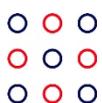


# PCB Foundations Quiz

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1. PCBs should be fabricated with \_\_\_\_ layers.
  - a. Odd number of
  - b. Even number of
  - c. Any number of
  
2. Which of the following is not taken into consideration when calculating the characteristic impedance for each layer?
  - a. Trace width
  - b. Trace height
  - c. Trace length
  - d. Distance of the trace to a plane
  
3. Vias-In-Pad usage and specifications should be stipulated in the
  - a. Assembly Notes
  - b. Fabrication Notes
  - c. Fabrication Files
  - d. Via stack up
  - e. Both b and c
  
4. Mechanical layers
  - a. Should be unique to each project
  - b. Are only declared in the PCB editor during layout
  - c. Follow an IPC standard
  - d. Should be used in the footprint libraries define courtyards and assembly information
  
5. Silk Screens
  - a. Are not required for every component
  - b. Are highly recommended for prototype boards
  - c. Are not necessary for production boards
  - d. All of the above
  
6. The use of 3D component models in the PCB layout can assist with
  - a. Electrical clearance
  - b. Component clearance
  - c. All of the above
  - d. None of the above



# PCB Foundations Quiz

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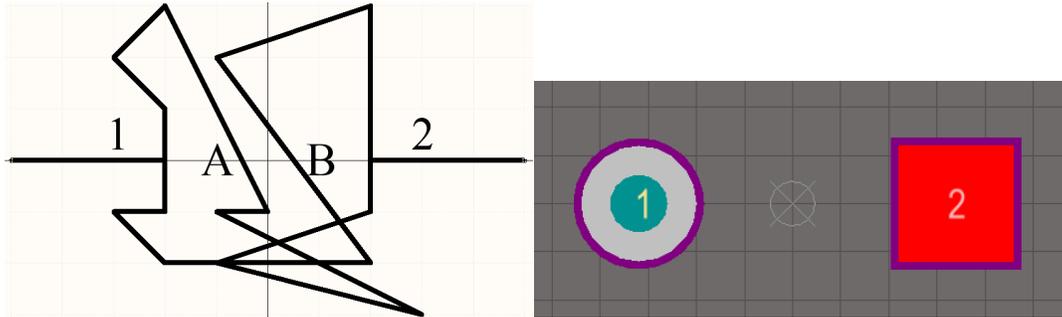
7. True or False – The solder mask impacts the characteristic impedance of a trace.
- a. True
  - b. False
8. When writing a requirement, the following word should be used to denote a requirement:
- a. Should
  - b. Would
  - c. Can
  - d. Shall
  - e. May
9. When writing a requirement
- a. The use of the word “and” is okay
  - b. The use of the word “or” is okay
  - c. Both of the above
  - d. None of the above
10. A well written requirement
- a. Has a complex sentence structure
  - b. Uses technical verbiage
  - c. Is testable by its nature
  - d. Can be vague



# PCB Foundations Quiz

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11. Consider the following symbol and corresponding footprint:



The symbol and corresponding footprint:

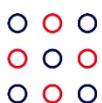
- Would be recognized by the EDA tool as a valid component
  - Would be flagged by the Electrical Rule checker in the schematic tool
  - Would be flagged by the Design Rule checker in the PCB editor
  - Both B and C
12. When should the bill of materials be given to purchasing?
- After fabrication has been started
  - After the boards have been fabricated
  - When the schematics are completed
  - After the layout is complete
13. What is the best method to provide a unique number for each component in the library?
- Use the manufacturer's part number
  - Use the vendor's part number
  - Use a part number that is assign by the company you work for
  - Use a part number that you make up as you go
14. During post assembly testing, it was found that a latch on one of the connectors cannot be fully extended due to other components located nearby. What would have prevented this situation from occurring?
- The use of a 3D component
  - The use of a 3D component and component clearance rule
  - The use of a courtyard
  - The use of a courtyard and a component clearance rule



# PCB Foundations Quiz

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15. Though schematic tools do have to use a grid for pin connectivity, in theory, the grid used in a schematic is
- In metric (mm)
  - In imperial (mils)
  - Both A and B interchangeably
  - Dimensionless
16. The grid used in a PCB layout tool should be
- In metric (mm)
  - In imperial (mils)
  - Both A and B interchangeably
  - Either A or B
17. When it comes to a trace's impedance, the most contributing factor is?
- Clock speed of the board crystal
  - The integrity of the signal from the output buffer of the sending component
  - The voltage level
  - The physical aspects of the board
18. True or False: Microvias are the same as a one layer blind or buried vias
- True
  - False
19. Which of the following drill document(s) must be provided to the fabricator to program their drilling equipment?
- Drill Plot
  - Drill Drawing
  - NC Drill file
  - All of the above
20. True or False: ODB++ and Gerbers are proprietary formats
- True
  - False



# PCB Foundations Quiz

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21. The solder paste files are generally
- a. Produced in the assembly file
  - b. Produced in the fabrication files
  - c. Manually drawn
  - d. Part of the bill of materials

Do you want to know how you did on the quiz? Click below for the answers:

