



REWORK OF SURFACE MOUNT CHIP COMPONENTS (DVD-92C)

This test consists of twenty multiple-choice questions. All questions are from the video: *Rework of Surface Mount Chip Components (DVD-92C)*.

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. Chip resistor length is defined by the**
 - a. last two numbers in the four digit series
 - b. first two numbers in the four digit series
 - c. second number in the four digit series
 - d. fourth number in the four digit series

- 2. MELF stands for**
 - a. Metal Electrode Face
 - b. Mounted Energy Laser Fountain
 - c. Mini Electron Front
 - d. Mercurial Electron Fabric

- 3. Forked soldering iron tips are referred to as**
 - a. conical tips
 - b. chisel tips
 - c. bifurcated tips
 - d. flat tips

- 4. The recommended method for removing a chip component is**
 - a. two soldering irons – one with a chisel tip and one with a conical tip
 - b. two soldering irons with chisel tips
 - c. a single soldering iron with a chisel tip
 - d. a single soldering iron with a bifurcated tip

- 5. When a chip component is also bonded to the board with adhesive, you'll need to**
 - a. turn up the heat to the iron in order to remove the component
 - b. push the chip sideways with a wooden stick or curved tweezers to release the bond
 - c. use a soldering iron and channel lock pliers to break the bond
 - d. all of the above

- 6. When solder braid is used for land preparation, use a braid that**
 - a. is smaller than the width of the land
 - b. is larger than the width of the land
 - c. matches the width of the land
 - d. any of the above

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- 7. The proper technique for applying heat to the solder braid is to use**
 - a. the weight of the iron to contact the braid and melt the solder on the land
 - b. sideways pressure to thoroughly remove the solder from the land
 - c. downward pressure to more effectively transfer the heat
 - d. a soldering iron tip that is wider than the solder braid

- 8. The second land preparation method requires the use of a**
 - a. vacuum extractor
 - b. hot air pencil
 - c. thermal tweezers
 - d. hand soldering iron with a flat tip

- 9. The proper method of prefilling a land with solder is to add**
 - a. solder to the land so that it dips in the middle
 - b. a thick, flat coating of solder to the land
 - c. a thin, flat film of solder to the land
 - d. solder to the land with a slight crown shape

- 10. Installation of chip components with a hand soldering iron can be done using a**
 - a. chisel tip
 - b. conical tip
 - c. chisel tip or conical tip
 - d. flat tip

- 11. Installing chip components with a bifurcated tip can be done by**
 - a. prefilling both lands with flux cored solder
 - b. aligning the component properly on the prefilled lands
 - c. holding the component in place with a wooden stick or tweezers while soldering
 - d. all of the above

- 12. Adding *too much* adhesive to secure a chip component usually results in**
 - a. the component not moving when being soldered
 - b. the adhesive bleeding onto the lands, getting in the way of a good solder connection
 - c. an acceptable connection – without the need of a solder joint
 - d. all of the above

- 13. The advantage of using pulse heated tweezers on a high density assembly is**
 - a. they won't cause damage if they touch nearby components since they are not hot yet
 - b. they have a tighter grip on the component
 - c. they heat up faster than continuously heated tools
 - d. all of the above

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- 14. A MELF component requires**
- a. the same amount of solder on the land as a chip resistor
 - b. less solder on the land than a chip resistor
 - c. more solder on the land than a chip resistor
 - d. no prefill at all
- 15. The heat setting of the pulse heated tweezers for component replacement is**
- a. higher than the removal operation
 - b. the same as the removal operation
 - c. lower than the removal operation
 - d. not significant
- 16. If a component moves even a slight amount during the solidifying process**
- a. there will be a disturbed solder joint
 - b. there will be insufficient solder
 - c. there will be non-wetting
 - d. there will be solder bridging
- 17. When using pulse heat tweezers with solder paste, it's important that**
- a. the component is lightly placed into the solder paste with the tips still cool
 - b. the heat is activated so that the paste becomes molten
 - c. both side of the tweezers are released at the same time
 - d. all of the above
- 18. Using angled tips on thermal tweezers makes it possible to**
- a. use larger tips for better heat transfer
 - b. remove components without using flux
 - c. come in from the side, using a microscope to see better
 - d. all of the above
- 19. The reason hot air pencils are set to a higher temperature is because**
- a. of air pressure variations of the tips
 - b. the tool does not physically touch the termination
 - c. the exit air needs to be hotter than the set temperature
 - d. the exit air is cooler than the set temperature
- 20. Ceramic chip capacitors need to be heated gradually to avoid**
- a. disturbed solder
 - b. internal cracking
 - c. solder voids
 - d. solder bridging