PCB. Workshop.

Q:1) Describe the function of double sided UV exposure unit.

→ 1. A double sided UV vaccum exposure unit is an essential tool for the production of parts such as double sided printed circuit board [PCB.]

2. The Vaccum makes these UV exposure units suitable for processing UV sensitive - flexible substrate materials. also Vaccum exposure unit gives better PCB etching results. Double sided exposures take about 160 sec to be completed.

Q:2) List the softwares used for PCB layout design & explain how to design layout using diptrace or EAGLE software.

→ Software's used are :-

- Altium Designer
- Solid works PCB.
- Diptrace
- Ki cad EDA.
- PCB artist by advanced circuits.
- ultiboard by national Instruments.
- X circuit.
- Eagle, etc.

① Getting software.
② Planning phase & setup.
③ library setup.
④ Part placement ① placing resistor

(5) Part placement (2) placing LED's
(6) Part placement (3) placing switches
(7) Part placement (4) connectors to Arduino
(8) Adding resistor values
(9) Renaming connectors
(10) Adding LED grounds
(11) Error - checking
(12) Precision port placement
(13) Finishing Touches and DRC.

Q3) Write and explain in short, the steps for Fabrication of PCB

→ The ~~fabri~~ process for fabrication of PCB are:

i.) Imaging desired layout on copper clad laminates.

ii.) Etching or removing excess of copper from inner layers to reveal traces & pads.

iii.) Creating the PCB layer stackup by laminating board materials at high - temperatures.

iv.) Drilling holes for mounting holes, through hole pins and vias.

v.) Etching or removing excess of copper from the surface layers.

vi.) Silk screen printing referance & polarity indicator lagos or other markings on surface.

vii.) Finish to be added to copper areas of software.

Q:4) Explain PCB in details :

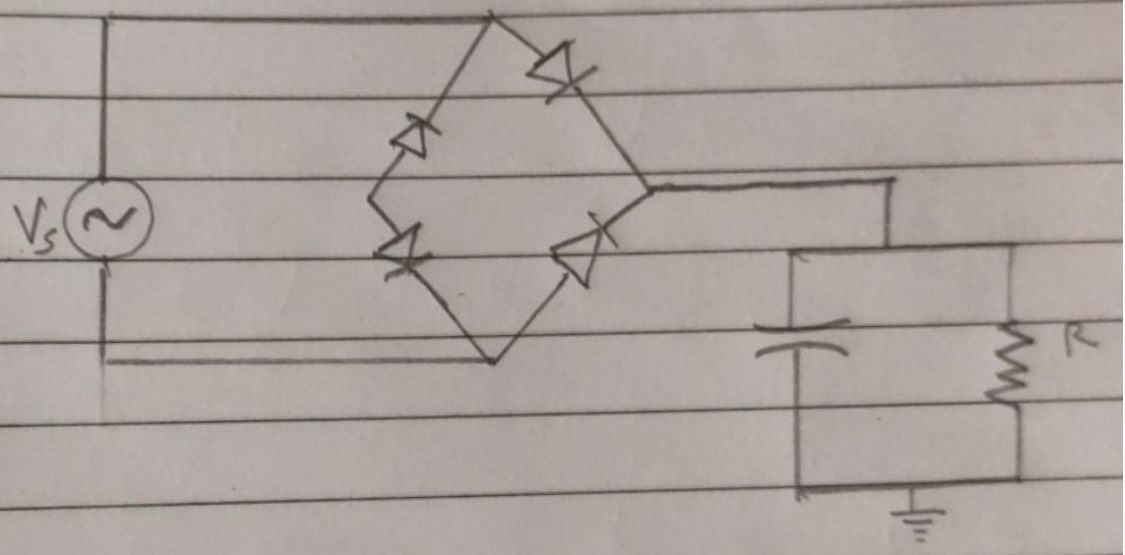
ans - i.) A Printed Circuit Board (PCB.) is an electronic circuit used in devices to provide mechanical support and a pathway to it's electrical components.

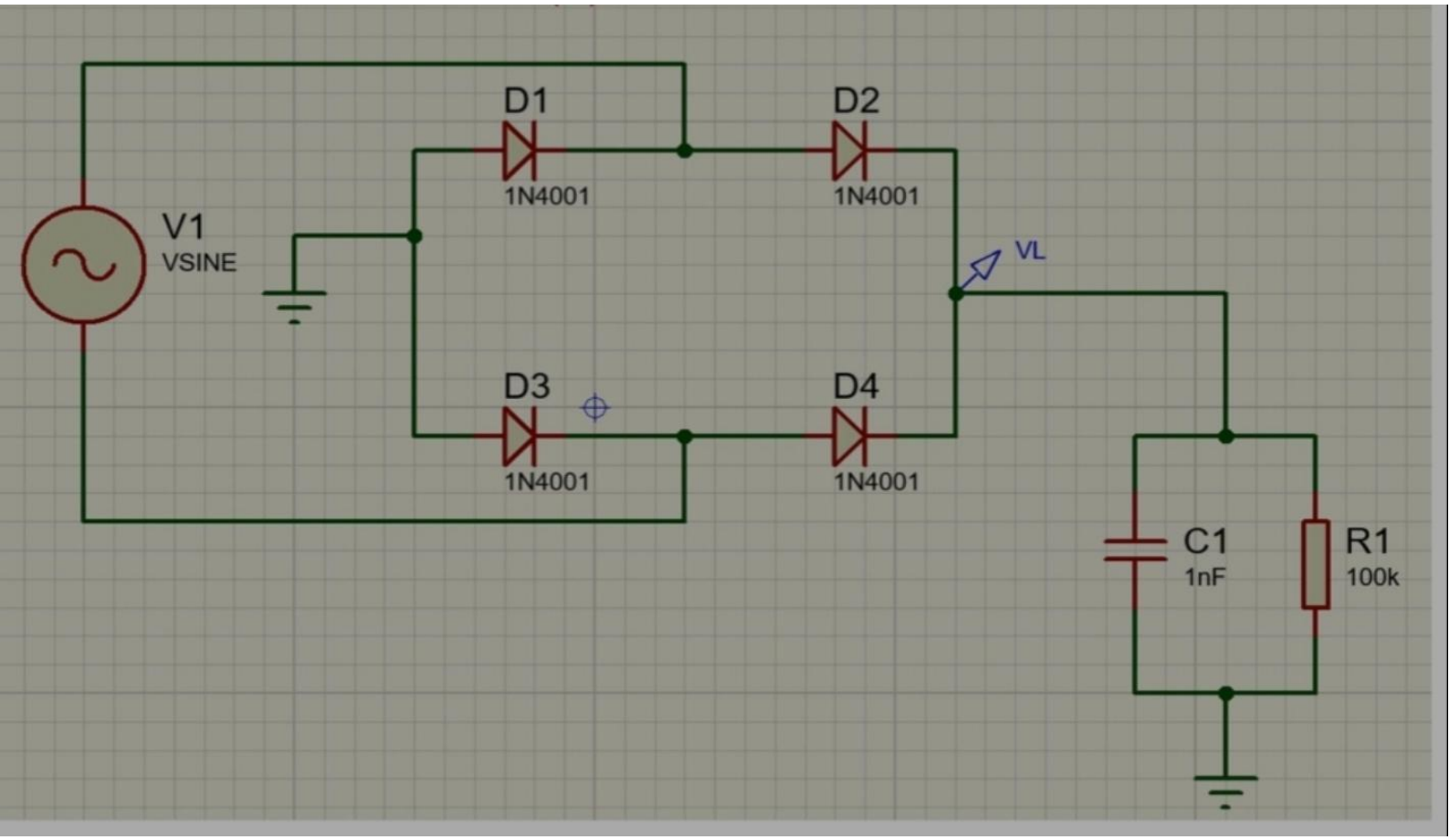
ii.) It is made by combining different sheets of non-conductive material, such as fibre-glass or glass that holds copper circuitary. A PCB works on the copper films that are placed inside of it to provide a pathway for the flow of current.

iii.) A PCB can hold various electronic-components that may be soldered without using visible wires which facilitates it's use. they are found in nearly every electronic and computing device.

(ans 5)

a.)

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D3
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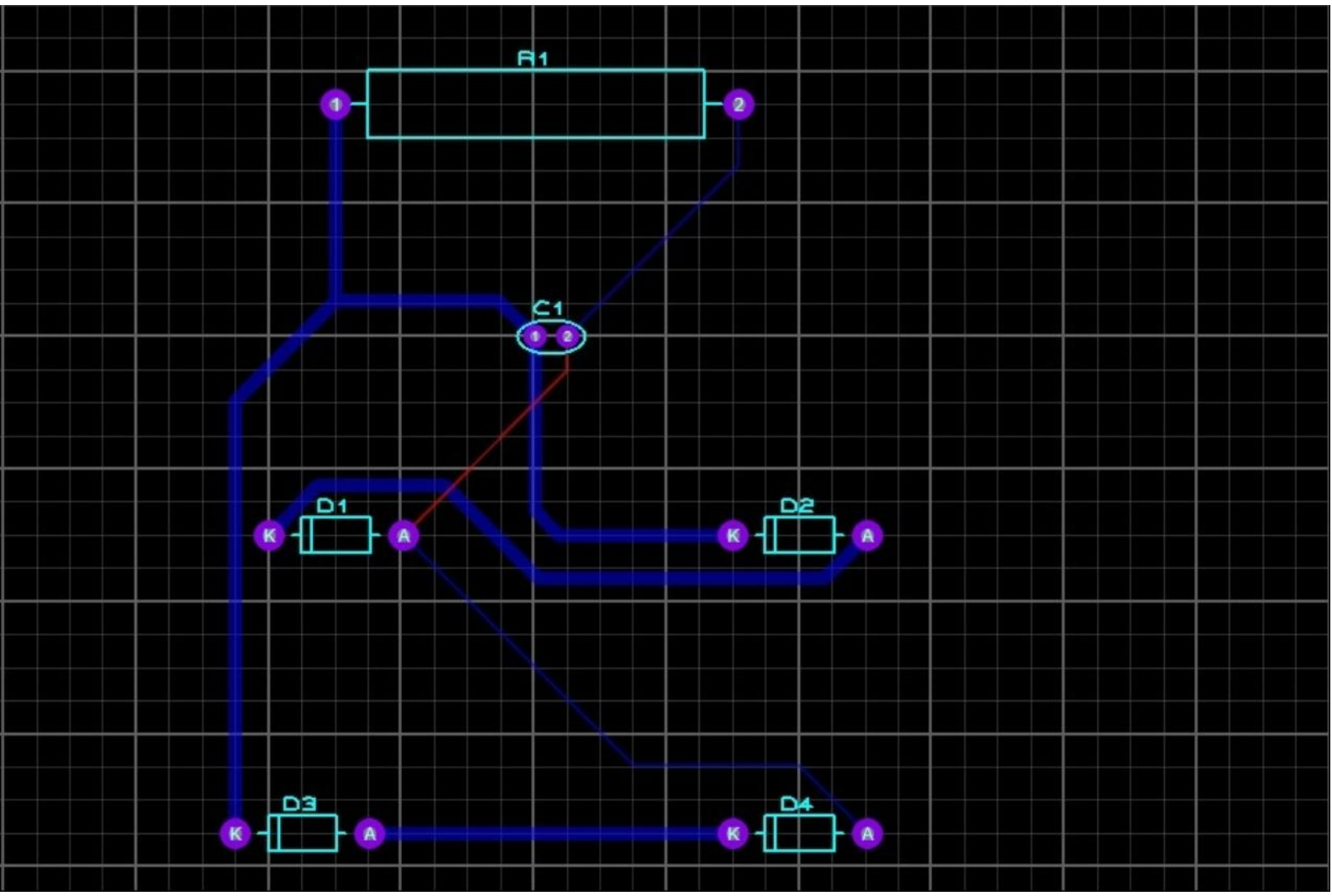
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