

**ESD CONTROL FOR
ELECTRONICS ASSEMBLY
TRAINING CERTIFICATION TEST (DVD-74C) v.2**



This test consists of twenty multiple-choice questions. All questions are from the video: *ESD Control for Electronics Assembly – DVD-74C*.

Use the supplied *Answer Sheet* and circle the letter corresponding to your selection for each test item. If more than one answer appears to be correct, pick the answer that seems to be the most complete response. Should you wish to change an answer, erase your choice completely.

When 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!

**ESD CONTROL FOR
ELECTRONICS ASSEMBLY
TRAINING CERTIFICATION TEST (DVD-74C) v.2**



ANSWER SHEET

Name: _____ Date: _____

1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
5	A	B	C	D
6	A	B	C	D
7	A	B	C	D
8	A	B	C	D
9	A	B	C	D
10	A	B	C	D
11	A	B	C	D
12	A	B	C	D
13	A	B	C	D
14	A	B	C	D
15	A	B	C	D
16	A	B	C	D
17	A	B	C	D
18	A	B	C	D
19	A	B	C	D
20	A	B	C	D

**ESD CONTROL FOR
ELECTRONICS ASSEMBLY
TRAINING CERTIFICATION TEST (DVD-74C) v.2**



- 1. Most people feel ESD above**
 - a. 2,000 volts
 - b. 20,000 volts
 - c. 20 volts
 - d. 200 volt s

- 2. ESD sensitive components can be damaged by as little as**
 - a. 2,000 volts
 - b. 20,000 volts
 - c. 20 volts
 - d. 200 volts

- 3. Triboelectric charging involves**
 - a. a positive or negative charge
 - b. creating electrostatic charge by contact and separation of materials
 - c. the transfer of electrons between materials
 - d. all of the above

- 4. A material that gains electrons is**
 - a. triboelectrically charged
 - b. positively charged
 - c. negatively charged
 - d. electrically over stressed

- 5. Which material leaves a cork positively charged?**
 - a. polyester
 - b. nylon
 - c. cotton
 - d. rubber

- 6. The human body and static dissipative materials are examples of**
 - a. electrostatic discharge
 - b. conductors
 - c. insulators
 - d. conductors with a higher resistance than metals to the flow of electricity

- 7. Wrist straps are required for**
 - a. operations where you use your wrist
 - b. seated operations
 - c. all operations
 - d. standing operations

**ESD CONTROL FOR
ELECTRONICS ASSEMBLY
TRAINING CERTIFICATION TEST (DVD-74C) v.2**



8. 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

9. Shaking your wrist and stretching the cord 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

10. Shoe grounders work because

- a. the elastic fits all shoes sizes
- b. the moisture from your sock aids in completing the connection from your body to ground
- c. all shoes are conductive
- d. all of the above

11. When testing shoe grounders on a tester with a single metal plate

- 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

12. 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 fails

13. When static control smocks are not available, it is best to wear clothing made of

- a. wool
- b. cotton
- c. polyester
- d. silk

14. The surest way to control ESD from non-essential insulators is to

- a. utilize an air ionizer
- b. operate with low humidity
- c. completely eliminate the non-essential insulators
- d. spray anti-static solution on the materials

**ESD CONTROL FOR
ELECTRONICS ASSEMBLY
TRAINING CERTIFICATION TEST (DVD-74C) v.2**

- 15. You can control the charges generated by process-required insulators through**
- a. air ionizers to neutralize charges
 - b. applying an anti-static solution to hand tools
 - c. arranging the workstation so that static sensitive assemblies are no closer than 12 inches to the static generating materials
 - d. all of the above
- 16. Static dissipative materials**
- a. dissipate humidity in the work area
 - b. conduct electricity slowly enough to minimize the chance of damaging electronic components
 - c. prevent static electricity from being generated
 - d. provide shielding
- 17. When handling components, make sure you**
- a. minimize sliding the device over any surface
 - b. handle the component by the body rather than the leads
 - c. set the components down so that the leads touch a static dissipative surface
 - d. all of the above
- 18. Circuit board assemblies should be handled**
- a. by the heat sinks or the headers
 - b. by the larger components that are securely soldered to lands
 - c. by the edges only
 - d. any of the above
- 19. Low charging packaging is required for**
- a. movement of ESD sensitive items within an ESD protected area
 - b. low charging devices
 - c. movement of ESD sensitive items out of an ESD protected area
 - d. devices that do not have ESD sensitivity
- 20. When transporting ESD sensitive devices out of the ESD protected area, use**
- a. moisture free packaging
 - b. lead and glass boxes
 - c. a combination of low charging and static shielding packaging
 - d. closed cardboard boxes