Name\_\_\_\_\_\_\_\_\_\_\_\_

Date\_\_\_\_\_\_\_\_\_\_

Hour\_\_\_\_\_\_

Shop Safety Test

Study Guide



1. People have accidents because they are careless, or indifferent to safety regulations.

2. Report all accidents to the instructor regardless of how slight it may be.

3. Safety glasses must be worn at all times. (EVEN UNDER THE WELDING HELMET).

4. Attempting to operate a piece of equipment without the teacher’s instruction may damage the equipment or result in a serious injury.

5. Any form of horseplay in the shop is dangerous and can lead to an accident. (THEREFORE IT IS NOT PERMITTED IN THE SHOP)

6. In the case of a leaking hose or any range of damaged shop equipment, the instructor should be notified for the next course of action to be taken.

7. There must be sufficient movement of air to prevent accumulation of toxic fumes or possible oxygen deficiencies.

8. Welding galvanized steel or metals painted with lead based paint are toxic and can be very dangerous to your health.

9. A fire may begin from sparks or falling slag which can travel as much as 35 feet.

10. Never use a cutting torch where sparks will be a hazard, such as areas containing flammable materials.

11. Know where fire exits, fire extinguishers, and emergency shut offs are at all times when working with welding and cutting equipment.

12. Always be aware of regulators, cylinders, and hoses when lighting and operating a cutting torch.

13. All piping and fittings used to convey gasses from a central supply system to a work station must withstand a minimum pressure of 150 psi.

14. Copper piping must never be used with acetylene. Copper and acetylene form copper acetylide . Copper acetylide can collect in low points of a piping system and will explode if schocked or moved suddenly.

15. Always open cylinder valves slowly and purge the oxygen and acetylene lines before lighting.

16. Do not switch the current or polarity settings while the machine is under load. Switching the settings while the machine is under load can damage the machine or cause a severe personal injury.

17. Do not make repairs to welding equipment unless the power to the machine is shut off and tagged out.

18. Since voltage in the range of 220 - 440 volts is always dangerous, extreme care must be taken to insure that the motor and frame are well grounded.

19. Never pick up pieces of metal that have just been welded or heated, and always assume all metal in the shop is hot before picking up. Always use pliers to pick up and cool off your metal.

20. When welding is complete, turn off the machine and hang the electrode in it designated place.

21. On an arc welding helmet there should be a clear cover plate on the inside and outside to protect the welding lens from getting damage.

22. Since arc welding puts out infrared and ultraviolet rays you should never look directly at an arc without a shield.

23. Do not weld in damp areas, and keep your hands and clothing dry at all times. Dampness on the body may cause an electric shock.

24. Avoid welding, cutting, and grinding operations when there are flammable materials nearby.

25. Always turn off all equipment before leaving your station. Never leave a torch or welding machine running when you are not using it.

26. The purpose of a safety cap on gas cylinders is to protect the valve from being damaged.

27. When operating an oxy-acetylene cutting torch, always open the cylinder valves slowly. Oxygen cylinder valves should be opened all of the way. Acetylene cylinder valves should be opened one and one half turns.

28. Never use or transport acetylene when it is in the horizontal position.

29. Never exceed 15 psi. when working with acetylene. Acetylene is stable under low pressures but if compressed to more than 15 psi. it will become very unstable.

30. Make sure that the regulator adjusting screw is all of the way back before opening a cylinder valve on a tank.

31. Never stand directly in front of a regulator when opening the cylinder valves.

32. Always use a striker to light an oxy-acetylene cutting torch.

33. Never operate any shop equipment without the teacher’s permission.

34. Use only oil free soap and water to check for gas leaks. Never allow oil or grease to come in contact with any oxy-acetylene equipment.

35. When lighting an oxy-acetylene cutting torch, you open the acetylene needle valve first and light, then you open the oxygen valve. When the cutting operation is over you turn off your acetylene needle first followed by the oxygen needle valve.

36. Acetylene hose fittings have left hand threads. Oxygen hose fittings have right hand threads.

37. All cylinders should be secured with a chain or safety devise to prevent the tank from falling over.

38. List 5 places in the shop where emergency stops are located.

 1. In my office

 2. On the post as you walk from the classroom to the shop (safety glasses post).

 3. On the post by the back bench (broom post).

 4. On the wall by the scrap bin

 5. By arc station #1

39. Observe all warning signs or tags before operating any shop equipment.

40. Never wear loose or overly baggy clothing, and keep you hair pulled up when working with machinery.

41. Be aware of the hazards and people around you at all times before operating any shop equipment.

42. Wear proper clothing while in the welding shop. This includes: long pants, non-flammable welding jacket, gloves, eye protection, helmet, and appropriate shoes.

43. Never wear gloves when you are operating a pedestal grinder.

44. Rings or jewelry will not be worn when working with any shop equipment.

45. Proper foot wear must be worn at all times while in the welding shop. Your feet must be fully covered to avoid serious injuries.

46. Any student guilty of intentionally damaging another students property or the schools equipment WILL BE REMOVED from class.

47. Any student guilty of making any type of weapon or illegal paraphernalia WILL BE REMOVED from class.

48. Use extreme caution when operating the hydraulic powered shears. Keep hands and fingers away from the blades at all times. There should only be one person on the shear at a time and NO ONE should be leaning or touching the shear while it is operating.

49. Every student must wear a helmet at all times while in the designated welding area. Weraing your helmet and keeping it down when you or the other students are welding will help prevent your eyes from getting flash burn.

50. The most common injury due to welding is flash burn, caused by the ultraviolet light produced by the arc. If you are in the welding area without your helmet on you will not be allowed to work in the welding shop. If you are welding, tacking or your partner is welding you must have your helmet down at all times.

51. It is your responsibility to ensure your welding helmet is working properly. You need to make sure that it has a clean cover plate on the front and back of the lens so the sensors can detect your arc. You will also need to make sure that the head gear fits properly and make sure that the auto darkening feature is working properly before you use the welding helmet every day.

52. If you find a problem with any shop equipment it is your responsibility to report it immediately to the instructor. DO NOT operate damaged or faulty equipment.

53. All grinders need to have a guard on them at all times or they are not to be used. If they do not have a guard or the cord has been damaged in any way you need to report it to the instructor immediately.

54. Having frays on clothing is a potential fire hazard and they are not allowed in the welding shop. Frayed clothing can easily catch on fire from sparks or falling slag and many times leads to personal injuries.