

Modern Welding 12th edition Althouse Test Bank

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Chapter 1 Safety in the Welding Shop

MULTIPLE CHOICE

1. When lifting, it is a good practice to ____.
- A. keep your back straight and lift with your leg muscles
 - B. lift over 35 pounds using your arm muscles
 - C. always bend your back while lifting
 - D. None of the above.

ANS: A PTS: 1

2. Which of the following factors does *not* promote safety in the shop?
- A. Staying healthy in mind and body.
 - B. Becoming well trained in the required job or task.
 - C. Having a good attitude toward safety and safety rules.
 - D. Thinking about pleasant things to pass the time.

ANS: D PTS: 1

3. ____ is a recommended material for protective clothing for welding or cutting.
- A. Nylon
 - B. Polyester
 - C. Leather
 - D. Asbestos

ANS: C PTS: 1

4. ____ must be stored in an approved steel cabinet.
- A. Gas cylinders
 - B. Cleaning chemicals
 - C. Welding rods
 - D. Leathers

ANS: B PTS: 1

5. It is recommended that ____ be worn while resistance welding.
- A. eye protection
 - B. pants without cuffs
 - C. a cap
 - D. All of the above.

ANS: D PTS: 1

6. Which of the following safety practices is recommended when working around electricity?
- A. Let only trained technicians do repairs on electrical equipment.
 - B. Always check for loose connections and worn insulation with the power off.
 - C. Assume all electricity is dangerous.
 - D. Voltages of 220 volts or more should be clearly marked as dangerous.
 - E. All of the above.

ANS: E PTS: 1

7. ____ should be used to light an oxyfuel gas flame.

- A. A wooden match
- B. A book match
- C. A spark lighter
- D. Another torch
- E. An electric arc

ANS: C PTS: 1

8. Which of the following is an appropriate type of face and eye protection for resistance welding?
- A. Lightly tinted welding goggles.
 - B. Welding helmet with a #6 filter plate.
 - C. Welding helmet with a #10 filter plate.
 - D. Welding helmet with a #14 filter plate.

ANS: A PTS: 1

9. All hand tools should be inspected for ____.
- A. size
 - B. loose parts
 - C. cleanliness
 - D. All of the above.

ANS: B PTS: 1

10. Gas cylinders should be ____.
- A. stored in an upright position
 - B. always moved with the safety cap in place
 - C. fastened with chains or steel bands
 - D. All of the above.

ANS: D PTS: 1

11. Which of the following metals may create toxic or deadly fumes when welded?
- A. Beryllium
 - B. Lead
 - C. Cadmium
 - D. All of the above.

ANS: D PTS: 1

12. Fire extinguishers and fire blankets should be mounted on a surface that is painted ____.
- A. orange
 - B. yellow
 - C. yellow and black
 - D. red
 - E. light blue

ANS: D PTS: 1

13. Which of the following are dangerous light rays developed during oxyfuel gas welding or cutting?
- A. Incandescent.
 - B. Fluorescent.
 - C. Ultraviolet.
 - D. All of the above.

ANS: C PTS: 1

14. A Class B fire extinguisher is used to extinguish ____ fires.
- A. combustible liquid
 - B. electrical
 - C. solid material
 - D. combustible metal
- ANS: A PTS: 1
15. Which of the following is *not* a factor to consider regarding the hazard of fumes and gases?
- A. Lack of general ventilation.
 - B. Confined area.
 - C. Wetness.
 - D. Electrode type.
- ANS: C PTS: 1
16. Documents that detail information about chemicals and substances used in the workplace are called ____.
- A. Safety Data Sheets
 - B. Material Data Sheets
 - C. Hazard Information Sheets
 - D. Fire Safety Sheets
- ANS: A PTS: 1

TRUE/FALSE

17. It is possible to receive a burn similar to a sunburn while arc welding.
- ANS: T PTS: 1
18. Some companies require their workers to wear a back brace or support when lifting anything.
- ANS: T PTS: 1
19. Housekeeping is considered an important factor in shop safety.
- ANS: T PTS: 1
20. A high-pressure shielding gas cylinder can be moved by slightly tipping the cylinder and rolling it on its edge.
- ANS: T PTS: 1
21. Well-designed shops have low ceilings to improve ventilation and airflow.
- ANS: F PTS: 1
22. When welding on metals that may emit toxic fumes, a welder must wear a quality respirator that removes all dangerous chemicals in the air.
- ANS: T PTS: 1

23. Heat stroke is characterized by heavy sweating.

ANS: F PTS: 1

24. The AWS suggests that a label be placed on all major arc welding equipment in order to point out the hazards of arc welding.

ANS: T PTS: 1

25. Flame-retardant-treated cotton gloves are recommended for use in welding or cutting.

ANS: F PTS: 1

26. Whenever the torch is *not* in a welder's hand, it should be turned off.

ANS: T PTS: 1

27. The American Welding Society suggests that a sticker be attached to the major equipment in an oxyfuel gas welding or cutting station to warn of hazards.

ANS: T PTS: 1

28. It is recommended that the welding operator of a robot wear leathers, a hat or cap, and safety glasses.

ANS: F PTS: 1

29. Engaging in horseplay in the shop demonstrates a lack of wisdom or intelligence.

ANS: T PTS: 1

30. To prevent back injuries when lifting, the back should always be kept straight and the object lifted with the arm muscles.

ANS: F PTS: 1

31. A pressure regulator is "OFF" when the regulator adjusting screw is turned out.

ANS: T PTS: 1

32. Grinders and wire wheels are *not* considered hazardous machines.

ANS: F PTS: 1

33. High-pressure shielding gas cylinders should be fastened securely to a wall or column when stored.

ANS: T PTS: 1

34. For oxyfuel gas cutting, it is recommended that the area be cleared of combustible materials, and at least one fire watch be posted with a fire extinguisher readily accessible.

ANS: T PTS: 1

35. When the oxyfuel gas station is shut down, the gases should be bled from the cylinder outlet to the torch tip.

ANS: T PTS: 1

36. Pants with narrow cuffs are preferred for welding or cutting.

ANS: F PTS: 1

37. Corners or stairways that stick out into the shop are always painted bright orange or red for visibility.

ANS: F PTS: 1

38. Arc welding safety inspections should be made with the power on.

ANS: F PTS: 1

39. Matches can be safely carried in trouser pockets during resistance welding.

ANS: F PTS: 1

COMPLETION

40. The greatest hazard to a welder while laser welding is damage to the welder's _____.

ANS: eyes

PTS: 1

41. Toxic fumes should always be picked up before they reach the welder's _____.

ANS: face

PTS: 1

42. For arc cutting, it is always necessary to clear the area of combustible materials and post a(n) _____.

ANS: fire watch

PTS: 1

43. Ultraviolet and _____ rays are harmful rays emitted during arc welding.

ANS: infrared

PTS: 1

44. Acetylene gas must never be used at a gauge pressure above _____.

ANS:
15 psig
103 kPa

PTS: 1

45. Metal that has been welded and is left somewhere to cool should be marked _____ so nobody is burned by touching it.

ANS:
HOT
Hot

PTS: 1

46. Special training in the use of explosives is required to do _____ welding.

ANS: explosion

PTS: 1

47. While resistance welding, the welder should stand on a(n) _____ platform if the floor is damp.

ANS: insulated

PTS: 1

48. If the highest pressure marked on the face of a pressure gauge is 400 psig, it is recommended that this gauge should *not* be used at pressures above _____ psig.

ANS: 200

PTS: 1

49. Pliers or _____ should be used to pick up metal in the welding shop.

ANS: tongs

PTS: 1

SHORT ANSWER

50. List five personal factors that may be responsible for causing accidents.

ANS:
Any five of the following: Stress, illness, fatigue, lack of job knowledge, age, lack of wisdom, poor attitude, drugs.

PTS: 1

51. Why are robots dangerous to anyone working within the robot's working volume?

ANS:

The robot may hit them as it moves about rapidly.

PTS: 1

52. List two welding processes that produce sounds loud enough to injure the welder's hearing.

ANS:

Any two of the following: plasma arc welding, plasma arc cutting, explosion welding, arc gouging.

PTS: 1

53. List ways to prevent injury when lifting heavy objects.

ANS:

Keep back straight, lift with legs, know your weight limit, know the weight of the object, wear a lifting belt or back brace.

PTS: 1

54. What types of information do Safety Data Sheets provide?

ANS:

Safety Data Sheets provide information on all of the chemicals and substances found in the workplace, including their known health effects, symptoms, and first aid treatment.

PTS: 1

55. List three topics that should be covered during job or task training.

ANS:

Answers will vary, but may include safety hazards; proper operation sequence; correct placement of hands and feet; machine safety features.

PTS: 1