

**Date:** October 22, 2018  
**Subject:** Question Formulation 3

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1. How is an operational amplifier manufactured and why do the internal circuit elements mimic resistors  $R_i$  and  $R_o$  and the voltage dependant voltage source?
2. What are a few applications of a capacitor and the advantages of using a capacitor as opposed to other energy storage elements in a circuit?
3. What methods are used to generate alternating current in square, triangle, and sinusoidal waveforms, and what are each's relative advantages?