## ME 133, Winter 2023 University of California, Riverside Department of Mechanical Engineering

Textbook problems (4th edition): 2.33, 2.34, 2.47, 3.1, 3.6, 3.8, 3.17, 3.19, 3.25 Textbook problems (5th edition): 2.37, 2.38, 2.51, 3.1, NA, 3.9, 3.18, 3.20, 3.27

Special problems:

- 1. Design a circuit using (ideal) diodes that limits a sinusoidal input voltage to a  $V_{max}$  and  $V_{min}$ , where  $V_{max} \neq V_{min}$ . The output voltage looks like the figure below.
- 2. Draw the voltage output if the diode model is the "approximation" curve in Fig. 3.6 with a 0.7 V contact potential.
- 3. Described an application of the *limiter* circuit you designed.

