

**LOS ANGELES UNIFIED SCHOOL DISTRICT  
DIVISION OF ADULT AND CAREER EDUCATION  
SAFETY TEST FOR MOBILE ELECTRONICS PROGRAM**

School: \_\_\_\_\_ Industry Sector: Energy, Environment & Utilities

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

Teacher: \_\_\_\_\_ Room: \_\_\_\_\_

(Please Print)

Your Name: \_\_\_\_\_ Phone: \_\_\_\_\_

(Last) (First)

Date of Birth: \_\_\_\_\_ Age: \_\_\_\_\_ Email: \_\_\_\_\_

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

(Street) (City) (Zip)

In Case of Accident, Notify: \_\_\_\_\_ Phone: \_\_\_\_\_

**To the Student:**

These instructions are an important part of training in the Mobile Electronics program. All members of the class must observe safety rules and precautions. Habits of carelessness or of failure to follow these rules are sufficient cause for dismissal from the class.

All students are required to learn these safety rules as part of the Mobile Electronics program. Additional specific safety instructions are taught in the classroom about the various operation of machines and other workplace equipment.

All students will be required to pass this safety examination with 100% accuracy and to sign the back page of this examination indicating that you have received these instructions.

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

**Directions: Mark "T" for true if the following statements are completely true or "F" for false if any part of the statement is untrue. The first statement will serve as an example:**

- 0. Most accidents in the classroom are due to unsafe acts by people.     T
- 1. All classroom injuries and accidents must be reported to the teacher immediately.
- 2. The school elevator may be used during an emergency such as fire or earthquake.
- 3. It is permissible to store heavy items on top of file cabinets and bookcases as long as nothing is stored within 18" of the sprinkler system.
- 4. Objects or materials must be passed carefully to or at another student.
- 5. You may lift or carry heavy boxes or equipment in school less than 25 lbs. using proper lifting techniques.
- 6. Any frayed cord or even the slightest shock or spark from electrical wire or connections must be reported to the instructor immediately.

- 7. When broken tools or an unsafe classroom condition are found, or a machine needs repair, it is permissible to make the needed repair and then report the condition to the instructor. \_\_\_\_\_
- 8. Smoking on school campus is a violation of District rules and the Health Code. \_\_\_\_\_
- 9. Hands must be dry when handling any electrical equipment. \_\_\_\_\_
- 10. All four legs/wheels of the chair must be on the floor. Tilting back can cause the loss of balance. \_\_\_\_\_

**DIRECTIONS: Complete the following statements by writing or printing the appropriate word or words in the blank spaces in the right margins only.**

**GENERAL SAFETY**

- 11. Safety instructions must be given and a safety test must be passed before you are allowed to work on any machine or \_\_\_\_\_.
- 12. You are not permitted to work on any equipment or machinery at any time if the \_\_\_\_\_ is not present.
- 13. Guards or safety devices must not be \_\_\_\_\_ from any machine
- 14. Machinery must not be oiled or adjusted while in \_\_\_\_\_.
- 15. A machine must be started or stopped only by the \_\_\_\_\_.
- 16. Before starting a machine, be sure everyone is \_\_\_\_\_.
- 17. Do not leave a machine while it is \_\_\_\_\_.
- 18. When working on or near any machine or tool which produces chips, particles, or blinding light, you must wear \_\_\_\_\_.
- 19. You are not permitted within the safety zone around any machines unless you are \_\_\_\_\_.
- 20. Loose clothing must be tucked in before you start work, as a precaution against \_\_\_\_\_.
- 21. If in doubt about any machine, check with the \_\_\_\_\_.
- 22. Aisles and working area must be kept clear of \_\_\_\_\_.

- 23. The floor must be kept free of oil because of the danger of fire and \_\_\_\_\_.
- 24. Combustible rags must be kept in a closed \_\_\_\_\_.
- 25. The compressed air nozzle must not be directed toward \_\_\_\_\_.
- 26. Do not lift materials heavier than your ability to handle them \_\_\_\_\_.
- 27. Long pieces of material should be carried by \_\_\_\_\_.
- 28. The attention of the instructor should be directed to any violation of \_\_\_\_\_.
- 29. Accidents, no matter how slight, must be reported immediately to \_\_\_\_\_.

**HAND TOOLS AND BENCH WORK**

- 30. Pass sharp-edged tools \_\_\_\_\_ first to another student.
- 31. Passing students may be injured if materials in a vise are left \_\_\_\_\_.
- 32. The handles and heads of tools should be kept free of \_\_\_\_\_.
- 33. Two hardened surfaces should not be \_\_\_\_\_ together.
- 34. Tools with tangs should never be without \_\_\_\_\_.
- 35. "Mushroom" ends of chisels or hand tools must be ground off to prevent steel chips from \_\_\_\_\_.
- 36. Sharp hand tools should not be carried in your \_\_\_\_\_.
- 37. To prevent cuts from the driving edge of a screwdriver or chisel, both hands should always be behind the \_\_\_\_\_.

**SHOP PRACTICE**

- 38. Fuses should not be pulled with power \_\_\_\_\_.
- 39. Safety interlock switches should never be \_\_\_\_\_.

- 40. Do not increase any fuse capacity or make an illegal connection on \_\_\_\_\_.
- 41. Cords should not be used that have defective plugs or \_\_\_\_\_.
- 42. Entering an isolation transformer cage is strictly \_\_\_\_\_.

**ELECTRONIC COMPONENTS**

- 43. Connections to equipment should be made prior to plugging the power cord into the \_\_\_\_\_.
- 44. Fingers must be kept away from the live metal parts of the test \_\_\_\_\_.
- 45. Amplifier gills should not be removed while power is applied to \_\_\_\_\_.
- 46. Resistors and \_\_\_\_\_ should not be replaced when current is on.
- 47. The power shall be turned off before discharging the high voltage capacitor to work on electronic \_\_\_\_\_.

**CATHODE-RAY TUBES**

- 48. Tubes should not be handled if they are electrically charged or \_\_\_\_\_.
- 49. Spare tubes left on the workbench may become \_\_\_\_\_.
- 50. When handling cathode-ray tubes, wear \_\_\_\_\_.
- 51. Some materials used for coating cathode-ray and fluorescent tubes are \_\_\_\_\_.
- 52. Report any cuts, no matter how minor, to the \_\_\_\_\_.

**WIRING**

- 53. Until they have been proved otherwise, consider all electric wires \_\_\_\_\_.
- 54. Under certain circumstances, wires carrying as little as 50 volts can cause \_\_\_\_\_.
- 55. When testing an electric circuit, use \_\_\_\_\_.
- 56. Before starting to work, the student should determine whether the power is on by going to \_\_\_\_\_.

57. All metallic or metallic grounded wiring systems must have an equipment \_\_\_\_\_ attached. \_\_\_\_\_

**MOTORS, GENERATORS, AND TRANSFORMERS**

58. Before turning on the power, be sure that all circuits are properly \_\_\_\_\_ . \_\_\_\_\_

59. Verify that all breakers, interlocks, fuses, and other safety devices are in \_\_\_\_\_ . \_\_\_\_\_

60. Recheck all wiring before energizing the \_\_\_\_\_ . \_\_\_\_\_

61. Make certain that distribution (power) transformers are grounded in the approved manner before the unit is \_\_\_\_\_ . \_\_\_\_\_

**BLOWTORCH AND PRESTOLITE TORCHES**

62. To avoid an \_\_\_\_\_ , the filler cap must be tightly closed. \_\_\_\_\_

63. Turn the Prestolite torch off tightly when \_\_\_\_\_ . \_\_\_\_\_

**BATTERIES, STORAGE**

64. Battery solution burns skin and clothing because it contains \_\_\_\_\_ . \_\_\_\_\_

65. Carry a battery with a \_\_\_\_\_ . \_\_\_\_\_

66. Keep all tools off the top of \_\_\_\_\_ . \_\_\_\_\_

67. Keep batteries away from an open flame and any potential sparks because the escaping gas from a battery is \_\_\_\_\_ . \_\_\_\_\_

68. Test batteries with the proper \_\_\_\_\_ . \_\_\_\_\_

69. Never connect or disconnect a battery while the charger is \_\_\_\_\_ . \_\_\_\_\_

70. When testing batteries, keep your face at \_\_\_\_\_ . \_\_\_\_\_

**ELECTRIC HAND DRILL**

71. When tightening the drill chuck, make certain the \_\_\_\_\_ is not accidentally turned on. \_\_\_\_\_

- 72. Do not operate the drill with moist \_\_\_\_\_.
- 73. The student holding the drill should always be ready to \_\_\_\_\_.
- 74. When using heavy drills, brace the body well and hold the drill motor with \_\_\_\_\_.
- 75. While operating the drill, keep your face away from the \_\_\_\_\_.

**DRILL PRESS**

- 76. To prevent work from being torn from your grasp, work should be securely clamped to the table or held in a \_\_\_\_\_.
- 77. When the drill begins to break through the work, you should ease up on the \_\_\_\_\_.
- 78. The vice should be held firmly to prevent the work from \_\_\_\_\_.
- 79. An improperly ground drill can throw the \_\_\_\_\_.
- 80. Chips should be removed from the drill press table with a \_\_\_\_\_.
- 81. The chuck key must be removed before turning on the \_\_\_\_\_.

**GRINDER AND BUFFER**

- 82. The tool must be set close to the grinding wheel to prevent work from becoming \_\_\_\_\_.
- 83. Work held in the hand while grinding may slip and cause injury to \_\_\_\_\_.
- 84. Grinding on the side of the wheel may produce pressure that can cause the wheel to \_\_\_\_\_.
- 85. If the tool is held downward, between the wheel and rest, the wheel may \_\_\_\_\_.
- 86. Buff work below the horizontal axis of the wheel to prevent the work from being \_\_\_\_\_.
- 87. No one should stand in line of the of the wheel when it is being faced or started because of the possibility of the wheel breaking \_\_\_\_\_.
- 88. Holding small pieces of material with a vise grip or a vise, rather than by the hand, will prevent work from \_\_\_\_\_.

89. For any grinding or buffing operation, the operator must wear \_\_\_\_\_.

### LATHE-METAL

90. When mounting work between center, the tail stock should be securely \_\_\_\_\_.

91. To prevent bar material which extends beyond the end of the lathe from whipping, the material should be \_\_\_\_\_.

92. Not using some form of support in removing or mounting the chuck may result in the chuck-dropping on the \_\_\_\_\_.

93. Revolving work never should be touched by \_\_\_\_\_.

94. The gear cover must be kept \_\_\_\_\_.

95. Turn the work through one complete cycle by hand to check for \_\_\_\_\_.

96. Starting the lathe with the wrench still in the chuck will throw the \_\_\_\_\_.

97. Stop the power feed before the tool bit reaches the \_\_\_\_\_.

98. Remove long, curled chips from the lathe with a \_\_\_\_\_.

### SQUARING SHEARS

99. The squaring shears must be operated by one \_\_\_\_\_.

100. \_\_\_\_\_ strips of metal should not be cut in the squaring shears.

101. Make sure that the foot is clear before pushing down on the \_\_\_\_\_.

102. Pieces of metal to be cut on the squaring shears should be large enough to be held \_\_\_\_\_.

### SOLDERING

103. Pass a soldering iron to another student by placing it on a \_\_\_\_\_.

104. Determine heated readiness of soldering copper by testing it with a \_\_\_\_\_.

105. Use liquid fluxes sparingly to avoid \_\_\_\_\_ . \_\_\_\_\_

106. Do not inhale fumes of fluxes or \_\_\_\_\_ . \_\_\_\_\_

**SPOT WELDING**

107. The operator of a spot welder should wear a face shield or goggles for protection from flying sparks and \_\_\_\_\_ . \_\_\_\_\_

108. Besides eye protection, the welder should wear \_\_\_\_\_ . \_\_\_\_\_

109. Proper preparation of work and correct operation of the spot welder will help to prevent excessive \_\_\_\_\_ . \_\_\_\_\_

110. The electrodes should not be brought together unless a piece of stock is held \_\_\_\_\_ . \_\_\_\_\_

**ETCHING**

111. When etching printed circuits, a person must be very careful not to get the etchant on the skin, the clothing, or in the \_\_\_\_\_ . \_\_\_\_\_

112. If ultra violet light is used to expose the chemical resist, when making a printed circuit, a person must be very careful not to \_\_\_\_\_ . \_\_\_\_\_

113. Some etching solutions are dangerous because they are \_\_\_\_\_ . \_\_\_\_\_

114. During the etching process, a person must avoid inhaling the \_\_\_\_\_ . \_\_\_\_\_

<b>Student</b>		<b>Instructor</b>	
THIS IS TO CERTIFY that I have received instructions on safety precautions in my Mobile Electronics class.		THIS IS TO CERTIFY that	
The teacher demonstrated to me how to use tools, equipment and chemicals safely and correctly. I will observe all safety precautions. If ever in doubt regarding any operations, I will obtain the necessary information from my teacher.		_____ (name of student)	
		has been given safety instructions in my class.	
		I demonstrated the proper use of tools, equipment and chemicals in the class and this student passed this written safety test with 100% accuracy.	
_____ (Student Signature)	_____ (Date)	_____ (Teacher Signature)	_____ (Date)