



LAND AND CONDUCTOR REPAIR (DVD-97ABC)

This test consists of twenty multiple-choice questions. All questions are from the video: *Land and Conductor Repair (DVD-97ABC)*.

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. The most important part of repairing lands and conductors is**
 - a. determining the action to take
 - b. making the repair properly
 - c. evaluating and testing the repair
 - d. all of the above

- 2. Laminate damage usually occurs during**
 - a. incoming inspection
 - b. testing operations
 - c. rework operations
 - d. product shipment

- 3. One important thing to be aware of when repairing laminate damage is**
 - a. the potential for damaging inner layer circuitry
 - b. the circumference of the plated through holes
 - c. the length of the adjacent conductors
 - d. the size of the surface mount lands

- 4. The term *isolated surface mount land* means**
 - a. the land is the only surface mount land on the board
 - b. the land is not connected to any other circuitry or conductor
 - c. the land is isolated and not available to have a component lead placed upon it
 - d. all of the above

- 5. The tip size used to repair an isolated surface mount land should be**
 - a. the exact size of the land – never larger or smaller
 - b. the exact size of the land, or slightly smaller
 - c. the exact size of the land, or slightly larger
 - d. larger or smaller than the land – never the same size

- 6. The purpose of tinning a land after a repair is to**
 - a. make it more cosmetically attractive
 - b. prevent the bare copper from oxidizing when in contact with the air
 - c. provide a barrier to control fingerprints and scratching
 - d. all of the above

LAND AND CONDUCTOR REPAIR (DVD-97ABC)

- 7. The brown oxide layer of a replacement land**
 - a. enables the adhesive agent to make a mechanical bond with the copper
 - b. allows the adhesive to bond with the laminate material
 - c. enables a component to be soldered to the land
 - d. is always pre-tinned

- 8. When selecting a replacement land from the frame**
 - a. find one that has the same electrical characteristics as the original
 - b. find one that is the same size and thickness as the original
 - c. ask your supervisor if you have any doubts about selecting the replacement land
 - d. all of the above

- 9. An overbond is**
 - a. the initial epoxy layer used to rebond the conductor
 - b. the epoxy placed on adjacent lands
 - c. an additional epoxy layer along the surface of the lifted portion of the conductor
 - d. the part of the epoxy that does not need to be cured

- 10. Adhesive backed conductor material is used for**
 - a. conductor replacement of a short straight run
 - b. conductor replacement of a cut or short gap
 - c. conductor replacement of a long straight run
 - d. a land with connected conductor replacement

- 11. The amount of overlap for a *lap solder joint* is**
 - a. a little less than two times the width of the original conductor
 - b. no less than two times the width of the original conductor
 - c. the same size as the original conductor
 - d. any of the above

- 12. When cleaning a conductor**
 - a. clean with parallel strokes to the conductor, in the direction of the conductor run
 - b. start your strokes on the conductor and end at the gap
 - c. clean after tinning the conductor ends
 - d. all of the above

- 13. The last step in evaluating a repair of a short straight conductor run is to**
 - a. make sure the replacement is well bonded
 - b. perform an electrical continuity test on the repaired area
 - c. verify alignment and spacing
 - d. make sure the repair is cosmetically attractive

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- 14. A cut or short gap means a gap of less than**
 - a. 1/16 of an inch
 - b. 1/8 of an inch
 - c. 1/4 of an inch
 - d. 1/2 of an inch

- 15. A cut or short gap is typically replaced using**
 - a. epoxy material
 - b. adhesive backed material
 - c. tin-lead or lead free solder
 - d. foil jumper material

- 16. When anchoring a long conductor run with bends, never use**
 - a. heat resistant tape
 - b. a wooden stick
 - c. a fast drying epoxy product
 - d. quick tack adhesive

- 17. If you can't match a replacement land exactly**
 - a. use the internet to find one that is the same size
 - b. select a replacement land that is larger than the original land
 - c. select a replacement land that is smaller than the original land
 - d. bond the land to conductor material to create the exact size replacement land

- 18. Epoxy residue, contamination and solder masking should be cleaned using a**
 - a. damp sponge
 - b. hot vacuum extractor
 - c. utility knife
 - d. fine grit sandpaper

- 19. The purpose of heat resistant tape for solder mask replacement is to**
 - a. prevent solder mask from getting onto places that need to stay free of solder mask
 - b. provide the material for the solder mask to attach to
 - c. prevent the epoxy coating from heating up too quickly
 - d. clean the repair site

- 20. A texture and color match of the repair**
 - a. may be more cosmetically appealing
 - b. does not improve the functionality of the repair
 - c. is not strictly necessary
 - d. all of the above