Q45. Name this weld:

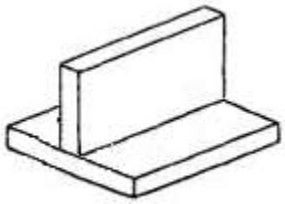


A Butt
B Tee
C Corner
D Lap
E Edge

Q46. Name this weld:

A Butt
B Tee
C Corner
D Lap
E Edge

Q47. Name this weld:



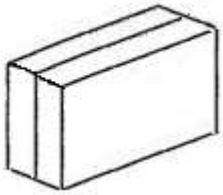
A Edge
B Corner
C Lap
D Tee

WELDING COURSE TEST

Q48. Name this weld:

A Lap
B Corner
C Butt
D Edge
E Tee

Q49. Name this weld:



A Butt
B Tee
C Lap
D Edge

Q50. The welding positions are _____.

A horizontal
B vertical up
C vertical down
D overhead
E flat
F all of the above

Q51. GTAW has also been known as _____.

A tungsten arc welding
B TIG
C heli-arc
D none of the above

Q52. TIG torches are both air and water cooled.

True
False

Q53. When you are welding aluminum with argon, set the polarity to _____.

A DC+
B DC-
C AC
D AC+

Q54. When welding carbon steel or stainless steel with argon, set the polarity to _____.

A DC+
B DC-
C AC
D AC-

Q55. Which two shielding gases are used in manual GTAW welding?

A Carbon dioxide and oxygen
B Argon and carbon dioxide
C Helium and argon
D Oxygen and argon

Q56. In GTAW welding, tungsten electrodes are considered _____.

A consumables
B non-consumables
C combustible
D disposable

Q57. Aluminum melts at slightly above _____.

A 1,200 degrees F
B 2,200 degrees F
C 200 degrees F
D none of the above

Q58. Aluminum oxide melts at above 3,000 degrees F.

True
False

Q59. Which of these gases are inert?

A CO2/argon
B Argon/helium
C Helium/C02
D All the above

Q60. When TIG welding aluminum, you should use _____.

A helium with AC-
B argon with Hi Freq AC
C argon with AC
D helium

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Q61. When you are TIG welding stainless or carbon steel, you should use _____.

A argon with Hi Freq AC
B argon with AC
C argon with DC-
D argon with Hi Freq DC+

Q62. When TIG welding, you should feed the filler rod into the edge of the molten puddle by _____.

A keeping the end of the rod in the gas envelope
B keeping the end of the rod out of the gas envelope
C touching the rod to the tungsten
D touching the rod to the puddle

Q63. TIG filler rods have a flux coating.

True
False

Q64. GMAW has also been known as _____.

A TIG
B MIG
C Stick
D Fluxcore

Q65. When selecting MIG wire, you should consider the _____.

A type of material to be welded
B thickness of the material
C type of weld joint
D type of shielding gas to be used
E all of the above

Q66. A constant voltage machine is required for MIG.

True
False

Q67. In MIG operations, which it true?

A DC straight polarity is seldom used
B AC is never used
C DC reverse polarity is most used
D DC reverse polarity is seldom used

Q68. When restarting a weld, _____.

A make sure there is no porosity in the crater
B trim the end of the wire
C restart at the leading edge of the crater
D all of the above

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Q69. Typical gas flow in a MIG machine is _____.

A 5 to 15 CFH
B 15 to 30 CFH
C 35 to 50 CFH
D 2 to 5 CFH

Q70. When adjusting the amperage and voltage, you should _____.

A do a test weld on your workpiece
B weld on a scrap piece
C preset the machine and start welding
D change the settings as you weld

Q71. Once you have set your heat range and gas flow and are ready to start the weld, you should _____.

A check for proper electrode extension
B aim the gun at the proper angle
C move in the direction of travel
D all of the above

Q72. FCAW uses a continuous electrode.

True
False

Q73. FCAW has the slowest deposition rate of any manual welding process.

True
False

Q74. FCAW stands for fluxcore arc welding.

True
False

Q75. When using stick welding (SMAW), it is important to remove all slag between passes.

True
False

Q76. Either direct current (DC) or alternating current (AC) can be used in stick welding.

True
False

Q77. When you are choosing a power supply, consider _____.

A the power available to operate the equipment
B the thickness of the material to be welded
C the size of the machine
D all of the above

Q78. There are two techniques of starting the arc, they are _____.

1. Drag
2. Scratch
3. Tap
4. Bump

A 1. and 2. above
B 1. and 3. above
C 2. and 3. above
D 1. and 4. above

Q79. When an electrode sticks to the work, you can _____.

A rock the stinger back and forth to free it
B un-clamp the electrode from the stinger
C turn off the machine
D all of the above

Q80. After the arc starts, it is important to hold a short arc about 1/2 the diameter of the electrode so the arc stabilizes and the gas shield is formed, before you move the weld bead.

True
False

Q81. Electrodes (rods) cannot be damaged by moisture.

True
False

Q82. The first set of numbers on a rod (i.e., E60) tells you the _____.

A length of the electrode
B tensile strength
C thickness of the electrode
D size of the electrode

Q83. When choosing a rod, rule of thumb is to choose one that is thicker than the material you are welding.

True
False

Q84. When using SMAW, which of the following is not a cause of undercutting?

A Welding with too large an electrode
B Improper manipulation of the weld
C Too slow a travel speed
D Too high a weld current

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Q85. After opening a hermetically sealed container of lo-hydrogen electrodes, they should be stored in _____.

A a vented gas oven
B a vented electric oven
C in your kitchen oven
D all of the above

Q86. When using reverse polarity, _____.

A the workpiece is negative
B the workpiece is positive
C the electrode is negative
D none of the above

Q87. SMAW can be used in _____.

A the horizontal position
B the flat position only
C all positions
D vertical and horizontal positions only

Q88. Which of the following electrodes does not have lo-hydrogen coatings?

A 7016
B 7018
C 6011
D 6010
E A and B above
F C and D above

Q89. The most common cause of slag inclusions is _____.

A using the wrong size electrode
B welding over the slag of the previous weld
C stick welding over a GTAW bead
D all of the above

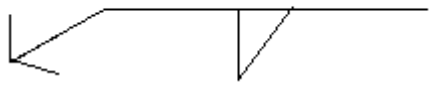
Q90. A butt joint in the 3G position puts the axis of the weld _____.

A flat
B horizontal
C vertical
D overhead

Q91. A tee joint with the axis of the weld in the horizontal position is in position _____.

A 1F
B 3G
C 4F
D 2F

Q92. This symbol signifies that the weld is to be made on the _____.

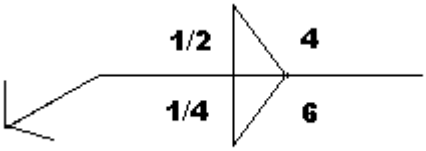


A other side
B either side
C arrow side
D none of the above

Q93. Information that appears to the left of the weld symbol refers to _____.

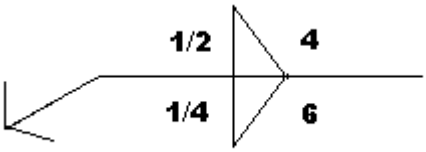
A processes to be used
B electrode size
C weld size
D weld length

Q94. The "other side" weld size is _____.



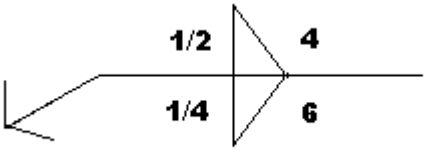
A 1/2"
B 1/4"
C 5/16"
D 3/16"

Q95. The pitch of this "arrow side" weld is _____.



A 3
B 2
C 6
D 4

Q96. The length of the weld on the arrow side is _____.



A 6"
B 2"
C 4"
D 1"

Q97. All welding symbols require which of the following basic elements?

A Ref. line, arrow and tail
B Ref. line, arrow and weld size
C Ref. line and arrow
D Ref. line only

Q98. In the following symbol, what does the circle represent?

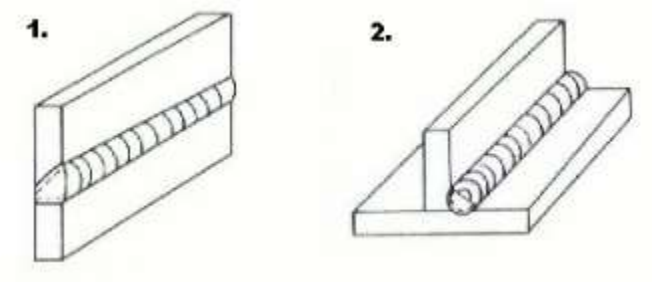
A Weld around 3 sides
B See detail
C Spot weld symbol
D Weld all around

Q99. Flat, horizontal, vertical and overhead welding positions are called out by the letters "F" or "G." What do these letters stand for?

A F = fill-in, G = grind
B F = fill-in, G = groove
C F = fill, G = grind
D F = fillet, G = groove

WELDING COURSE TEST

Q100. There are two welds shown below; choose the answer that correctly describes each weld.



A 1 is a fillet, 2 is a groove
B 2 is a fillet, 1 is a groove
C 1 and 2 are both groove welds
D 1 and 2 are both fillet welds