

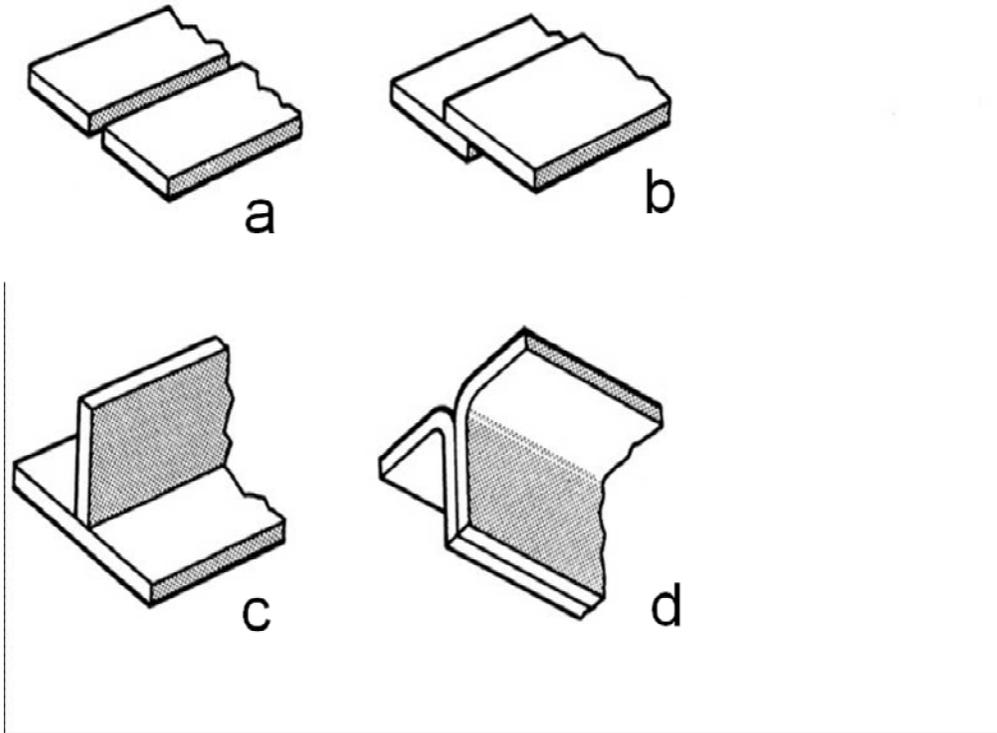
## Study Guide - Welding

### Multiple Choice

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

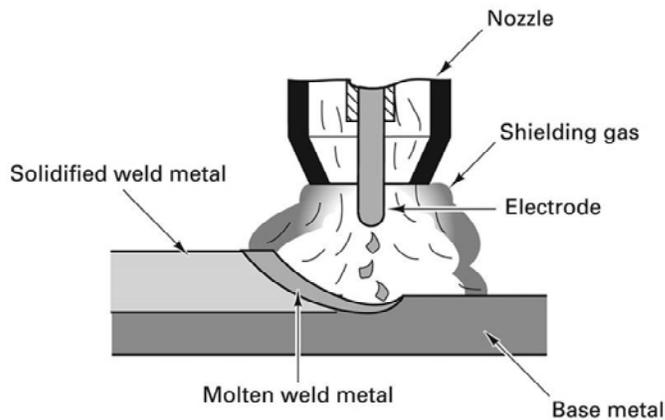
- \_\_\_\_\_ 1. \_\_\_\_\_ is the consolidation of two materials by means of temperature and/or pressure to cause the materials to melt or diffuse at the joint. It involves a coalescence of completely melted base and filler metals.
- |            |                     |
|------------|---------------------|
| a. Welding | c. Soldering        |
| b. Brazing | 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 | c. c |
| b. b | d. d |
- \_\_\_\_\_ 3. Which joint shown above is an Edge Joint?
- |      |      |
|------|------|
| a. a | c. c |
| b. b | d. d |
- \_\_\_\_\_ 4. Which joint shown above is a Tee Joint?
- |      |      |
|------|------|
| a. a | c. c |
| b. b | d. d |
- \_\_\_\_\_ 5. Which joint shown above is a Lap Joint?
- |      |      |
|------|------|
| a. a | c. c |
| b. b | 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



- \_\_\_\_\_ 14. In the process illustrated above, the electrode is melting into the weld pool. What is this process known as?
- |         |         |
|---------|---------|
| a. GMAW | c. GTAW |
| b. SMAW | d. SAW  |
- \_\_\_\_\_ 15. Which of the following is NOT a true difference between SAW and SMAW?
- |                                      |                                    |
|--------------------------------------|------------------------------------|
| a. The form of the flux is different | c. SAW is more easily automated    |
| b. SAW is done underwater            | d. The arc visibility is different |
- \_\_\_\_\_ 16. The main difference between brazing and soldering is one of:
- |                |                      |
|----------------|----------------------|
| a. Flux form   | c. Filler metal form |
| b. Temperature | d. Heating method    |
- \_\_\_\_\_ 17. This method of soldering (commonly used to join electronic components to a PC board) does not require holes to penetrate the board.
- |                   |                             |
|-------------------|-----------------------------|
| a. Iron soldering | c. Surface mount technology |
| b. Wave soldering | d. Paste Soldering          |
- \_\_\_\_\_ 18. Soldering is NOT used to join:
- |                      |                                  |
|----------------------|----------------------------------|
| a. Thermoplastics    | c. Metal to glass                |
| b. Metal to ceramics | d. Ferrous to non-ferrous metals |
- \_\_\_\_\_ 19. Joint design in brazing is especially important because of its influence on:
- |                         |                     |
|-------------------------|---------------------|
| a. Solidus temperature  | c. Capillary action |
| b. Liquidus temperature | d. Flux application |