



Association Connecting Electronics Industries

## **INTRODUCTION TO BOX BUILD TRAINING CERTIFICATION TEST (DVD-50C) v.1**

**This test consists of twenty multiple-choice questions. All questions are from the video: *Introduction to Box Build (DVD-50C)*.**

**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!**



# INTRODUCTION TO BOX BUILD TRAINING CERTIFICATION TEST (DVD-50C) v.1

Name \_\_\_\_\_ Date \_\_\_\_\_

1. **Box build is an electromechanical assembly process consisting of**
  - a. fabricating the chassis
  - b. installing subassemblies
  - c. routing cables and wires
  - d. all of the above
  
2. **Box build results in**
  - a. a fully assembled circuit board
  - b. the fabrication of the chassis
  - c. the final electronic product
  - d. all of the above
  
3. **An example of a box is a**
  - a. computer
  - b. life support system
  - c. cell phone
  - d. all of the above
  
4. **The documentation for box build typically consists of**
  - a. four types of assembly instructions
  - b. three types of assembly documents
  - c. two types of assembly specifications
  - d. one complicated drawing
  
5. **The Bill of Materials contains**
  - a. the part numbers and quantities of all the hardware required for the build
  - b. step-by-step procedures used to accomplish the build
  - c. photographs of all the billed materials that will be installed
  - d. line drawings of all the hardware and tools used for the build
  
6. **The physical form of the product is depicted in the**
  - a. method sheet
  - b. assembly drawing
  - c. bill of materials
  - d. assembly instructions

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- 7. The step-by-step instructions are specified in the**
  - a. method sheet
  - b. assembly instructions
  - c. bill of materials
  - d. both a and b
  
- 8. Documentation that is either incomplete or inaccurate creates a feeling of**
  - a. frustration
  - b. comfort
  - c. confidence
  - d. relaxation
  
- 9. The chassis is also known as the**
  - a. box
  - b. enclosure
  - c. cabinet
  - d. all of the above
  
- 10. The back panel of the chassis typically houses**
  - a. power supplies
  - b. connectors
  - c. indicators
  - d. motherboards
  
- 11. One of the biggest causes of circuit board assembly failures is**
  - a. faulty solder connections
  - b. overheating
  - c. ESD
  - d. solder splatter
  
- 12. A common tool for tightening screws is a**
  - a. socket wrench
  - b. Phillips head screwdriver
  - c. crimping tool
  - d. pliers
  
- 13. A torque device**
  - a. allows screwdrivers and wrenches to over tighten hardware
  - b. is an excellent remedy for coughs and muscle aches
  - c. allows a tool to stop tightening when a predetermined tightness is reached
  - d. is used to keep the circuit board assemblies from overheating



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- 14. Stacking circuit board assemblies can be a problem because**
  - a. through-hole component leads can drag across the next board and scratch a conductor
  - b. it is difficult to stack them neatly
  - c. they are harder to count
  - d. everybody has their own way of stacking
  
- 15. Enclosure panels can cause potential injury because of**
  - a. loose switches
  - b. heat from panel LED displays
  - c. sharp edges and burrs
  - d. pointy through-hole leads
  
- 16. The box build process begins when**
  - a. the first subassembly is installed in the chassis
  - b. the assembly instructions are read and understood
  - c. the first tube of epoxy is opened
  - d. the materials for the job are delivered from the stockroom
  
- 17. The Bill of Materials is used to**
  - a. verify part numbers and quantities of materials
  - b. determine the build sequence
  - c. specify torque settings for the drivers
  - d. illustrate exploded views
  
- 18. Circuit board rails are installed with the**
  - a. slots facing out
  - b. slots facing in
  - c. slots facing in and out
  - d. slots facing in a manner that is the most attractive
  
- 19. It's important to verify that torque devices**
  - a. have the correct amount of adhesive
  - b. have been properly pre-heated
  - c. have been calibrated
  - d. exhibit proper wetting characteristics
  
- 20. The key to successful box build is to**
  - a. become completely familiar with the assembly documentation
  - b. consult with team members to find solutions to assembly problems
  - c. have the correct tools and materials
  - d. all of the above