



THE 7 SINS OF ESD CONTROL

Training Certification Test (DVD-78C)

This test consists of twenty multiple-choice questions. All questions are from the DVD: *The Seven Sins of ESD Control (DVD-78C)*.

Each question has only one *most* correct answer. Circle the letter corresponding to your selection for each test item.

If you want to change an answer, erase your choice completely.

You should read through the questions and answer those you are sure of first. After your first pass through the test, then go back and answer the questions that you were not sure of. If two answers appear to be correct, pick the answer that seems to be the most correct response.

When you are finished, check to make sure you have answered all of the questions. Turn in the test materials to the instructor.

The passing grade for this test is 70% (14 correct answers or better).

Good luck!

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- 1. The reason personal grounding helps control ESD is**
 - a. people work in a more controlled manner
 - b. people absorb the ESD charges instead of the electronic assembly
 - c. charges are drained before they reach the ESD sensitive device
 - d. charges simply disappear

- 2. Wrist straps should be used during**
 - a. seated operations
 - b. standing operations
 - c. operations where you use your wrist
 - d. all of the above

- 3. Wrist straps should**
 - a. be worn snugly against bare skin
 - b. be attached to a ground wire with a current limiting resistor
 - c. have some form of quick connect / disconnect
 - d. all of the above

- 4. Shoe grounders work because**
 - a. your shoes touch the ground
 - b. the moisture from your sock aids in completing the connection from your body to ground
 - c. the elastic fits all shoe sizes
 - d. none of the above

- 5. When testing shoe grounders, you should**
 - a. place both feet on the metal plate
 - b. never touch the metal plate with your feet
 - c. place one foot at a time on the metal plate
 - d. take off your wrist strap

- 6. Shaking your wrist during wrist strap testing**
 - a. causes the pass light to flash
 - b. checks for intermittent failures
 - c. checks that the wrist strap is secured to your wrist
 - d. is a nervous habit that should be stopped

- 7. Static producing clothing**
 - a. can cause damage to ESD sensitive components
 - b. stores static charges
 - c. is usually made from wool or polyester
 - d. all of the above

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- 8. Conductive smocks are effective because they**
- a. drain charges harmlessly to ground
 - b. can be used as a replacement for wrist straps
 - c. make operators feel they are part of a team
 - d. are attractive when they fit right
- 9. Rubbing hands together, raising arms and combing hair are examples of**
- a. repetitive movements that cause carpal tunnel syndrome
 - b. static producing activities
 - c. positive ways of relieving tension
 - d. what you do when you're bored
- 10. Which of these materials are allowed at your workstation?**
- a. tape dispensers
 - b. party balloons on your birthday
 - c. flowers in ESD approved vases
 - d. none of the above
- 11. Air ionizers**
- a. are sprayed on equipment to prevent ESD
 - b. keep your skin from drying out
 - c. help neutralize any positive or negative charges
 - d. lower the relative humidity
- 12. Conductive surfaces cause**
- a. charged devices to discharge too rapidly
 - b. charged devices to discharge too slowly
 - c. components to slip and slide around your work area
 - d. damage to ESD sensitive devices from optical reflection
- 13. An ESD safe workstation consists of**
- a. selected charged items
 - b. a grounded static dissipative work surface and static dissipative flooring
 - c. an oversized metal work bench where you can easily access materials
 - d. two chairs – one for you and one for your supervisor who can observe your work
- 14. Dissipative work surfaces and floors**
- a. require rubber shoes and gloves
 - b. require safety glasses
 - c. are good locations to store work in process
 - d. conduct electricity slowly

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- 15. The first rule of proper handling is to**
- a. minimize handling as much as possible
 - b. wear protective gloves
 - c. pick up assemblies by grasping the soldered components
 - d. ask for help when lifting the assembly
- 16. An example of improper handling is**
- a. holding an assembly by the edges
 - b. picking up a component with a vacuum pick
 - c. holding a component by the leads
 - d. none of the above
- 17. Sliding a component across a work surface**
- a. is the fastest and safest way to move it
 - b. generates static charge and can damage the component
 - c. is a way of preparing the leads for component insertion
 - d. all of the above
- 18. The best protection for ESD sensitive devices is to**
- a. store them in closed cardboard boxes
 - b. store them in static shielding containers
 - c. store them in static dissipative containers
 - d. store them using a combination of static shielding and static dissipative packaging
- 19. An approved ESD rack will have**
- a. two shelves
 - b. inflatable wheels
 - c. a grounding chain
 - d. all of the above
- 20. Transporting ESD sensitive items in open totes is usually permitted**
- a. within an ESD safe area
 - b. outside an ESD safe area
 - c. whenever you can't find a cover that fits
 - d. is never permitted