



Association Connecting Electronics Industries

RAY'S ESD PREVENTION SECRETS TRAINING CERTIFICATION TEST (DVD-75C) v.1

This test consists of twenty multiple-choice questions. All questions are from the video: *Ray's ESD Prevention Secrets (DVD-75C)*.

Each question has only one *most* correct answer. Circle the letter corresponding to your selection for each test item. If you wish 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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Name _____ Date _____

1. **When one item is charged positive and another item is charged negative**
 - a. the items will attract one another
 - b. the items will repel one another
 - c. the items remain static
 - d. the items become grounded

2. **The lowest level of ESD most people feel is**
 - a. 20 volts
 - b. 700 volts
 - c. 2,000 volts
 - d. 5,000 volts

3. **An example of a neutral material is**
 - a. polyester
 - b. cotton
 - c. nylon
 - d. all of the above

4. **The biggest cause of ESD is**
 - a. styrofoam coffee cups
 - b. improper transport of assemblies
 - c. people
 - d. operating with low humidity

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

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

7. **Shoe grounders work because**
 - a. your shoes fit better
 - b. the moisture from your sock aids in completing the connection from your body to ground
 - c. your shoes become dryer
 - d. all of the above



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

- 9. If shoe grounders fail when being tested at the start of your shift**
 - a. it's a sign to go home because nothing that day will work properly
 - b. try rubbing some ESD hand lotion on the bottom of your foot and test again
 - c. try rubbing alcohol on the bottom of your foot and reverse the straps
 - d. try testing your wrist strap

- 10. Continuous monitoring is helpful because**
 - a. it is important to pay attention to what others are doing
 - b. it increases humidity at the workstation
 - c. there needs to be continuity when handling ESD sensitive devices
 - d. it notifies the operator the moment the wrist strap or workbench fails

- 11. When conductive smocks are not available, it is best to wear clothing made of**
 - a. cotton
 - b. wool
 - c. polyester
 - d. silk

- 12. The best protection for ESD sensitive devices is to store them**
 - a. in moisture free packaging
 - b. using a combination of static shielding and static dissipative packaging
 - c. in lead and glass boxes
 - d. in closed cardboard boxes

- 13. When you enter a non-ESD protected area**
 - a. you can handle product as long as you are wearing shoe grounders
 - b. you can touch an assembly as long as you hold it by the edges
 - c. your shoe grounders will no longer function as intended
 - d. all of the above

- 14. The best way to control ESD from static producing materials is to**
 - a. utilize an air ionizer
 - b. operate with low humidity
 - c. spray staticide on the materials
 - d. completely eliminate the materials from the work area



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- 15. Operating within a high humidity environment tends to**
- a. make ESD problems worse
 - b. reduce charge build-up
 - c. make components sensitive to heat
 - d. increase charge build-up
- 16. An example of a static producing activity is**
- a. rubbing two dissimilar materials together
 - b. shifting your feet
 - c. combing hair
 - d. all of the above
- 17. When handling components, make sure you**
- a. pick up the component to move it
 - b. handle the component by the body rather than the leads
 - c. set the components down so the leads touch a static dissipative surface
 - d. all of the above
- 18. Setting a component down on a static dissipative surface works because**
- a. the insulation renders the charge neutral
 - b. electricity is amplified to neutralize the charge
 - c. any built up charges drain slowly
 - d. the color of the surface lowers the temperature
- 19. Circuit board assemblies should be handled**
- a. by the edges only
 - b. by the larger components that are securely soldered to lands
 - c. by the heat sinks or the headers
 - d. any of the above
- 20. The most important aspect of ESD prevention involves**
- a. the complete participation and cooperation of every employee
 - b. caution signs related to ESD
 - c. understand the physics behind ESD
 - d. the newest engineering innovations