



GULL WING REWORK (DVD-93C)

This test consists of twenty multiple-choice questions. All questions are from the video: *Gull Wing Rework (DVD-93C)*.

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. QFPs require more rework than other gull wing components because leads can**
 - a. bend
 - b. become misaligned
 - c. bridge with solder
 - d. all of the above

- 2. SOIC stands for**
 - a. small orientation in-line cavity
 - b. small outline integrated circuit
 - c. semi-optical inset column
 - d. super oxide indigo core

- 3. Clipping gull wing leads with side-cutters to remove the component**
 - a. destroys an expensive component that may simply have been misaligned
 - b. is the safest method of component removal
 - c. is the fastest method of component removal
 - d. is the most cost effective method of component removal

- 4. For optimum heat transfer, the special soldering iron tip should rest on the**
 - a. knee of the SOIC leads
 - b. heel of the SOIC leads
 - c. foot of the SOIC leads
 - d. toe of the SOIC leads

- 5. Oxides should be removed from the special tip surfaces using a**
 - a. non-abrasive cleaning tool
 - b. tip tinner
 - c. tip scrubber
 - d. all of the above

- 6. Thermal tweezers are particularly effective for removing**
 - a. SOICs
 - b. small SOTs
 - c. large PQFPs
 - d. TSOPs

GULL WING REWORK (DVD-93C)

- 7. Thermal tweezers are easier to operate if the tips open**
 - a. the exact width of the component
 - b. slightly wider than the component
 - c. twice the width of the component
 - d. much wider than the component

- 8. When removing larger PQFPs, heat transfer is improved by using**
 - a. an external flux
 - b. solder wrap
 - c. a bridge fill technique
 - d. all of the above

- 9. The advantage to using the thermal vacuum pick for component removal is**
 - a. there isn't any grasping action that could bend a lead
 - b. the suction cup can lift heavier components
 - c. the suction releases when you try to lift the component before the solder melts
 - d. all of the above

- 10. When using the thermal vacuum pick, it's important to activate the vacuum**
 - a. after the solder is molten
 - b. the moment the suction cup touches the component
 - c. after the component is removed
 - d. after the external flux is added

- 11. When preparing PQFP lands, a wide solder braid can be used to clean**
 - a. extra wide lands
 - b. several lands at once
 - c. an entire row of lands at once
 - d. all of the above

- 12. The advantage of heavier mass tips for vacuum extraction is**
 - a. they maintain operating temperature better than thinner tips
 - b. you can use downward pressure to flatten the lands
 - c. they don't require the addition of external flux
 - d. they don't require tinning

- 13. The disadvantage to using a hand soldering iron for soldering gull wing leads is**
 - a. it's harder to align the leads
 - b. it requires too much solder
 - c. it takes a long time to complete the soldering process
 - d. all of the above

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- 14. When using the continuous flow solder method for component replacement**
- a. the tip should glide right above the leads – on a wave of solder
 - b. watch every joint form perfectly before proceeding to the next
 - c. make sure you keep the tip moving past the final leads, rather than lifting it
 - d. all of the above
- 15. A common defect that occurs when using continuous flow solder is**
- a. fragile solder joints
 - b. poorly wetted solder joints
 - c. solder bridging
 - d. lifted lands
- 16. The gradual heat build-up in the pulse-heated tools allows you to use**
- a. solder wire or solder paste
 - b. solder wire
 - c. solder paste
 - d. wave soldering
- 17. Non-tinnable means that**
- a. solder will not stick to the tips
 - b. the tips cannot transfer heat to the connection
 - c. you must add external flux to the connection
 - d. all of the above
- 18. When using a hot air pencil, the temperature should be set between**
- a. 183 and 255 degrees C
 - b. 315 and 370 degrees C
 - c. 426 and 482 degrees C
 - d. 512 and 549 degrees C
- 19. The quickest method of applying solder is**
- a. the solder prefill method
 - b. tinning each land
 - c. applying molten solder onto the lands from a solder pot
 - d. applying solder paste directly onto the lands
- 20. Solder joints made with hot air are**
- a. grainier than those made with a soldering iron
 - b. a different color than those made with the soldering iron
 - c. shinier than those made with a soldering iron
 - d. more uneven than those made with a soldering iron