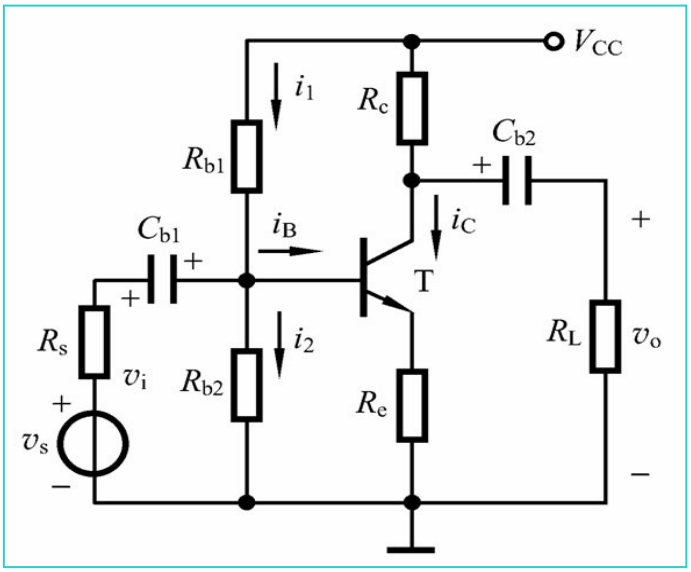
Practice Exercise _Lecture 4

1. For the following circuit, Vcc = 16 V, R_{b1} = 56 kΩ, R_{b2} = 20 kΩ, R_e = 2 kΩ, R_c = 3.3 kΩ, R_L = 6.2 kΩ, R_s = 500 Ω, β = 80, V_{BEQ} = 0.7 V.



   a. Draw its corresponding DC circuit, and calculate the Q operating point.

   b. Draw its corresponding small-signal model, and calculate R_i, R_o, and A_v.

   c. If a capacitor with a value of 50μF is parallel with R_e, please calculate (a) and (b) again.