



## **PLATED THROUGH HOLE REPAIR (DVD-97CC)**

**This test consists of twenty multiple-choice questions. All questions are from the video: *Plated Through Hole Repair (DVD-97CC)*.**

**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!**

## PLATED THROUGH HOLE REPAIR (DVD-97CC)

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

- 1. A supported through hole means**
  - a. the hole is supported by laminate material
  - b. the hole is plated with a metal lining around the inside of the barrel
  - c. there is documentation to support the hole
  - d. the hole has surface mount support
  
- 2. The two ways that lands and plating are connected are**
  - a. via through hole and surface mount
  - b. with two part epoxy
  - c. mechanically and electrically
  - d. hard drives and RAM
  
- 3. Damaged plating is replaced by**
  - a. an eyelet
  - b. foil jumper material
  - c. adhesive backed plating
  - d. electromigration
  
- 4. The most reliable method to find out if there is an inner layer connection is to**
  - a. inspect the assembly using a microscope
  - b. review the engineering schematics
  - c. perform a stress test
  - d. all of the above
  
- 5. Most eyelets come from the manufacturer with a flat surface on one end called a**
  - a. flange
  - b. crimp
  - c. bend
  - d. rivet
  
- 6. The measurement used to select a replacement eyelet is**
  - a. board thickness
  - b. inside diameter
  - c. length under the flange
  - d. all of the above

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- 7. The eyelet diameter should always be between .003 and .020 inches greater than**
  - a. the original plated through hole
  - b. the factory flange
  - c. the component lead that will go through the eyelet
  - d. the thickness of the board
  
- 8. The eyelet's factory flange should be slightly smaller than the**
  - a. component
  - b. thickness of the board
  - c. inside diameter
  - d. land it sits on
  
- 9. The hole that the eyelet goes into should be**
  - a. the same size as the eyelet's outside diameter
  - b. between .001 and .005 inches larger than the eyelet's outside diameter
  - c. between .005 and .010 inches larger than the eyelet's outside diameter
  - d. between .010 and .015 inches larger than the eyelet's outside diameter
  
- 10. The thickness of the board is measured with a**
  - a. dial caliper or micrometer
  - b. volt meter
  - c. continuity tester
  - d. ruler
  
- 11. The flange diameter on the replacement eyelet**
  - a. should be slightly smaller than the companion hole's land
  - b. should not interfere with minimum spacing requirements of nearby circuitry
  - c. should not be smaller than the hole in the board
  - d. all of the above
  
- 12. The inside diameter of the companion hole barrel is measured with a**
  - a. diametric device
  - b. caliper
  - c. set of pin gauges
  - d. micrometer
  
- 13. The drill bit used to grind away the damaged plating should be**
  - a. the same size as the companion hole diameter
  - b. slightly larger than the companion hole diameter
  - c. slightly smaller than the companion hole diameter
  - d. any of the above

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- 14. The length under the flange should be**
- .005 to .010 inches greater than the thickness of the board
  - .015 to .020 inches greater than the thickness of the board
  - .020 to .025 inches greater than the thickness of the board
  - .025 to .035 inches greater than the thickness of the board
- 15. The step that needs to be completed before the eyelet is inserted is**
- replacing lands that are badly damaged
  - replacing conductors that are badly damaged
  - tinning lands
  - all of the above
- 16. When tinning lands for replacement eyelets, it's important to make sure that**
- the coating of solder is not too thin
  - the coating of solder is not too thick
  - the flange sits above the surface of the board
  - the land is only partially coated with solder
- 17. The eyelet is typically inserted**
- up from the bottom side of the board
  - down from the top side of the board
  - so that the factory flange is on the component side of the board
  - any of the above
- 18. A *funnel set* means that the eyelet is**
- fully swaged
  - completely flattened
  - partially swaged
  - left as is
- 19. The best time to solder the eyelet flange to the land is**
- immediately after the eyelet has been swaged
  - before the eyelet has been swaged
  - during the installation of the replacement component
  - any time during the repair process
- 20. To evaluate the plated through hole repair, make sure that**
- the land and its conductor have secure physical bonds to the board
  - the surface mount land is rebonded
  - it passes a stress test
  - the solder mask is not damaged