**Pretest Info Section Power Tools**

1. What are the two main tasks for maintaining a drill? **Oil chuck and keep clean**

2. What material is drilled using a carbide-tip bit? **Masonry**

3. What is one advantage and one disadvantage of HSS (high speed steel) bits? **Designed for faster speeds but is very brittle and can break**

4. What are the two main types of hammer drill? **Percussion and rotary**

5. Cutting oil can be left on tools and equipment as it is also a lubricant. True or False? **False**

6. Why is a drill press an especially dangerous tool? **High torque**

7. What are some precautions when using a drill press? **Hair under control, no loose clothing, don’t use hands to brush cuttings away, clamp all work, and remove the chuck before starting**

8. How should cuttings be removed from the work area when using a drill press? **Rag or gloves**

9. What is the main advantage of hydraulic knockout punches over manual ones? **Ease of use**

10. What size hole is made by a ½” knockout punch? **7/8”**

11. What are the main parts of a hydraulic knockout punch? **Pump, ram, hose, and punch and die set**

12. What is the first step when drilling a large hole in thick metal with a HSS bit? **Drill a small pilot hole**

13. What are some advantages of cordless drills over the corded models? **Very portable and can be safely used in damp locations**

14. Why should a hole saw not be used without the pilot hole drill in the center? (Think about it if you have not had the experience.) **Hole saw will wander from where you want the hole**

15. When drilling steel with a HSS bit, what should be done just before breaking through the surface? **Ease up on the pressure**

16. What materials (other than wood) can be cut with a circular saw? **Metal and masonry**
17. What are reciprocating saws typically used for in the electrical field? Cut floorboards, notch beams, and cut access holes

18. What are jigsaw s typically used for in the electrical field? Cutting outlet boxes into wooden walls

19. Which drill bit requires the operator to use the auxiliary handle and keep a firm grip on the drill at all times? Hole saw

20. How are grinders sized? Size of the wheel they will accommodate

21. What is the purpose of the course and fine wheels on a grinder? Course is for fast removal of stock and fine is for a smoother finish

22. When are problems most likely with a grinder? As it is coming up to speed

23. What is the best protection from sparks and debris when working with a grinder? Full-face shield

24. What is the best protection for working with a small portable hand grinder? Full-face shield

25. What is the typical RPM of portable hand grinders? 10,000 rpm

26. What checks should be made before connecting pneumatic nailing and stapling tools to a supply? Safety mechanism is working, all caps are tight, and pressure is correct

27. What precautions should be taken before attempting to clear a blockage from a pneumatic tool? Disconnect from supply and purge by holding trigger

28. What is the minimum recommended pressure for air hoses on a system that produces 150 psig? 225 psig

29. Brushes in power tools should be inspected periodically and replaced if they are less than 6 mm?

30. What is the most likely cause of arcing in a power tool? Worn Brushes or commutator

Basic Electrical Safety

1. Why does current flow through a ground wire in a grounded power tool when a fault occurs and not through the operator? Lower resistance path
2. Which power tools are not required to be grounded? Double insulated

3. What should be done with damaged power tools? Taken out of service until repaired

4. When is it permissible to use power tools in wet locations? GFCI protected

5. What is one option instead of making a knot to hold a power tool cord in an extension cord? Loop cord or use twist-lock plug

6. What does CEC rule 10-408 (3) state? Tools and equipment with double insulation or equivalent protection, and so marked, need not be grounded