

LOS ANGELES UNIFIED SCHOOL DISTRICT
DIVISION OF ADULT AND CAREER EDUCATION

SCHOOL: _____

AREA: _____

SAFETY TEST FOR INDUSTRIAL EDUCATION
AUTO MECHANICS

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 automotive shop training. The test does not include questions on all machines and equipment used in the different departments of an auto shop. Safety instructions and tests on such equipment must be given when the student begins more specialized training.

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) () 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

- 4) () 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

- 5) () Before test-running an engine or using any power machinery, be sure to:
 - a) See that all safety guards are removed
 - b) Get your instructor's permission
 - c) Both a and b
 - d) Neither a nor b

WEAR PROTECTIVE CLOTHING

- 6) () California law states that "Eye protective devices (approved safety goggles or a face shield) shall be worn anytime your in the shop and especially while:
 - a) Working under a car
 - b) Repairing or servicing any vehicle or other machinery or equipment
 - c) Using power machinery
 - d) All of the above

- 7) () 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 and hair before working on a machine or project
- 8) () 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

- 9) () 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
- 10)() 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

- 11)() 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 machinery
 - d) All of the above
- 12)() Gasoline should never be used:
- a) For cleaning
 - b) Near sparks or flames
 - c) To pour into the carburetor to start the car
 - d) All of the above

- 13)() To prevent hand and arm burns, never:
- a) Use your hand as a choke when the engine is cranking or running
 - b) Remove a hot radiator cap with your bare hands
 - c) Both a and b
 - d) Neither a nor b
- 14)() 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
- 15)() 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
- 16)() Before you leave the area, put all rags containing oil, gasoline, paint, solvents, or other similar flammable materials:
- a) In covered metal containers
 - b) Under the nearest bench
 - c) In your pocket
 - d) In your locker
- 17)() If battery acid splashes on your skin or clothing, you should first:
- a) Wipe it off quickly with a rag
 - b) Clean it off with solvent
 - c) Rinse it off with plenty of water
 - d) Find your instructor and report it

HAND TOOLS AND BENCH WORK

- 18)() 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) Over-loading a tool can cause breakage and injury
 - c) Both (a) and (b)
 - d) It is permissible to use any available tool

- 19)() Never use chisels, hammers, punches, or any tools with:
- a) Round heads
 - b) Mushroomed heads
 - c) Flat heads
 - d) Square heads
- 20)() 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
- 21) () 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 them
 - b) They will ruin your clothes
 - c) You'll forget where you left them.
 - d) Someone else might be injured
- 22) () Be sure sharp-edged tools are kept sharp because:
- a) A dull tool can slip over the work and injure you
 - b) A dull tool needs more pressure and is harder to control, and thus it is more dangerous
 - c) Both a and b
 - d) Neither a nor b
- 23) () 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
- 24) () When you work with a screwdriver:
- a) Be sure the tip is not worn, chipped, or broken
 - b) Hold your work in the palm of your hand
 - c) Use any sized tip since it will probably do the job
 - d) Keep both hands on the screwdriver

SHOP PRACTICE

- 25) (___) Floors and aisles should be kept clear. Hoses, cords, creepers, and jacks must be kept out of passageways to prevent:
- a) Slips and falls
 - b) A messy-looking shop
 - c) A bad rating by the inspectors
 - d) Injuries
- 26) (___) 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
- 27) (___) Disconnect battery cables before doing engine work to:
- a) Prevent short circuits or sparks to:
 - b) Save power
 - c) Save the life of the battery
 - d) To prevent the possibility of reverse polarity
- 28) (___) When the vehicle is elevated on the lift the door on the vehicle should be:
- a) Opened
 - b) Closed
 - c) Locked
 - d) Left ajar
- 29) (___) The transmission should be in park or neutral and the hand brake set before starting an engine because:
- a) This will prevent the car from moving unexpectedly
 - b) The car will not start unless this is done
 - c) It saves gas
 - d) It prevents transmission leaks
- 30) (___) 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

OPERATE POWER MACHINERY SAFELY

- 31) (___) In case of any emergency when you are operating power machinery, always be ready first to:
- 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
- 32) (___) 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
- 33) (___) 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
- 34) (___) 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
- 35) (___) Before you turn on the power to start a machine, be sure:
- a) Any loose tools or other objects are removed from the machine
 - b) You are not standing where you could be injured by material thrown by the machine
 - c) To check with your instructor
 - d) All of the above

PORTABLE ELECTRIC TOOLS

- 36) (___) To avoid injury from the chuck key or the rotating drill, be sure:
- a) The drill will not be accidentally turned on while you are tightening the chuck
 - b) The switch is on before plugging the drill into a wall outlet
 - c) The switch is off before plugging into an outlet
 - d) Both a and c

- 37) (___) Extension cords should be:
- a) Red in color
 - b) Draped across aisles
 - c) Checked for worn insulation
 - d) Yanked out of the outlet when finished
- 38) (___) 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
- 39) (___) While drilling with the electric drill:
- a) Brace yourself well and be ready to release the switch in case the drill grabs
 - b) Keep your face away from the drill
 - c) Both a and b
 - d) Neither a nor b
- 40) (___) When drilling a small piece of material
- a) Hold it in your lap
 - b) Never hold it in your hand
 - c) Use extra pressure
 - d) Use pliers to hold the material

PEDESTAL GRINDER

- 41) (___) To prevent the work from catching between the rest and the grinding wheel, the gap between them should be greater than:
- a) 1 inch
 - b) 1/4th inch
 - c) 1/8th inch
 - d) 1/2"
- 42) (___) Before starting the grinder, be sure that:
- a) The side wheel guards are removed
 - b) The grinding wheel is securely in place
 - c) Both a and b
 - d) Neither a nor b
- 43) (___) To prevent the work from slipping into the grinding wheel:
- a) Hold it with a rag
 - b) Hold it with vise grips or a vise
 - c) Hold it with pliers
 - d) Hold it with gloves

- 44) (___) To avoid injury from flying particles:
- a) Always wear safety goggles or a face shield
 - b) Grind on the sides of the wheel only
 - c) Stand in front of the wheel when starting the grinder
 - d) The tool rest should be 1/4" from the wheel
- 45) (___) To prevent the grinder from throwing the work:
- a) Grind above the center of the wheel
 - b) Grind below the center of the wheel
 - c) Push the work downward between the wheel and the rest
 - d) Grind on the side of the wheel

DRILL PRESS

- 46) (___) To prevent the work from being torn from your grasp, work should be securely clamped to the table or in a:
- a) Wrench
 - b) Vise
 - c) Vertical position
 - d) Horizontal position
- 47) (___) The vise should be held firmly to prevent the work from:
- a) Overheating
 - b) Falling
 - c) Revolving in a dangerous manner
 - d) All of the above
- 48) (___) When the drill begins to cut through the work, ease up on the:
- a) Chuck
 - b) Feed pressure
 - c) Vise
 - d) Drill speed
- 49) (___) An improperly ground drill can cause the drill to:
- a) Dig into the work
 - b) Throw the work
 - c) Both a and b
 - d) Neither a nor b
- 50) (___) Before the power is turned on, the drill chuck key must be:
- a) Removed from the chuck
 - b) Installed correctly
 - c) Adjusted
 - d) Lubricated

- 51) (___) The machine should be stopped before removing work, chips, or cuttings. Chips and cuttings should then be removed from the table with:
- a) An air gun
 - b) Your hand
 - c) A brush
 - d) A shop towel

AXLE STANDS AND JACKS

- 52) (___) Before lifting a car with a hydraulic jack, first be certain that:
- a) The car's transmission is in neutral
 - b) Your instructor has checked the job and the equipment that you are using
 - c) The rest on top of the jack is in proper position
 - d) All of the above
- 53) (___) When one end of a car is lifted, blocks should be used:
- a) At the lifting end before jacking
 - b) At the opposite end after jacking
 - c) Where and how the instructor tells you, according to the type of equipment that you are using
 - d) At the opposite end of the vehicle before jacking
- 54) (___) Be sure the jack is correctly positioned under a strong section of the car, especially if:
- a) It is a station wagon
 - b) There is extra weight in the trunk
 - c) The car has a unit body construction
 - d) It is a 4-wheel drive
- 55) (___) If the jack is used under an axle, make sure that:
- a) The vehicle's transmission is in neutral
 - b) The lifting pad is positioned correctly to prevent slipping
 - c) Both a and b
 - d) Neither a nor b
- 56) (___) You should never:
- a) Crawl under a car supported only by a jack
 - b) Keep the hydraulic valve closed after raising the car
 - c) Leave the jack handle pointing straight up
 - d) Torque the lug nuts
- 57) (___) When using a pair of axle stands, check to be sure that they:
- a) Are the same height
 - b) Are the same brand
 - c) Have proper school identification numbers
 - d) Are the same size

- 58) (___) When lowering a car on a hydraulic jack, you should:
- a) Lower it slowly
 - b) Remove the wheel blocks before releasing the jack
 - c) Keep the hydraulic valve closed
 - d) Lower the car rapidly

ARBOR AND HYDRAULIC PRESSES

- 59) (___) The operator must make sure that the work is solidly supported on the press table and that the work is lined up correctly to prevent dangerous:
- a) Cranking
 - b) Pressure
 - c) Slipping
 - d) All of the above
- 60) (___) After each press table adjustment, make sure the supporting pins are properly placed so that the work set-up will not:
- a) Puncture
 - b) Collapse
 - c) Build up pressure
 - d) Align
- 61) (___) A bad hand injury could occur if the work should slip while you are holding onto the work or onto the:
- a) Pressure ram
 - b) Arbor
 - c) Handle
 - d) Cable
- 62) (___) You must watch the pressure gauge on a hydraulic press very carefully when the ram comes in contact with work because:
- a) Little effort by the operator can result in damage
 - b) The hydraulic press multiplies handle pressure greatly, compared with that of the arbor press
 - c) Both a and b
 - d) Neither a nor b

THIS IS TO CERTIFY that I have received instruction on the safety precautions to be observed in a class on auto 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 with a score of 100%.

Instructor's signature