Electronic Devices and Circuit Theory (Eleventh Edition)
Soal-soal Bab 4 : DC Biasing—BJTs

Kerjakan di kertas folio bergaris.

2. Given the information appearing in Fig. 4.119, determine:

a. I_C.
b. R_C.
c. R_B.
d. V_{CE}.

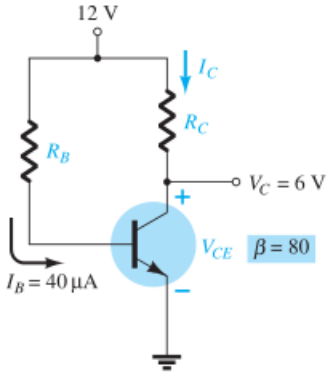

FIG. 4.119
Problem 2.

8. For the emitter-stabilized bias circuit of Fig. 4.122, determine:

a. I_{B_Q}.
b. I_{C_Q}.
c. V_{CE_Q}.
d. V_C.
e. V_B.
f. V_E.
g. Gambarkan Garis Beban DC dan titik kerjanya (Qpoint)

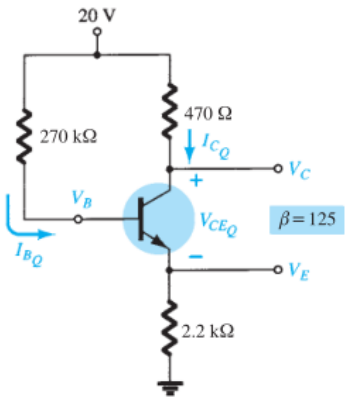

FIG. 4.122

17. Given the information provided in Fig. 4.126, determine:

a. I_C.
b. V_E.
c. V_B.
d. R_1.

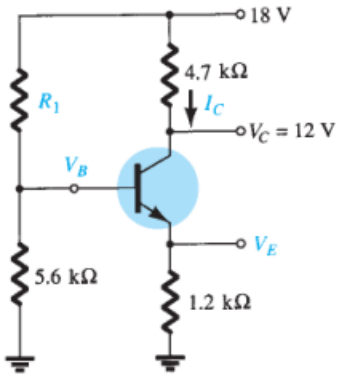

FIG. 4.126

29. For the voltage feedback network of Fig. 4.130, determine:

a. I_C.
b. V_C.
c. V_E.
d. V_{CE}.

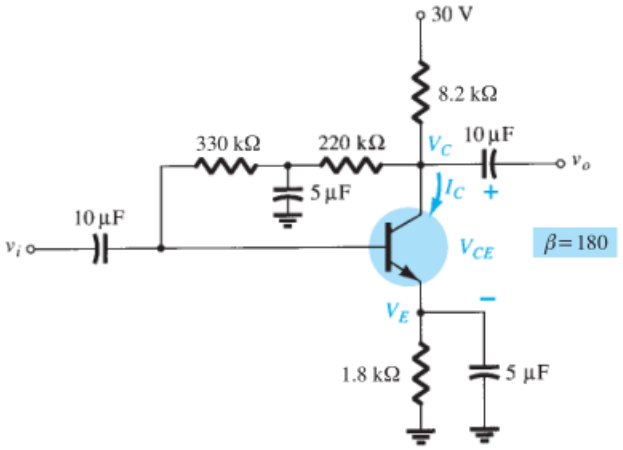

FIG. 4.130
Problems 29 and 30.

35. For the emitter follower network of Fig. 4.135

a. Find I_B, I_C, and I_E.
b. Determine V_B, V_C, and V_E.
c. Calculate V_{BC} and V_{CE}.

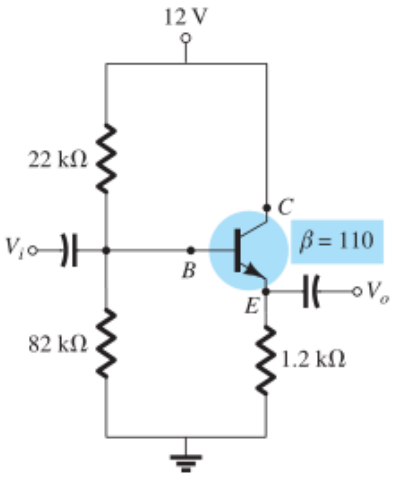

FIG. 4.135
Problem 35.

38. For the common-base network of Fig. 4.138

a. Using the information provided determine the value of R_C.
b. Find the currents I_B and I_E.
c. Determine the voltages V_{BC} and V_{CE}.

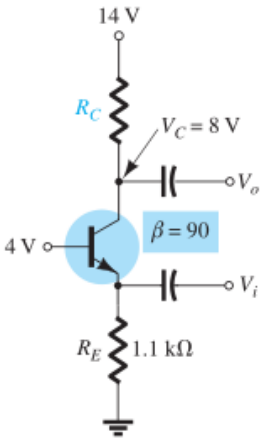

FIG. 4.138
Problem 38.

***58.** Design the transistor inverter of Fig. 4.154 to operate with a saturation current of 8 mA using a transistor with a beta of 100. Use a level of I_B equal to 120% of $I_{B_{max}}$ and standard resistor values.

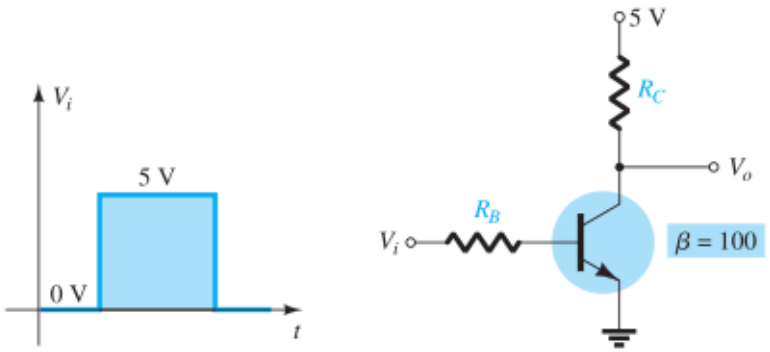

FIG. 4.154
Problem 58.