EE386 Lab2

Faculty of Engineering, University of Peradeniya

(a) Implement the following R-2R ladder (Figure 1) digital to analog converter in PSpice.

(b) Explain the functionality of the R-2R DAC circuit.

(c) Derive the expression for a 3bit R-2R DAC.

(d) Vary the digital input form "000" to "111" and plot the curves V_0, V_2, V_4, and V_{DAC}

(e) Compute the analog voltage corresponding to the bit combination to the digital input "011", "101" and compare those results to the simualtion results.
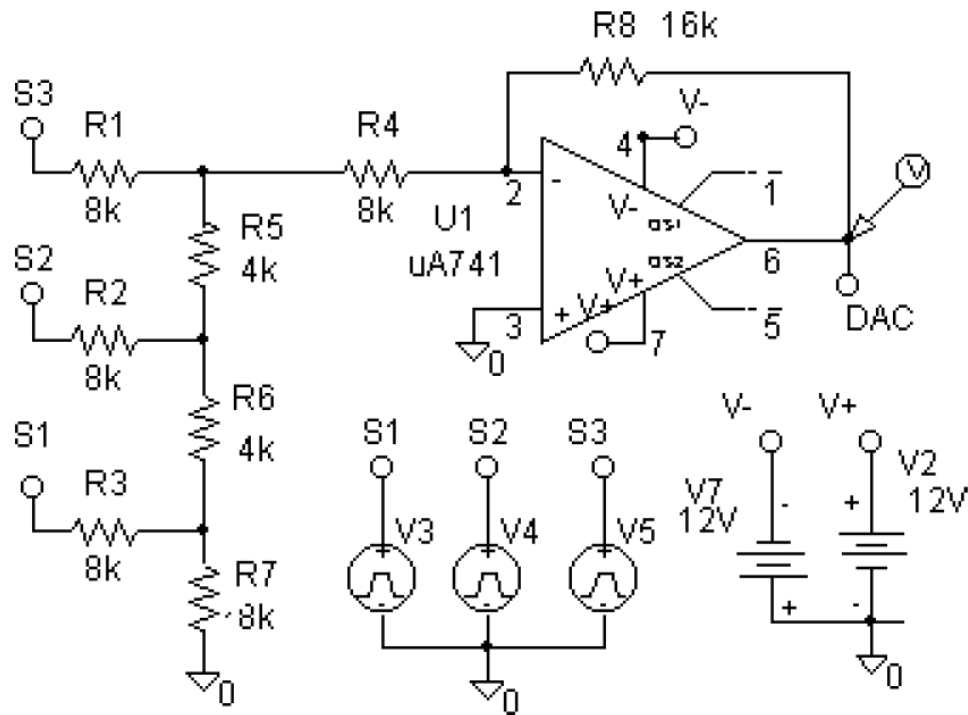

Figure 1. R-2R ladder digital to analog converter