

# Maintenance Technician Test

NOTE: ANSWER KEY IS ON LAST PAGE

Name: \_\_\_\_\_

Score: \_\_\_\_\_

This is a test of your knowledge of basic maintenance skills. It covers areas like plumbing, carpentry, electrical systems, painting, tools, etc. There are 50 questions. Each question is followed by four possible answers (marked a, b, c, d). Circle the letter that gives the best answer to the question.

Example: A building's hallway lights keep flickering. You are not sure what the problem is. Who should you call for help?

- a. A plumber.
- b. An electrician.
- c. The police.
- d. A mason.

Since b, an electrician, is the right answer, you would draw a circle around the letter b.

1. The piece of equipment on which you are most likely to find a safety (pop off) valve is:
  - a. Hot air furnace.
  - b. Electric fan.
  - c. Hot water heater.
  - d. Dehumidifier .
  
2. Water hammer in domestic water lines is best eliminated by:
  - a. Increasing the size of all piping.
  - b. Installing an air chamber.
  - c. Replacing the valve seats with neoprene gaskets.
  - d. Flushing the system to remove corrosion.
  
3. Of the following, the best procedure to follow with a frozen water pipe is:
  - a. Allow the pipe to thaw out by itself as the weather gets warmer.
  - b. Put antifreeze into the pipe above the section that is frozen.
  - c. Turn on the hot water heater.
  - d. Open the faucet closest to the frozen pipe and warm the pipe with a blow torch, starting at this point.
  
4. In plumbing work, a valve that allows water to flow in one direction only is commonly known as a:
  - a. Check valve.
  - b. Glove valve.
  - c. Gate valve.
  - d. Stop valve.

5. A tool used in hanging doors is a:
  - a. Miter gauge.
  - b. Line level.
  - c. Micrometer.
  - d. Butt gauge.
  
6. A miter box is used:
  - a. For locating dowel holes in two pieces of wood to be joined together.
  - b. To hold a saw at a fixed angle while sawing.
  - c. To hold a saw while sharpening its teeth.
  - d. To clamp two pieces of wood together at 90 degrees.
  
7. Of the following, the best way to lay out a long, straight line of floor is to use:
  - a. A steel tape and carpenter's pencil.
  - b. Chalk and a 6 foot rule.
  - c. Chalk and a plumb tool.
  - d. Chalk and a mason's line.
  
8. The purpose of flashing on roof is:
  - a. Secure roofing materials to the roof.
  - b. Make it easier to lay the roofing.
  - c. Prevent leaks through the roof.
  - d. Insulate the roof from excessive heat.
  
9. Water is used to thin which type of paint?
  - a. Enamel.
  - b. Latex.
  - c. Shellac
  - d. Lacquer.
  
10. When using tape to conceal joints in dry wall construction, the first operation is:
  - a. Channeling the grooves between boards.
  - b. Applying cement to the joints.
  - c. Sanding the edges of the joints.
  - d. Packing the tape into the joints.
  
11. The room is 7'6" wide by 9'0" long with a ceiling height of 8'0". One gallon of flat paint will cover approximately 400 square feet of wall. The number of gallons of this paint required to paint the walls of this room, making no deductions for windows or doors, is most nearly:
  - a. 1/4 gallon.
  - b. 1/2 gallon.
  - c. 3/4 gallon.
  - d. 1 gallon.
  
12. In a 100-220 volt three wire circuit, the neutral wire is usually:
  - a. Black.
  - b. Red.

- c. White.
  - d. Green.
13. Assume that freshly poured concrete has been exposed to freezing temperatures for six hours. In all likelihood, this concrete:
- a. Has been permanently damaged.
  - b. Will harden properly as soon as the air temperature warms.
  - c. Will harden properly even though the temperature remains below freezing.
  - d. Will eventually harden properly, but it will take much longer than usual.
14. A carton contains 9 dozen drill bits. If a maintenance worker removes 73 drill bits, the number of bits remaining in the carton is:
- a. 24.
  - b. 35.
  - c. 47.
  - d. 62.
15. Tubing with an outside diameter of 2" and a wall thickness of 1/16" has an inside diameter of:
- a. 1 1/2".
  - b. 1 3/4".
  - c. 1 7/8".
  - d. 1 15/16".
16. The best material to lubricate a door lock is:
- a. Penetrating oil.
  - b. Pike oil.
  - c. Graphite.
  - d. Light grease.
17. What is the best method of removing stickers from the refrigerator and bathtub?
- a. Scrape with a razor blade.
  - b. Powdered cleaner and sponge.
  - c. A solvent (Acetone, etc.)
  - d. All of the above.
18. What cleaning agent is safest and best used for cleaning oil base paint from your painting tools?
- a. Water.
  - b. Alcohol.
  - c. Gasoline.
  - d. Turpentine or mineral spirits.
19. When painting over a dark water stain on a wall or ceiling that has dried, you should:
- a. Paint the water stained area the same color and square off ends.
  - b. Prime, seal, and paint the entire room because it won't look good if you don't.
  - c. Make certain the water leak is stopped and then make sure any sheetrock repairs needed have been made and prime or coat. If necessary, paint entire surface.
  - d. None of the above.

20. When is the best time of year to prune trees and shrubs?
- Anytime of the year if they need it.
  - Just before fertilization.
  - Early spring or early fall, depending on the type of tree or shrub.
  - Just after a rain.
21. What is the three-way wall switch?
- A switch that operates a light from two locations.
  - A switch that operates a three-way light bulb.
  - A switch specifically designed for high pressure sodium fixtures.
  - A switch only used for 24 volt systems.
22. If the service request from the resident indicates that the ceiling light fixture in the bedroom is not working, in what order would you check?
- Wiring to light fixture, main panel box, light switch.
  - Light bulb, diffuser, switch, breaker.
  - Light switch, transformer, light bulb, panel box.
  - Check breaker, light bulb, light switch.
23. What is the most efficient tool to use for testing electrical current and motors?
- Volt-ohm tester.
  - Light bulb tester.
  - Amp probe.
  - Continuity tester.
24. What is the correct way to connect copper to aluminum wire?
- Wire nut and electrical paste.
  - Tape
  - Split nut.
  - You should never connect copper wire to aluminum wire.
25. If the electric hot water heater is not heating, what are the first two things that you would check?
- Temperature setting and elements.
  - Breaker and thermostat reset.
  - Breaker and mixing valve.
26. If a resident complains that he/she does not have enough hot water to finish a shower, what could be the problem?
- Inferior insulation.
  - Poor air to water mixture in the tank.
  - Week pressure relief valve or element burned out.
  - Cheap equipment.

27. What is the common condition that causes an air conditioner to operate continuously or for long periods of time?
- a. Dirty condenser.
  - b. Dirty evaporator.
  - c. Dirty filter
  - d. All of the above.
28. The low voltage controlled contractor in a condensing unit controls:
- a. Main condensing unit's operation.
  - b. High side mixing valve.
  - c. Sequencer mechanism.
29. An iced suction line generally indicates:
- a. Low refrigerant.
  - b. Dirty piercing valve.
  - c. Dirty condenser.
  - d. Any of the above.
30. When replacing a compressor, you should always install line dryers.
- a. True.
  - b. False.
31. When checking the suction line at the condensing unit, you find it warm. What could this indicate?
- a. Lock rotor amp compressor.
  - b. Too little Freon.
  - c. Dirty condenser coil.
  - d. All of the above.
32. If the thermostat is lowered from 75 degrees to 65 degrees on the cooling cycle, the air coming out of the ducts will be at least 10 percent cooler.
- a. True.
  - b. False.
33. Upon arriving at an apartment on an a/c service call, you find water running out of an air handler. The cause probably is:
- a. Refrigerant leak.
  - b. Condensate line blockage.
  - c. Leak isn't a/c related.
  - d. None of the above.
34. An iced evaporator can indicate a dirty filter.
- a. True.
  - b. False.

35. Resident complains that the furnace blower runs, but there is not enough heat. What would you suspect is wrong?
- Dirty filter.
  - Weak limit switch.
  - Sequence switch not operating correctly.
  - Heating coil burned out.
  - Any of the above.
36. Resident complains that the furnace blower is turning off and on all the time, but she still has heat. What would you suspect is wrong?
- Thermostat is short cycling, too high rating of anticipator.
  - Bad sequence switch.
  - Internal motor overload may be opening and closing.
  - Any of the above.
37. Resident complains that the furnace will not blow air. What would you suspect is wrong?
- Tripped breaker.
  - Defective contactor or relay in control system.
  - Defective motor (open circuit).
  - Any of the above.
38. What is a safety device on a gas fired furnace?
- Sequencer.
  - Anticipator.
  - Limit switch.
  - Smoke indicator.
39. While inspecting a gas furnace, you noticed scorched front wires. What could be the problem?
- Clogged flow meter.
  - Inoperative sequencer (low voltage side).
  - Hole in heat exchanger or improper draft.
  - All of the above.
40. Resident complains that the gas furnace blower is turning off and on all the time, but he still has heat. What should you suspect is wrong?
- Bad heat capacitor.
  - Bad thermocouple
  - Weak transformer.
  - Internal motor overload may be opening and closing.
41. Frequent washer replacement on a faucet generally indicates:
- Poor installation of washers.
  - Wrong size of washer.
  - Worn faucet seat.
  - None of the above.

42. A running toilet is general caused from a worn float rod.
- True.
  - False.
43. Where would you find an aerator?
- At the base of the stem.
  - At the end of the faucet.
  - Just before the p-trap or j-bend.
  - In the shower head.
44. What is the function of a bib seat?
- To help stop water flow.
  - To increase water flow.
  - Helps the plumber unclog drains.
  - To relieve pressure so pipes do not burst.
45. Flux is used:
- To lubricate valve stems.
  - To seal mechanical joints from leaking.
  - To clean copper wire before soldering.
  - To seal copper joints after soldering.
46. A vacuum pump should be used on an air system anytime all the Freon is released from the system.
- True.
  - False.
47. In replacing a door, the most accurate way to cut the hinge depth would be:
- Hammer and 1/4" chisel.
  - Jigsaw.
  - Hinge saw.
  - Router and bit.
48. When installing a deadbolt lock on an exterior door, what are the two most commonly used plunger depths?
- 2" and 3".
  - 1 1/2" and 2".
  - 2 3/8" and 2 3/4".
  - None of the above.
49. In putting out a grease fire, which of the following is the best type of fire extinguisher to use?
- CO<sub>2</sub>.
  - Baking soda.
  - ABC powder.
  - Any of these.

50. How many times a year should you change a/c filters?
- a. Four times.
  - b. Once.
  - c. It is the resident's responsibility.
  - d. The Resident Manager will let you know.



## Maintenance Test Score Key

1	C	33	B
2	B	34	A
3	D	35	E
4	C	36	D
5	D	37	D
6	B	38	C
7	D	39	C
8	C	40	D
9	B	41	C
10	B	42	A
11	C	43	B
12	C	44	A
13	A	45	C
14	B	46	A
15	C	47	D
16	C	48	C
17	C	49	D
18	D	50	A
19	C		
20	C		
21	A		
22	B		
23	A		
24	D		
25	B		
26	C		
27	D		
28	A		
29	D		
30	A		
31	D		
32	B		