

END-OF-YEAR

KNOWLEDGE – KEY & SCORING SHEET

Scoring sheet:

Number of correct answers	Test score
33	100
32	97
31	94
30	91
29	88
28	85
27	82
26	79
25	76
24	73
23	70
22	67
21	64
20	61
19	58
18	55
17	52
16	48
15	45
14	42
13	39
12	36
11	33
10	30
9	27
8	24
7	21
6	18
5	15
4	12
3	9
2	6
1	3

Answers:

Question ID	Answer
1	c
2	b
3	a
4	b
5	a
6	b
7	a
8	c
9	b
10	a
11	a
12	b
13	b
14	b
15	a
16	b
17	d
18	b
19	a
20	b
21	b
22	c
23	d
24	a
25	d
26	b
27	d
28	c
29	b
30	b
31	a
32	d
33	c



1. All of the following are the attributes of a proper machine guard EXCEPT:
 - a) ~~Prevents hands and other body parts from contacting moving parts~~
 - b) ~~Cannot be easily removed without tools~~
 - c) **Holds the stock in place**
 - d) ~~Creates no new hazards~~

2. What is the main advantage of a fixed guard?
 - a) ~~The operator does not need to inspect the guard~~
 - b) **It is a permanent part of the machine that cannot be easily bypassed**
 - e) ~~It provides adequate protection when defective or damaged~~

3. Two-hand controls are an example of a:
 - a) **Device**
 - b) ~~Procedure~~
 - e) ~~Guard~~
 - d) ~~LOTO~~

4. Complete this sentence to make it a “true” statement: A properly designed guard is a fixed guard which ...
 - a) ~~Can be easily removed~~
 - b) **Requires special tools to be removed**
 - e) ~~May be bypassed if it gets in the way of making a part~~
 - d) ~~Requires frequent adjustments and testing~~

5. A pressure mat is NOT an acceptable way to guard a point of operation
 - a) **True**
 - b) ~~False~~

6. When multiple people are operating a press, all of the following are true EXCEPT:
 - a) ~~Each operator should have an individual set of controls~~
 - b) **One set of controls is adequate as long as the work flow is coordinated**
 - e) ~~An emergency stop should be readily accessible to each worker~~
 - d) ~~If present, foot controls should be guarded to prevent accidental activation~~

7. An interlocking barrier guard shuts off or disengages power and prevents machine start-up when the guard is open.
 - a) **True**
 - b) ~~False~~

8. Safety glasses are marked with a stamp on the lens or on the temple. The stamp reads:
 - a) ~~OSHA~~
 - b) ~~ASE~~
 - c) **Z87**
 - d) ~~NIOSH~~



9. If you wear safety prescription glasses in the shop then:

- a) ~~Side shields are optional~~
- b) **Side shields must comply with the Z 87 standard requirements**
- c) ~~Side shields must be of clear plastic~~
- d) ~~Frames do not need to comply with the Z 87 standard~~

10. In a lockout/tagout program, an “authorized employee” is someone who is trained to:

- a) **Prepare a machine for service or maintenance**
- b) ~~Operate a robot in “training” mode~~
- c) ~~Install a new piece of equipment in the shop~~

11. In a lockout/tagout program, you would be considered an “affected employee” if you operate a machine that may be locked or tagged out for maintenance.

- a) **True**
- b) ~~False~~

12. Energy sources to a machine do not need to be locked out if the emergency stop (E-stop) is pushed prior to machine maintenance.

- a) ~~True~~
- b) **False**

13. A lockout/tagout program should include all of the following EXCEPT:

- a) ~~Employee training~~
- b) **Locks and tags purchased from OSHA**
- c) ~~Annual updates of lockout procedures~~
- d) ~~Lockout procedures for each machine~~

14. Machine guards for mills and drills must prevent eye injuries and comply with the Z 87 standard requirements.

- a) ~~True~~
- b) **False**

15. You may not notice noise-induced hearing loss because it often develops gradually.

- a) **True**
- b) ~~False~~

16. An extremely loud noise cannot damage your hearing after a short exposure.

- a) ~~True~~
- b) **False**

17. The severity of hearing loss depends on all of the following EXCEPT:

- a) ~~How loud the noise is~~
- b) ~~How long you are exposed to loud noise~~
- c) ~~Whether hearing protection is worn correctly and consistently~~
- d) **Whether noise exposure is at home or at work**



18. What is the purpose of power outage protection?
- a) ~~Keeps the machine operating even when shop loses power~~
 - b) Prevents the machine from automatically restarting when power is restored**
 - c) ~~Assures that critical machinery remains operational at all times~~
19. Compressed air should not be used for cleaning EXCEPT where the pressure is reduced to less than 30 p.s.i. and then only with effective chip guarding and personal protective equipment.
- a) True**
 - b) ~~False~~
20. Lifting objects heavier than 50 pounds without assistance puts you at high risk for:
- a) ~~Carpal tunnel~~
 - b) Back injury**
 - c) ~~Conjunctivitis~~
 - d) ~~Tendonitis~~
21. It is safe to remove chips from a machine while it is operating if you wear gloves to protect your hands from being cut or burned.
- a) ~~True~~
 - b) False**
22. Unrestrained long beards are not permitted in a machine shop because:
- a) ~~They keep you hot~~
 - b) ~~They affect your speech~~
 - c) They are an entanglement hazard**
 - d) ~~They make a person hard to see~~
23. Poor housekeeping habits that are also safety hazards include all of the following EXCEPT:
- a) ~~Oil on the floor around machines and in the aisles~~
 - b) ~~Piles of rags soaked with combustible materials~~
 - c) ~~Cluttered work areas~~
 - d) Articles stored on shelves**
 - e) ~~Tools lying on the floor~~
24. Coolants and cutting oils may cause which of the following health problems?
- a) Skin rash and lung problems**
 - b) ~~Kidney and liver disease~~
 - c) ~~Nerve and liver injury~~
 - d) ~~Skin rash and liver disease~~
25. How many of the emergency exits must be labeled with an illuminated exit sign?
- a) ~~At least half of them~~
 - b) ~~None of them~~
 - c) ~~Only the ones required by the fire inspector~~
 - d) All of them**



26. Emergency exits can be locked during business hours if the key is kept in the nearby office.
- a) ~~True~~
 - b) **False**
27. All of the following will help you avoid back injuries when lifting EXCEPT:
- a) ~~Sharing the load with another person~~
 - b) ~~Bending your knees and using your legs to help~~
 - c) ~~Avoiding twisting while holding the load~~
 - d) **Leaning forward and reaching**
28. A ground fault circuit interrupter (GFCI) is required when using an electric tool in a wet area because it will:
- a) ~~Protect the equipment~~
 - b) ~~Prevent fires~~
 - c) **Prevent electrocution**
 - d) ~~Prevent circuit overheating~~
29. The most important electrical current characteristic that determines the health effects in case of electrocution is:
- a) ~~Voltage~~
 - b) **Amperage**
 - c) ~~Complexity~~
 - d) ~~Resistance~~
30. What is the correct order of steps to operate a fire extinguisher?
- a) ~~Squeeze, Aim, Sweep, and Pull~~
 - b) **Pull, Aim, Squeeze, and Sweep**
 - c) ~~Pull, Aim, Sweep, and Squeeze~~
 - d) ~~Sweep, Aim, Pull, and Squeeze~~
31. You should use water to extinguish a fire involving:
- a) **Ordinary combustibles (paper, wood)**
 - b) ~~Electrical circuits and tools~~
 - c) ~~Flammable liquids (thinners, degreasers)~~
 - d) ~~Metals (magnesium, aluminum)~~
32. To reduce static electricity buildup when transferring flammable liquids you should do all of the following EXCEPT:
- a) ~~Ground the metal containers~~
 - b) ~~Connect the two containers~~
 - c) ~~Keep the door to the mixing room closed~~
 - d) **Place the clamps on a painted part of the container**



33. Which of the following is NOT a potential cause of fire in a shop?

- a) ~~Damaged electrical wires~~
- b) ~~Welding sparks~~
- c) **Open containers of corrosive liquids**
- d) ~~Solvent-soaked rags in an open trash can~~

