Study Guide - Welding

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. __________ is the consolidation of two materials by means of temperature and/or pressure to cause the materials to melt or diffuse at the joint. It involves a coalescence of completely melted base and filler metals.
   a. Welding  
   b. Brazing  
   c. Soldering  
   d. All of the above

Use the diagram to identify the type of weld joints.

2. Which joint shown above is a Butt Joint?
   a. a  
   b. b  
   c. c  
   d. d

3. Which joint shown above is an Edge Joint?
   a. a  
   b. b  
   c. c  
   d. d

4. Which joint shown above is a Tee Joint?
   a. a  
   b. b  
   c. c  
   d. d

5. Which joint shown above is a Lap Joint?
   a. a  
   b. b  
   c. c  
   d. d
6. The heat source for oxyfuel-gas welding comes from which of the following?
   a. A short circuit  
   b. An exothermic reaction with oxygen  
   c. An arc passing from an electrode to the workpiece  
   d. All of the above

7. Which of the following is NOT true of acetylene?
   a. It is hazardous at pressures exceeding 15 psi.  
   b. It is dissolved in acetone in the cylinder  
   c. It is a simple hydrocarbon  
   d. None of the above (all are true of acetylene)

8. The proper term for welding with a flux-covered electrode is _______.
   a. Arc welding  
   b. Stick welding  
   c. SMAW  
   d. GMAW

9. Welding current can be of three types. Direct Current Electrode Positive (DCEP) or ________- Provides deeper penetration. In this arrangement, the electrode is positive and the workpiece is negative.
   a. Reverse polarity  
   b. Straight polarity  
   c. Alternating current (AC)  
   d. None of the above

10. Welding current can be of three types. Direct Current Electrode Negative (DCEN) or ________ - Causes electrode to melt faster and deposit filler metal faster. Used on thin materials. In this arrangement, the electrode is negative and the workpiece is positive.
    a. Reverse polarity (DCRP)  
    b. Straight polarity (DCSP)  
    c. Alternating current (AC)  
    d. None of the above

11. Which of the following is NOT a purpose served by the electrode covering?
    a. Shields the welder (operator) from electrical shock  
    b. Add filler metal to the weld  
    c. Creates a protective gas shield around the arc and molten metal  
    d. Creates a hard slag covering to protect the molten bead as it cools

12. What is the proper term for the type of welding commonly called “MIG”?
    a. GMAW  
    b. SMAW  
    c. GTAW  
    d. OFW

13. What is the proper term for the type of welding commonly called “TIG”?
    a. GMAW  
    b. SMAW  
    c. GTAW  
    d. OFW
In the process illustrated above, the electrode is melting into the weld pool. What is this process known as?

a. GMAW  b. SMAW  c. GTAW  d. SAW

Which of the following is NOT a true difference between SAW and SMAW?

a. The form of the flux is different  b. SAW is done underwater  c. SAW is more easily automated  d. The arc visibility is different

The main difference between brazing and soldering is one of:


This method of soldering (commonly used to join electronic components to a PC board) does not require holes to penetrate the board.


Soldering is NOT used to join:

a. Thermoplastics  b. Metal to ceramics  c. Metal to glass  d. Ferrous to non-ferrous metals

Joint design in brazing is especially important because of its influence on:

a. Solidus temperature  b. Liquidus temperature  c. Capillary action  d. Flux application