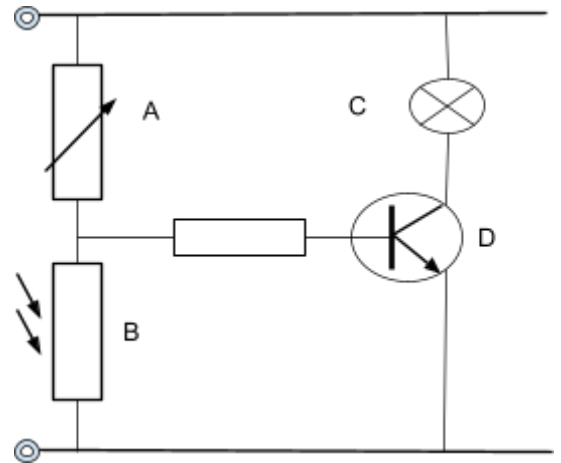


1) A student built an electronic circuit as shown.

- Name components A,B,C and D
- State the function of component D
- State what happens to component B when the circuit is placed in the dark.
- Describe how this affects component D and C



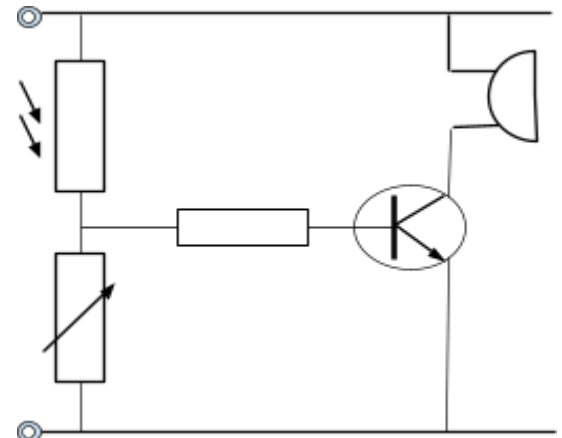
2) Copy and fill in the blanks in the text below describing the action of the electronic circuit shown.

When the light level increases the resistance of the LDR \_\_\_\_\_.

This means the LDR takes a \_\_\_\_\_ share of the supply voltage.

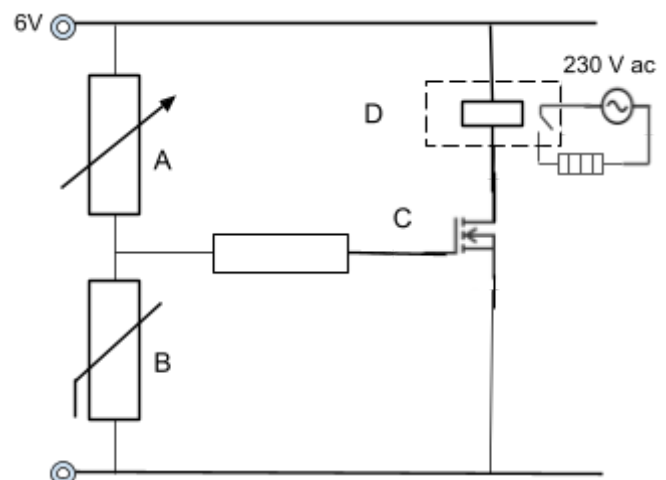
The variable resistor will then take a \_\_\_\_\_ share in the supply voltage.

When the share of the voltage rises above \_\_\_\_\_ the base voltage of the transistor rises above \_\_\_\_\_ and makes the transistor \_\_\_\_\_ and sound the buzzer.



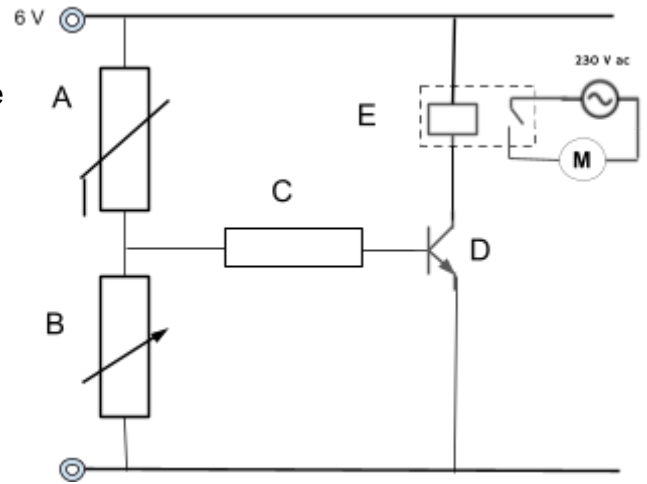
3) This circuit appears in an electronics magazine.

- Name the components A,B,C and D
- Describe what happens to the resistance and voltage across component B when it gets cold.
- State the voltage at component C's gate which will make it conduct.
- Explain why component D is needed to turn on the heater.



4) State the name of components A,B,C,D and E

- a) Explain why component C is needed in the circuit.
- b) When it gets cold state what happens to the resistance of component A
- c) What will happen to the voltage across components A and B.
- d) What voltage at the base of component D will allow it to conduct?
- e) Explain the need for component E to turn on the motor.
- f) State a use for the electronic circuit.



- 5) An electronics engineer is given the job of building an electronic circuit that will turn on an LED when it gets too dark.  
Make a list of components the engineer would use and draw the electronic circuit that would be used.
- 6) An electronics student has built a circuit to alert a worker when the arm of a factory robot has reached its maximum extension.  
Sketch the circuit and label all the components used in the design.
- 7) Design a circuit that will sound an alert when a door is left open in a car.
- 8) Design an electronic circuit that will sound an alarm when a certain amount of time has gone by when a switch is closed.

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Word Bank for question 2

- 1. decreases
  - 2. 0.7 V
  - 3. smaller
  - 4. 0.7 V
  - 5. conduct
  - 6. Bigger
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