



HAND SOLDERING WITH LOW RESIDUE FLUXES *(DVD-36C)*

This test consists of twenty multiple-choice questions. All questions are from the video: *Hand Soldering With Low Residue Fluxes (DVD-36C)*.

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!



ASSOCIATION CONNECTING
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Name _____ Date _____

- 1. The elimination of the cleaning operation can have a beneficial impact on the**
 - a. manufacturing cost
 - b. manufacturing cycle time
 - c. environment
 - d. all of the above

- 2. The composition of a typical RMA liquid flux is about**
 - a. 30% solids
 - b. 40% solids
 - c. 50% solids
 - d. 60% solids

- 3. Low residue fluxes**
 - a. have reduced solids
 - b. are halide free
 - c. are used in a no-clean process
 - d. all of the above

- 4. Contamination can be reduced when soldering with low residue fluxes by**
 - a. receiving materials with a known cleanliness and solderability
 - b. handling boards only by the edges
 - c. using clean storage containers
 - d. all of the above

- 5. Low residue fluxes tend to evaporate very quickly which means**
 - a. massive amounts of flux must be used
 - b. fluxes need to be applied with special dispensers
 - c. there is less time available to form the solder connection
 - d. less solder needs to be used

- 6. When selecting a soldering iron tip**
 - a. select a tip that has the greatest contact area without overhanging the termination area
 - b. select a conical tip for greater precision
 - c. select the tip that feels most comfortable
 - d. all of the above

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- 7. A tip that has greater thermal mass will**
- a. decrease the ability to transfer heat without raising the temperature
 - b. increase the ability to transfer heat without raising the temperature
 - c. increase the reliability of the solder joint
 - d. have the greater contact area
- 8. Dwell time indicates**
- a. how long the soldering temperatures are applied
 - b. how long it takes the flux residues to evaporate
 - c. how long it takes the iron to reach soldering temperature
 - d. all of the above
- 9. The dwell time for low residue fluxes should be minimized because of**
- a. thermal considerations
 - b. the increased activity period
 - c. the reduced activity period
 - d. flux fumes
- 10. How fast the solder is fed into the connection during soldering is called the**
- a. dwell time interval
 - b. feed rate
 - c. thermal profile
 - d. RMA syndrome
- 11. Large diameter solder wire will feed solder into the connection**
- a. more quickly
 - b. more slowly
 - c. more evenly
 - d. more accurately
- 12. Tip maintenance is more critical when using**
- a. tips with more thermal mass
 - b. conical tips
 - c. low residue fluxes
 - d. RMA fluxes
- 13. When oxides form on the soldering iron tip**
- a. heat transfer is decreased
 - b. tip performance is degraded
 - c. the tip may need to be reconditioned or scrapped
 - d. all of the above

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- 14. The best way to combat oxidation is**
- a. tinning the soldering iron tip
 - b. wiping the tip with a clean rag
 - c. storing the tip in a lint free box after using it
 - d. all of the above
- 15. The best method of reconditioning a soldering iron tip is to**
- a. use a tip tinner
 - b. never let it degrade
 - c. use a tip scrubber
 - d. use a more active flux
- 16. The most ineffective method of improving heat transfer is to**
- a. use high soldering temperatures
 - b. use massive amounts of flux
 - c. use a longer dwell time
 - d. all of the above
- 17. A solder heat bridge**
- a. helps to create solder bridges
 - b. allows the heat to flow into the connection more rapidly
 - c. bridges the gap between one solder joint to the next
 - d. is only used during wave soldering
- 18. Solder peaks or a disturbed appearance are typically caused when**
- a. too much heat is applied to the connection
 - b. too little heat is applied to the connection
 - c. the iron and the solder are not removed at the same time
 - d. the iron and the solder are removed at the same time
- 19. The advantage of using a soldering iron with heated air or nitrogen is**
- a. the connection is completed more rapidly
 - b. tip selection is more flexible
 - c. there will be a reduced volume of flux residues
 - d. lower temperatures can be used
- 20. During rework, it is important to**
- a. use the same flux that was used in the original soldering process
 - b. use the same type of soldering iron that was used in the original soldering process
 - c. make sure the replacement component is not sensitive to moisture
 - d. clean and bake the assembly before soldering