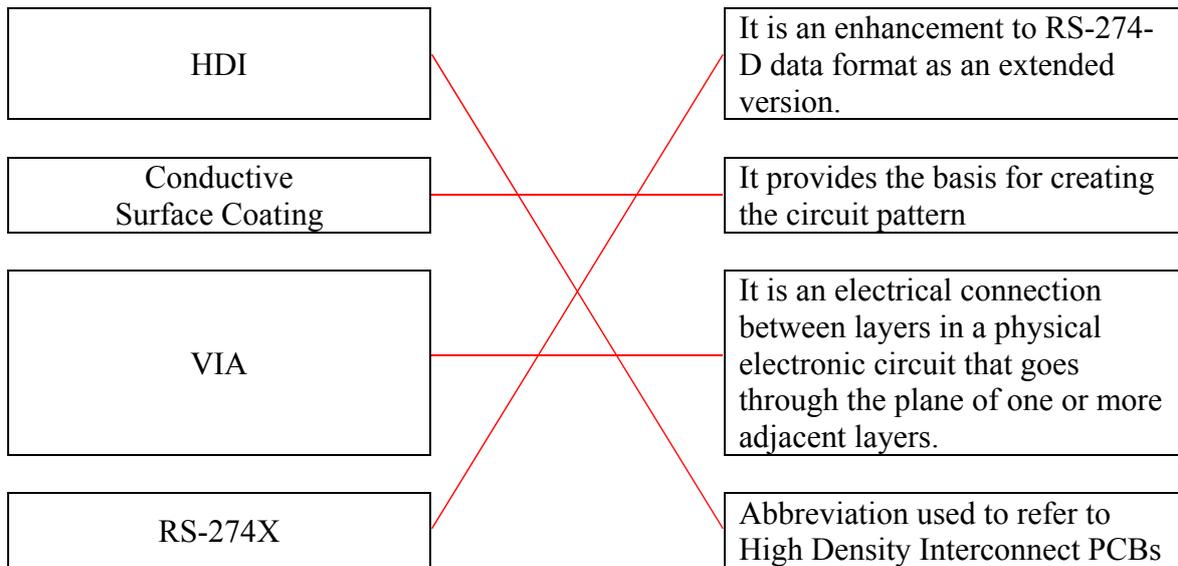


**1. Assign the terms from the left column to the corresponding definitions on the right.**



**2. List three basic characteristics of High Density Interconnect printed circuit boards.**

1. Higher wiring density per unit area than conventional PCBs.
2. They have finer lines and spaces.
3. They have smaller vias, capture pads and a very high connection pad density.

**3. Correct the text so that the following statements are true.**

The power supply pins should be decoupled directly to the ground plane by using located ( ~~inductances~~ **ceramic capacitors** ) as close as possible to the integrated circuit power pins.

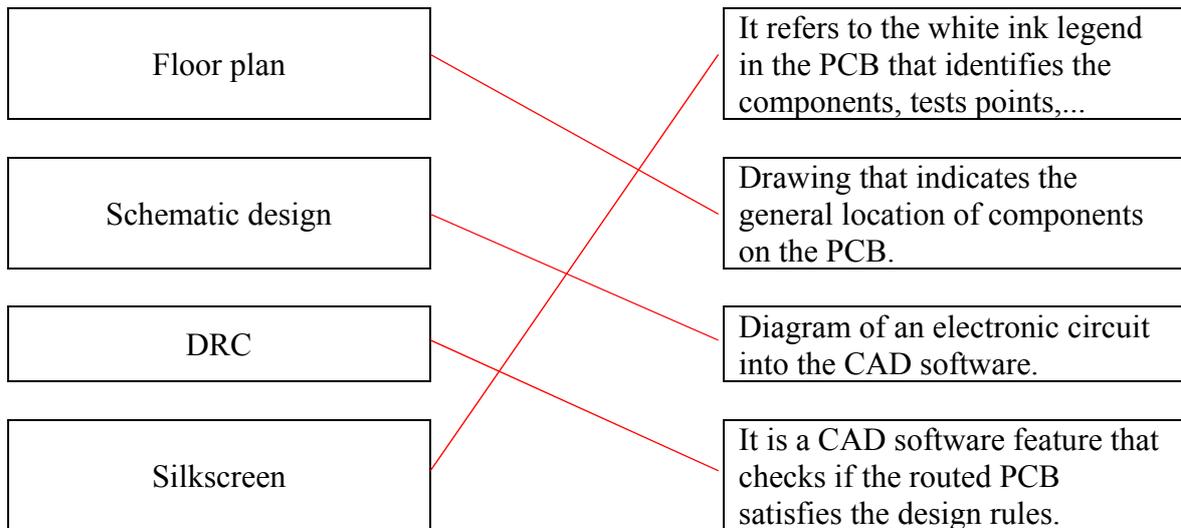
In general, frequencies higher than 1GHz ( ~~1MHz~~ **1GHz** ) are considered as high frequencies.

Single-layer PCBs are made out of a single layer of ( ~~base material or substrate~~ **resine** ).

Aluminum backed PCBs are composed of an ( ~~Al~~ **Al** ) backing, a highly thermally conductive dielectric layer and a standard circuit layer.

The rigid-flex PCBs, combine the ( ~~worst~~ **best** ) of both rigid boards and flexible circuits integrated together.

**4. Assign the terms from the left column to the corresponding definitions on the right.**



**5. List a minimum of 5 basic steps of the PCB fabrication process.**

1. **Film generation**
2. **Drilling**
3. **Etching**
4. **Solder mask**
5. **Silkscreen**

**6. Correct the text so that the following statements are true.**

Keep digital and analog grounds (~~together~~  
**separate**) because voltage and current spikes from (~~analog~~  
**digital**) circuits can generate interference noise in the (~~digital~~  
**analog**) circuits.

When placing components, (~~minimize~~  
**maximize**) trace lengths and avoid (~~90~~  
**45**) degrees angles.

Manufacturers use a (~~photo plotter~~  
**printer**) to obtain a (~~digital~~  
**negative**) image of the PCB.

Sensitive signals should be (~~kept away~~  
**shielded**) from noise sources with planes and be kept impedance controlled.