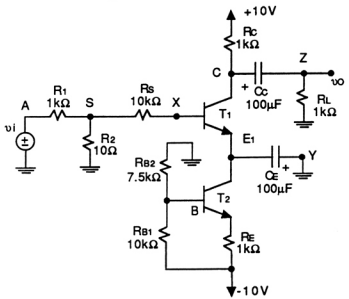

Figure 7.3 A Common-Emitter Amplifier

- Connect the circuit as shown in Fig. 7.3 with $V^+ = -V^- = 10$ V. Use a sine-wave input of about 1 V peak at 10 kHz. Measure peak-to-peak voltages with your oscilloscope, with one probe at *Z*, which should be adjusted using the generator amplitude control to 2 V (peak-to-peak), and the other at *A*, *S*, *X*, in turn.
- Now, raise the input voltage, while observing node *Z* and node *C*, until the wave just clips at one peak. Note the positive and negative peak voltages on each waveform for which clipping occurs.
- * Continue to increase the input until the opposite peak begins to clip, noting the voltages.
- ** Continue to raise the input until its maximum is reached. Note the voltages.

E3.0 The Common-Base (CB) Amplifier

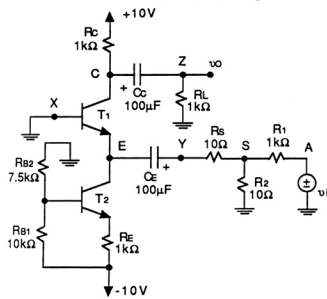

Figure 7.4 A Common-Base Amplifier

- Connect the circuit as shown in Fig. 7.4 with $V^+ = -V^- = 10$ V. Use a triangle-wave input of about 2 V pp at 10 kHz. Measure the peak-to-peak signals at *A*, *S*, *E* and *Z*. Quickly, evaluate the gains v_z/v_s and v_z/v_e.
- Raise the input signal to be large(by shunting R1 by 1kohm), noting the evidence of nonlinear distortion in the output signal.