

**LOS ANGELES UNIFIED SCHOOL DISTRICT**  
**DIVISION OF ADULT AND CAREER EDUCATION**

SCHOOL: \_\_\_\_\_

AREA: \_\_\_\_\_

**SAFETY TEST FOR INDUSTRIAL EDUCATION**  
**WELDING**

Name of Student: \_\_\_\_\_

Date: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Date Enrolled: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

In Case of Accident, Notify:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

**INTRODUCTION**

This general safety test is designed to prepare trainees for initial welding shop training. The test does not include questions on all machines and equipment used in the different departments of a welding shop. Safety instructions and tests on such equipment must be given when the student begins more specialized training. Students are not required to answer questions on machines or equipment that is not located in the shop or not utilized in the industrial program.

**This test must be on file in the school records for 5 years.**

**DIRECTIONS:**

Choose the best answer from the (a), (b), (c), or (d) choices to complete each statement. Write the letter of your choice in the parentheses (\_\_\_) to the left of each item number.

**"THINK SAFETY" REPORT TO YOUR INSTRUCTOR**

- 1) (  ) Most accidents in the shop are due to:
  - a) Unguarded equipment
  - b) Unsafe shop conditions
  - c) Unsafe acts by people
  - d) Following safety procedures
  
- 2) (  ) Before working with any machines, equipment, or power tools in the shop, you must:
  - a) Pass a safety test and be sure there's an instructor in the shop
  - b) Learn how to turn on the machines
  - c) Check each machine by turning it on for a short time
  - d) Have prior experience on the machine, equipment, or tool
  
- 3) (  ) You are not permitted to work on any equipment or machinery at any time if the \_\_\_\_\_ is not present.
  - a) Instructor
  - b) Security guard
  - c) Advanced student
  - d) Teacher assistant
  
- 4) (  ) When there is even the slightest accident, injury, or illness in the shop, you should first:
  - a) Tell your instructor
  - b) Get the first aid kit and use it
  - c) Get the injured person to the nurse
  - d) Put a Band-Aid on the injury and continue working
  
- 5) (  ) Whenever you find broken tools, an unsafe shop condition, or a machine in need of repair, you should first:
  - a) Make the needed repair at once
  - b) Use the tool, complete the repair and then report the broken tool
  - c) Report the condition to your instructor
  - d) Warn your classmates to be careful
  
- 6) (  ) Before using any power machinery, be sure to:
  - a) See that all safety guards are removed
  - b) Get your instructor's permission
  - c) Call your mother
  - d) Don't ask at all, just use the equipment

### **WEAR PROTECTIVE CLOTHING**

- 7) (  ) California law requires that "Eye protective devices (approved safety goggles or a face shield) must be worn while:
- a) Welding any project"
  - b) Repairing or servicing any vehicle or other machinery or equipment"
  - c) Using power machinery"
  - d) All of the above
- 8) (  ) Since loose clothing, ties, dangling jewelry and long hair could get caught in moving parts or machines you should:
- a) Get another student to help you
  - b) Get your hair cut before using machinery
  - c) Stay away from such machinery
  - d) Wear properly fitting clothes and tuck in all loose ends including hair before working on a project
- 9) (  ) To protect your feet from falling objects, spilled acid, or objects on the floor of the shop you should wear:
- a) Sneakers
  - b) Sandals
  - c) Solid shoes with full tops, preferably with rubber soles and heels
  - d) Shoes with full tops and oil resistant soles

### **LIFTING AND CARRYING SAFETY**

- 10)(  ) When lifting heavy objects, keep your back and head as straight as possible, and use your
- a) Arm muscles
  - b) Back muscles
  - c) Leg muscles
  - d) Stomach muscles
- 11)(  ) Lifting heavy objects and carrying long pieces should be done by:
- a) More than one person
  - b) Someone else
  - c) Knocking obstacles out of your way
  - d) All of the above

### **PREVENT FIRE AND BURNS**

- 12)( ) In case a fire begins in the shop, you should first:
- a) Know where fire extinguishers are and how to use them
  - b) Report the fire and follow only your instructor's directions
  - c) Know how to turn off the power equipment
  - d) Both A and B
- 13) ( ) Materials or fluids that are flammable or combustible should never be used near sparks or flames. If you do not know whether or not a material is combustible, you should:
- a) Read the label on the container or ask the teacher
  - b) Light a match to a small sample of the material or fluid to find out
  - c) Ask a more experienced person
  - d) All of the above
- 14)( ) Liquids or grease spilled on the floor should be cleaned up to prevent:
- a) Fire
  - b) Slips and falls
  - c) Both A and B
  - d) Neither A nor B
- 15)( ) Put all rags especially those rags used to clean up flammable materials:
- a) Into covered metal containers
  - b) Under the nearest bench
  - c) In your pocket
  - d) In your locker

### **HAND TOOLS AND BENCH WORK**

- 16)( ) Using the tool of the right size, shape, and recommended "work load" for the job is important. Do not just pick up any available tool to "get by" because:
- a) The wrong tool can slip and hurt you
  - b) Using the wrong tool can cause breakage and injury
  - c) Both A and B
  - d) It is permissible to use any available tool
- 17)( ) Never use chisels, hammers, punches, or any tools with:
- a) Round heads
  - b) Mushroomed heads
  - c) Flat heads
  - d) Square heads

- 18) (\_\_\_) Which is a good safety practice when working with hand tools?
- a) Giving tools to another person by the handles first
  - b) Cleaning off greasy handles so they aren't slippery
  - c) Both A and B
  - d) Neither A nor B
- 19) (\_\_\_) Never carry sharp-edged tools in your pocket or with the point toward your body because:
- a) You'll get hurt if you slip and bump against another student
  - b) They will ruin your clothes
  - c) You'll forget where you left them.
  - d) Someone else might be injured
- 20)(\_\_\_) After making sure your hammer, screwdriver, or file is right for size, type, and sharpness, etc., the next most important thing to check for is
- a) A tight-fitting handle
  - b) If anyone else needs the tool
  - c) Price
  - d) None of the above

### **SHOP PRACTICE**

- 21) (\_\_\_) Floors and aisles should be kept clear of stock, materials, scraps, tools, equipment, hoses and cords to prevent:
- a) Slips and falls
  - b) A messy-looking shop
  - c) Injuries
  - d) A and C
- 22) (\_\_\_) The large shop doors should be kept open when engines are running because:
- a) The engines make noise
  - b) Good air circulation is needed to protect against carbon monoxide gas poisoning
  - c) Both A and B
  - d) Neither A nor B
- 23) (\_\_\_) To prevent injury to eyes or ear drums from flying particles, an air hose should never be:
- a) Pointed toward yourself or others
  - b) Used to clean dust from your clothing
  - c) Both A and B
  - d) Neither A nor B

**PORTABLE POWER TOOL SAFETY**

- 24) (\_\_\_) In case of any emergency when operating power machinery, always be ready to first:
- a) Turn the power off
  - b) Finish the job and then report the trouble
  - c) Get away from the machine fast
  - d) Notify your instructor
- 25) (\_\_\_) Before leaving a power machine, be sure that:
- a) All parts have stopped moving
  - b) The power has been turned off
  - c) Both A and B
  - d) Neither A nor B
- 26) (\_\_\_) The power must be off when you are oiling, cleaning, or adjusting any power equipment to:
- a) Save electricity
  - b) Keep your attention on your work
  - c) Prevent catching your hands or clothing in moving parts
  - d) None of the above
- 27) (\_\_\_) Before you start a power machine, be sure that you:
- a) Get your instructor's instructions and permission
  - b) Check to make sure that guards and safety devices are in place and adjustments are tightly locked;
  - c) Both A and B
  - d) Neither A nor B
- 28)(\_\_\_) Extension cords should be:
- a) Black, red, or yellow in color
  - b) Draped across aisles
  - c) Checked for worn insulation
  - d) Yanked out of the outlet when finished
- 29) (\_\_\_) When using power equipment, be sure your hands and feet are dry because wet hands and feet invite:
- a) Shocks
  - b) Blisters
  - c) Dirt
  - d) None of the above

**GENERAL WELDING SAFETY PRACTICES**

- 30)( ) When working on or near any machine or tool which produces chips, particles, or blinding light, you must wear:
- a) Face shield
  - b) Goggles
  - c) Proper safety equipment
  - d) All of the above
- 31)( ) Ear protection should be worn:
- a) When a loud van comes by
  - b) When welding or grinding in hazardous areas
  - c) When the instructor is yelling at you
  - d) All of the above

**OXYGEN-ACETYLENE WELDING**

- 32)( ) Valve protection caps are designed to protect valves from:
- a) Explosion
  - b) Goggles
  - c) Breakage, damage
  - d) Getting lost
- 33)( ) Even when cylinders are empty, never use them as:
- a) Chairs
  - b) Rollers or supports
  - c) Missiles
  - d) Trash cans
- 34)( ) To keep cylinders from being knocked over while in use, secure them with a chain or:
- a) Rope
  - b) Tie down
  - c) Solder
  - d) Locking device
- 35)( ) Never allow cylinders to come in contact with live wires or:
- a) Ground wires
  - b) Electrical outlets
  - c) Wire cutters
  - d) Water
- 36)( ) Keep cylinders away from cutting work or:
- a) Welding area
  - b) Flammable material
  - c) Inadequate ventilation
  - d) All of the above

- 37)( ) Closing the cylinder \_\_\_\_\_ after use prevents waste and fire hazards.
- a) Valves
  - b) Welding area
  - c) Report
  - d) Gauge
- 38)( ) Compressed air should never be confused with:
- a) Valves
  - b) Oxygen
  - c) Acetylene
  - d) Hydrogen
- 39)( ) Acetylene should never be allowed to saturate any part of the clothing as it could:
- a) Ignite it
  - b) Stain it
  - c) Burn it
  - d) Discolor it
- 40)( ) Before you open a cylinder valve, you should \_\_\_\_\_ the pressure adjusting screw on regulators.
- a) Remove
  - b) Release, back-off
  - c) Open
  - d) Disable
- 41)( ) Never attempt to repair oxygen or acetylene cylinder:
- a) Gauge
  - b) Walls
  - c) Valves
  - d) Cap
- 42)( ) Rough treatment to an acetylene cylinder could damage the:
- a) Gauge
  - b) Fuse plugs
  - c) Valves
  - d) Cap
- 43)( ) Detect gas leaks with:
- a) Soapy water
  - b) Leak detector tools
  - c) Matches
  - d) Acetylene torch

- 44)( ) An acetylene valve should never be opened near other welding or cutting work, or near sparks, flames, or any other possible source of:
- a) Electricity
  - b) Water
  - c) Fire, ignition
  - d) Extra work
- 45)( ) If the cylinder valves are opened suddenly, the pressure regulator might:
- a) Explode
  - b) Be damaged
  - c) Read too high
  - d) Break off
- 46)( ) What should be attached to cylinder tanks in order to obtain a safe, constant working pressure?
- a) Gauges
  - b) Regulator
  - c) Cap
  - d) Extra oxygen
- 47)( ) In order that the acetylene can be turned off quickly in case of emergency, what must be left on the valve?
- a) Gauges
  - b) Regulator
  - c) Cap
  - d) T-Wrench
- 48)( ) Do not attempt to use one cylinder to charge or fill \_\_\_\_\_.
- a) Another cylinder
  - b) A vacancy
  - c) Balloons
  - d) Hot air
- 49)( ) Heavy metal falling on the hose could cause \_\_\_\_\_:
- a) Cuts or Bruises
  - b) A rotten egg smell
  - c) A loss of pressure
  - d) Extra work
- 50)( ) Oil or grease in the presence of oxygen under pressure may cause the mixture to \_\_\_\_\_
- a) Burn
  - b) Ignite violently, explode
  - c) Loose pressure
  - d) Slip and fall

- 51)( )The hose must be free from dirt before you attach the \_\_\_\_\_
- a) Gauge
  - b) Oxygen tank
  - c) Regulator
  - d) Torch
- 52)( )The maximum number of turns to open an acetylene valve is \_\_\_\_\_
- a) 3/4
  - b) 1
  - c) 1 1/2
  - d) 2
- 53)( )A left-hand thread is encountered when hooking up a \_\_\_\_\_
- a) Acetylene hose
  - b) Oxygen hose
  - c) Hydrogen hose
  - d) Auxiliary hose
- 54)( )Cotton in the ears or a cap pulled down over the head will protect you from \_\_\_\_\_
- a) Acetylene flame
  - b) Serious burns in ears or punctured ear drum, sparks
  - c) Too much noise
  - d) Rap music
- 55)( )Acetylene welding goggles are worn because they protect the eyes from:
- a) Acetylene flame
  - b) Serious burns
  - c) Glare and sparks
  - d) Overheating

### **ARC WELDING**

- 56)( )One direct flash from the arc on the naked eye can cause:
- a) Explosion
  - b) Goggle discoloration
  - c) Breakage, damage
  - d) Headache or sore eyes
- 57)( )The eyes must be protected at all times during welding by keeping all leaks and openings closed in the:
- a) Arc welding helmet
  - b) Safety goggles
  - c) Welding room
  - d) All of the above

- 58)( )When \_\_\_\_\_ slag from a weld, be sure the eyes are protected with goggles or a flip-front helmet.
- a) Chipping
  - b) Removing
  - c) Adding
  - d) All of the above
- 59)( )Under no conditions should a closed container be welded on until it has been \_\_\_\_\_.
- a) Removed
  - b) Cleaned and properly tested to prevent explosion
  - c) Paid for
  - d) Properly mounted
- 60)( )Before starting to weld, be sure that the work is well \_\_\_\_\_.
- a) Grounded
  - b) Cleaned and properly tested
  - c) Mounted
  - d) Inspected
- 61)( )For eye protection against infrared and ultraviolet rays, you must wear \_\_\_\_\_.
- a) An arc welding helmet with proper lens
  - b) Goggles
  - c) Safety glasses
  - d) Extra protection
- 62)( )Persons nearby, who are not wearing helmets, must be protected from the \_\_\_\_\_.
- a) Sparks
  - b) Vapor fumes
  - c) Arc flash, ultra violet rays
  - d) Splatter
- 63)( )The welding table should be free from any material that is \_\_\_\_\_.
- a) Contaminated
  - b) Dirty
  - c) Disorganized
  - d) Flammable
- 64)( )Electrode stubs should be kept off the \_\_\_\_\_.
- a) Floor
  - b) Work table
  - c) Arc welding helmet
  - d) Torch area

65)( ) An electrode holder may become grounded if it is allowed to touch

- \_\_\_\_\_.
- a) Any grounded metal
  - b) The work table
  - c) The arc welding helmet
  - d) The torch area

66)( ) The welding cable will be damaged if allowed to come in contact with

- \_\_\_\_\_.
- a) The regulator
  - b) Hot metal
  - c) The arc welding helmet
  - d) The torch area

67)( ) Unattended heated metal must be labeled with the word or words

- \_\_\_\_\_.
- a) "Hot"
  - b) "Do not disturb"
  - c) "Explosive"
  - d) "Dangerous"

68)( ) When quenching hot metal, always use \_\_\_\_\_.

- a) Tongs or pliers
- b) Metal containers
- c) The arc welding helmet
- d) Safety glasses

69)( ) Fumes are injurious when you are welding on \_\_\_\_\_.

- a) Galvanized steel
- b) Phosphor bronze
- c) Stainless steel
- d) All of the above

70)( ) Always shut off the welder when work is completed, as a protection against \_\_\_\_\_.

- a) A short circuit
- b) Harmful fumes
- c) Explosions
- d) Regulator damage

71)( ) Protective apparel for the arc welder is made of \_\_\_\_\_.

- a) Treated leather
- b) Resin
- c) Wire mesh
- d) Cotton

**SPOT WELDING**

- 72)( ) The spot welder should wear a face shield or goggles for protection from flying sparks and \_\_\_\_\_.
- a) Explosion
  - b) Molten metal
  - c) Breakage, damage
  - d) Headache or sore eyes
- 73)( ) Besides eye protection, the welder should wear \_\_\_\_\_.
- a) A helmet
  - b) Chest protection
  - c) Ear protection
  - d) Leather gloves
- 74)( ) Proper preparation of work and correct operation of the spot welder will help to prevent excessive \_\_\_\_\_.
- a) Fumes
  - b) Explosion
  - c) Excessive sparks
  - d) Eye damage
- 75)( ) The electrodes should not be brought together unless a piece of stock is held \_\_\_\_\_.
- a) Between them
  - b) On top of them
  - c) For each of them
  - d) By them

THIS IS TO CERTIFY that I, \_\_\_\_\_, have received instruction on the safety precautions to be observed in a class on welding mechanics. I promise to observe these precautions and, if ever in doubt about any operation, that I will obtain the necessary instructions from my teacher.

\_\_\_\_\_  
Student's signature

\_\_\_\_\_  
Witness to student signature

\_\_\_\_\_  
Date

THIS IS TO CERTIFY

\_\_\_\_\_  
Student's name

Has been given instructions on the general safety precautions to be observed in this shop and has satisfactorily passed the written safety test for initial shop training.

\_\_\_\_\_  
Instructor's signature

\_\_\_\_\_  
Date