

# Introduction to Robotics and Mechatronics

## **GROUP 2.5**

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## PreLab 03

### **Q1**

On the LM319N there are two independent voltage comparators.

### **Q2**

The supply voltage must be connected to pin 11 (Vcc). Moreover, the ground to negative supply voltage should be connected to pin 6 (Vee).

### **Q3**

The output of the two comparators can be obtained from pin 7 and pin 12.

## Q4

The LM319N IC could be used in a heating system. Sensors detect the temperature and output a voltage signal depending on the temperature. If the output signal of the sensor, which is sent through the comparator, is lower than the set limit voltage, the heater is switched on.

## Q5

A single LM319N IC can be bought for a price around 0,52€.