1. Some SMD capacitors have a case form of 01005. What are the dimensions of this capacitor?

2. A HDI substrate has a 1-4-3 construction. What does 1-4-3 mean?

3. Name three etchants commonly used in the PWB industry.

4. a. The black colored area in an Ag-halide photo tool blocks UV light. 
   
   True or False? ____________

   b. YAG laser cannot drill copper but can drill through a dielectric.
   
   True or False? ____________

5. FR-4 is a standard laminate material used in PCBs. What does ‘FR’ stand for? Name the key ingredient/element for the unique property.
6. What do the following terms stand for?
   a. B^2IT >>
   b. HASL >>

7. a. A positive photo resist when exposed to UV light becomes harder and insoluble in developer.  
   True or False? ______________________

   b. Ni-SS metal foils are normally used to make stencils for solder paste printing.  
   True or False? ______________________

8. Mention two points favoring aqueous developing as compared to organic developing for photo resists.

9. List the major steps in SMD assembly process that employs wave soldering?  
   (A simple single-sided TH assembly)

   1.
   2.
   3.
   4.
   5.

10. Name two etch resists for TH boards.
11. What is the purpose of ‘flying probe test’ in finished PCBs?

12. There is a need to coat a liquid dielectric on a copper plate to about 18 microns. Which coating method or methods would you employ? Which gives more yields?

13. Platinum is used as the catalyst for electroless process in TH-PCBs? 
   True or False? ___________________________________________

14. Copper needs to be protected from atmospheric oxidation after PCB fabrication. Other than Sn-Pb what other surface protection can you provide? Indicate thickness.

15. Why is HSS drill bit not used in high-speed drilling of copper-clad laminates-glass/epoxy based? What is your choice?

16. Itemize four electrical properties you would look for in a copper-clad laminate.
17. As a manufacturer of PCBs, is etch factor important? Why?

18. What is a B-stage resin?

19. What are the reasons for formation of epoxy ‘smear’ in a through-hole?

20. What are the standard thicknesses of copper-clad laminates available in the market?

21. Name two possible defects expected in microvias of a HDI-PWB.

22. What do you mean by ROHS? Name one element under ROHS.
23. Name two advantages of ‘mitring’ in your CAD.

24. Name two substrate materials under the organic substrate category: (other than epoxy)
   
   a) __________________________________

   b) __________________________________

25. Mention two MERITS of a Diazo photo tool.