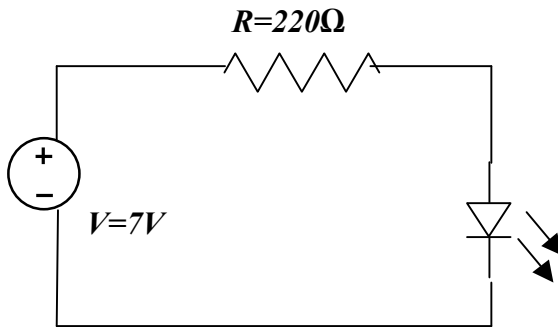
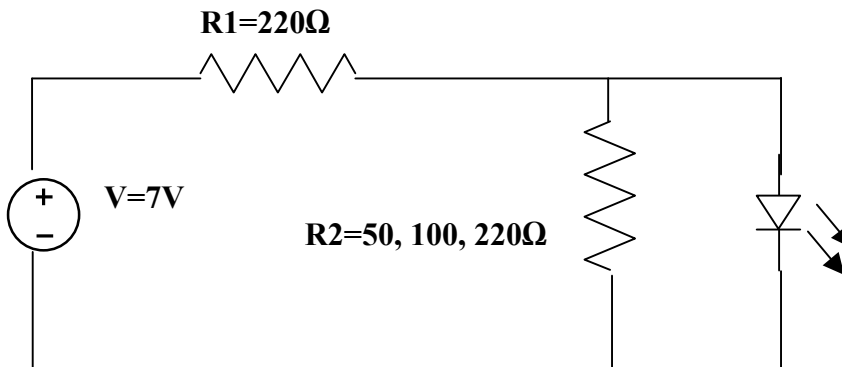


CS1025 Laboratory Experiment 1:

- 1) Connect the circuit shown in the following diagram:



- 2) Using a 5V d.c. supply, connect the above circuit and measure:
- The voltage drop across the LED.
 - The voltage drop across the resistor(s).
 - The current through the resistor(s) and LED.
- 3) Connect the circuit shown below with resistors connected in parallel with the LED and repeat the measurements above *for each configuration* ($R_2=200, 100, 50\Omega$ respectively). Explain your observations.



Laboratory Report:

Reports should be submitted via Blackboard before the subsequent laboratory session for your group. Your name, student number, date the experiment was performed, your lab session and details of any attachments such as letters of permission etc. should be clearly indicated on the cover page. The report for this experiment should include the circuit diagrams and the respective measurements in tabular form. From your measurements you should calculate the static resistance of the LED in each case. From the measurements taken you should verify Kirchhoff's Current and Voltage Laws and compare with those derived theoretically and explain all of your observations comprehensively. The report should be neatly written. Students should note that ~25% of marks are awarded for presentation of results, ~75% for explanation and interpretation of results – assuming the experiment was performed correctly. If you discover following your lab session that you have made a mistake then your report should identify that mistake and explain how it should be corrected.

