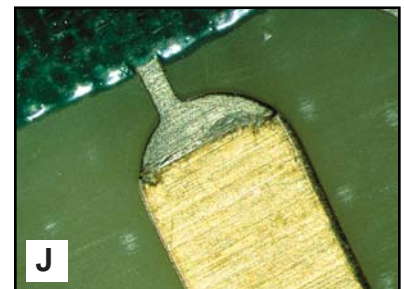
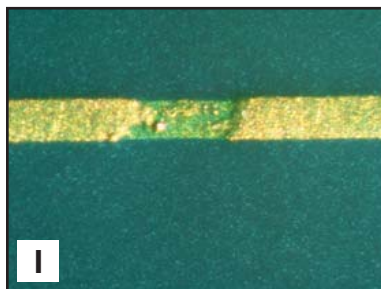
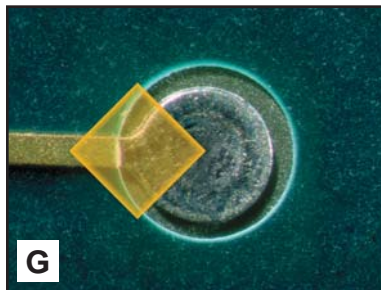
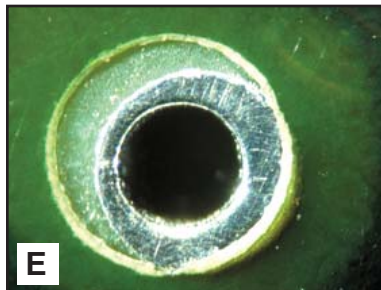
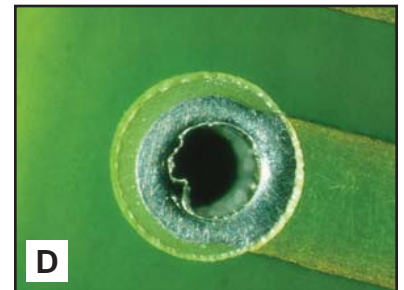
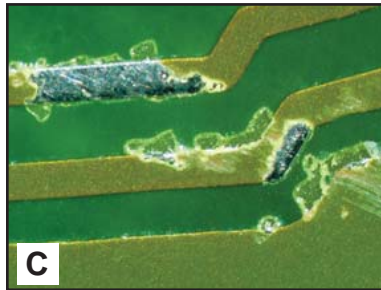
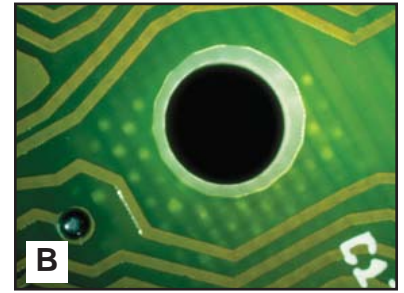
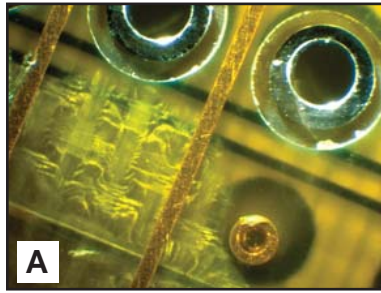


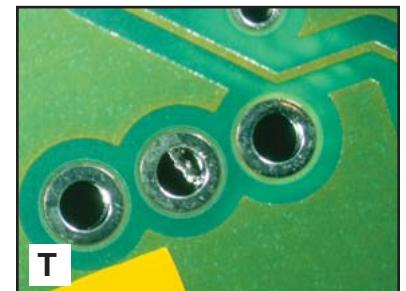
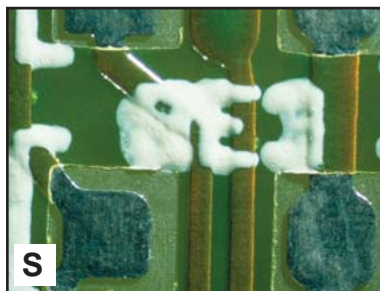
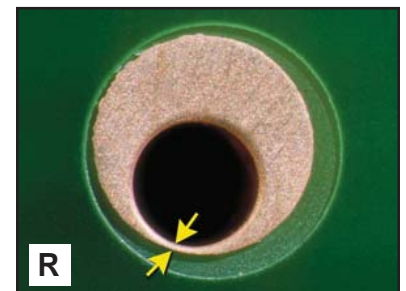
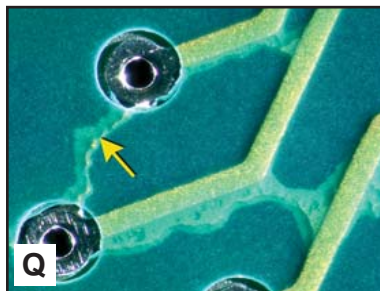
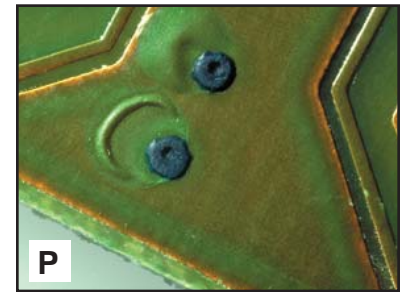
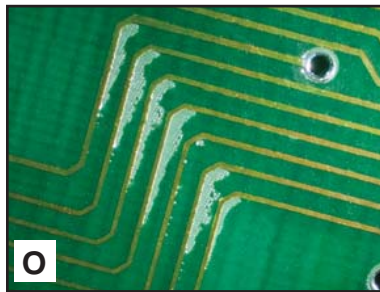
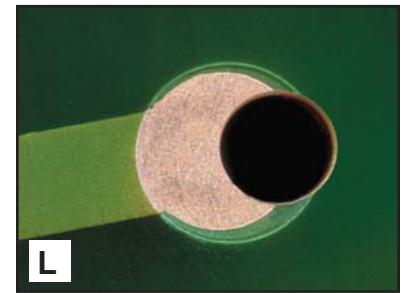
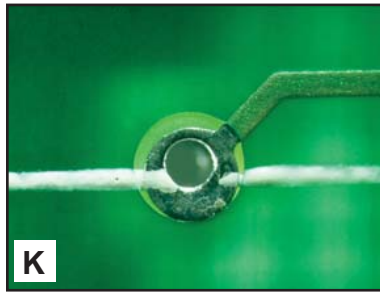
**MATCH THE PHOTOS ON THIS PAGE TO THE CONDITIONS LISTED BELOW**

1. Edge Delamination
2. Burr
3. Plating Void on Conductor Trace
4. Marking on Land
5. Solder Mask Misregistration
6. Plating Overlap on Gold Fingers
7. Measles
8. Conductor to Land Junction
9. Solder Mask Cracking / Wrinkling
10. Delamination



**MATCH THE PHOTOS ON THIS PAGE TO THE CONDITIONS LISTED BELOW**

11. Pit on Gold Finger
12. Minimum Annular Ring
13. Whisker
14. Nodule
15. Solder Mask Blister
16. Marking Ink into PTH
17. Hole to Land Misregistration
18. Scratched Conductors
19. Solder Mask Skips
20. Illegible Marking



- 21. Incoming inspection of sample bare boards consists of**
- checking board thickness, circuit trace thickness and drilled hole sizes
  - a tape test to verify the strength of solder mask and markings
  - a visual inspection to detect defects
  - all of the above
- 22. Measles always occur**
- on the lands
  - on the circuit traces
  - at the intersection of the alternating bundles of fiberglass fibers
  - on the edges of the board
- 23. Delamination usually becomes visible after**
- solder fusing processes
  - hot air leveling
  - wave soldering
  - all of the above
- 24. Any solder mask defect condition that exposes adjacent conductors is**
- a process indicator
  - not acceptable for any class of product
  - an acceptable condition, but not a target condition
  - acceptable as long as the components are soldered
- 25. If gold fingers are scratched, the exposed copper or nickel can**
- oxidize
  - delaminate
  - shrink
  - crack
- 26. If splatter from solder paste adheres to the critical contact area of the gold fingers**
- there will be delamination in the contact area
  - there will be a moisture problem
  - there may not be a proper electrical connection between the board and mating connectors
  - there will be pinholes in the gold
- 27. Burrs look like**
- circular reflections
  - whiskers
  - epoxy material
  - individual flakes of metal
- 28. The tiny piece of copper that can cause a plating short is called a**
- hair
  - whisker
  - trace
  - wire
- 29. Minimum annular ring is defined as the**
- shortest distance from the edge of the hole wall to the edge of the land
  - the visible ring inside a plated through hole
  - width of a scratch on traces or lands
  - all of the above
- 30. When marking ink is accidentally applied to a portion of a land, it can**
- cause a plating short
  - cause an ESD failure
  - block the bonding of solder to the land
  - physically damage the component

Name \_\_\_\_\_

Company \_\_\_\_\_ Date: \_\_\_\_\_

This test consists of thirty questions - twenty that match bare board condition descriptions with the correct image and ten multiple-choice questions.

All questions are from the video: (DVD-88C)  
**Bare Board Defect Recognition**

Each answer has only one most correct answer. Write the letter that corresponds to each image or question. If you wish to change an answer, erase your choice completely.

You should examine each image and read through the questions and answer the ones you are sure of first. After your first pass through the test, then go back and match the images 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 answered all of the questions. Turn in the test materials to the instructor.

The passing grade for this test is 70%.  
(21 correct answers or better)

**Page 1** Number 1 through 10 - fill in the letter:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

**Page 2** Number 11 through 20 - fill in the letter:

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

16. \_\_\_\_\_

17. \_\_\_\_\_

18. \_\_\_\_\_

19. \_\_\_\_\_

20. \_\_\_\_\_

**Page 3** Number 21 through 30 - fill in the letter:

21. \_\_\_\_\_

22. \_\_\_\_\_

23. \_\_\_\_\_

24. \_\_\_\_\_

25. \_\_\_\_\_

26. \_\_\_\_\_

27. \_\_\_\_\_

28. \_\_\_\_\_

29. \_\_\_\_\_

30. \_\_\_\_\_