

Iowa State University
Department of Mechanical Engineering
Collegiate Design and Student Organization Shop

Laboratory Safety Examination

You must complete the following quiz and score a minimum of 80% to be allowed to work in the Nuclear Engineering shop space. Students scoring less than 80% MUST retake the exam until a minimum score of 80% is achieved. All quizzes must be signed and dated.

Exam Instructions: Match the "best" term on the right to complete the statement on the left. Some terms may be used more than once but not all terms are used in all sections.

By signing below, I acknowledge that I have read the shop safety documentation, and have been trained on each of the safety points listed.

Name (Clearly Printed): _____

Signature: _____

Date: _____

Section 1, General:

1. Long sleeves, long hair, and loose clothing should be _____ to prevent being caught in moving or rotating machinery. Ties, loose sweaters, jackets, and jewelry should not be worn in the shop areas.
2. It is always dangerous to grab, wipe off, or otherwise remove metal chips with your _____.
3. Never leave a machine unattended while it is _____.
4. Small pieces of material that are to be drilled on a drill press should be held securely in a _____.
5. To avoid possible damage or injury, it is a good practice to ease up on the pressure about the time the drill _____ the metal.
6. It is dangerous to leave a _____ in the chuck after installing or removing a drill or work piece.
7. Immediately _____ any unsafe condition or behavior to the shop supervisor.
8. _____ and/or OSHA specific personal safety protection equipment must be worn while working in the lab.
9. When grinding or buffering a piece of material, always hold the work piece with a(n) _____.
10. For foot protection, _____ are good safety apparel but not required.
11. For operator protection, always verify that all _____ are in place on the equipment before running.
12. Immediately report all accidents and equipment problems to the nearest _____.
13. Due to danger from pressure and flying debris such as metal chips, never direct a(n) _____ at yourself or another person.
14. While (i) _____ tools are overall more dangerous to handle, (ii) _____ tools require more cutting effort and can cause accident during use.
15. For a liquid spill use _____ to clean up the liquid.
16. When using a drill press make sure to use the proper _____ speed when operating.

- A. Breaks Through**
- B. Fire Alarm**
- C. Firm Grip**
- D. Gloves**
- E. Spindle**
- F. Bare Hands**
- G. Hot**
- H. Key**
- I. On-Off Switch or
Emergency Stop**
- J. Report**
- K. Absorbent**
- L. Running**
- M. Safety Glasses**
- N. Steel Toe Boots**
- O. Secured**
- P. Vise Grips Or
Clamps**
- Q. Guards and Shields**
- R. Shop Supervisor**
- S. Air Hose or Air Gun**
- T. (i) Dull ; (ii) Sharp**
- U. (i) Sharp; (ii) Dull**
- V. Drill Press Vise**

Section 1, General continued:

17. Do not approach someone from _____ while they are operating a machine, it may startle them and cause an injury.
18. For safety reasons, one should never carry _____ with exposed cutting edges in your pocket.
19. Tools like chisels and punches with mushroomed heads are dangerous because of the potential for _____.
20. Make sure others are _____ of the work area around the machine you intend to use before turning it on.
21. Allow the _____ to reach full speed before stepping into position to use the tool.
22. One should NOT wear _____ while using a grinder.
23. The tool rest on a grinder should not be less than _____ from the face of the wheel.
24. One should never grind on the _____ surface of a grinding wheel.
25. Do not try to force the _____ by having multiple people stand on it.
26. An example of misusing a tool would be using a hammer on a _____.
27. One should never leave a running tool unattended while it is _____.
28. Use the _____ specified by a particular job and material.
29. Inspect three-pronged electrical plugs before use to make sure the _____ isn't broken off.
30. Do not use a _____ ladder if working around electrical sources.

- A. Clear**
- B. Gloves**
- C. Behind**
- D. Flying Fragments**
- E. Clearly Label**
- F. Running**
- G. One-Eighth Inch
(1/8")**
- H. Chisel**
- I. Ground**
- J. Sharp tools**
- K. Side**
- L. Sheet Metal Shear**
- M. Rotating**
- N. Ventilation**
- O. Away From You**
- P. Correct Grinding
Wheel**
- Q. One-Fourth Inch
(1/4")**
- R. In Front of**
- S. Grinder**
- T. Screwdriver**
- U. Metal**