



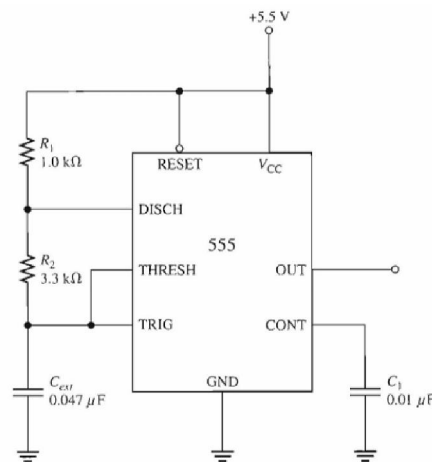
Benha University
Faculty of Engineering
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Electronic circuits (B)

Electrical Eng. Dept.
3rd year communication
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Sheet (7)

1. Name the five basic elements in a 555 timer IC.
2. When the 555 timer is configured as an astable multivibrator, how is the duty cycle determined?
3. What are the two comparator reference voltages in a 555 timer when $V_{cc}=10V$.
4. Determine the frequency of oscillation of the figure shown, and then to what value must C_{ext} be changed to achieve a frequency of 25 KHz.
5. In astable 555 configuration, the external resistor $R_1=3.3K\Omega$. What must R_2 equal to produce a duty cycle of 75 percent?



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6. Define line regulation, load regulation?
 7. The input of a certain regulator increased by 3.5V. As a result, the output voltage increased by 0.042V. The nominal output is 20V. Determine the line regulation in both % and in %/V.
 8. A certain regulator has no load output voltage of 10V and a full-load output voltage of 9.9V. What is the percent load regulation? If the full load is 250mA. Express the load regulation in %/mA.

Good Luck

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