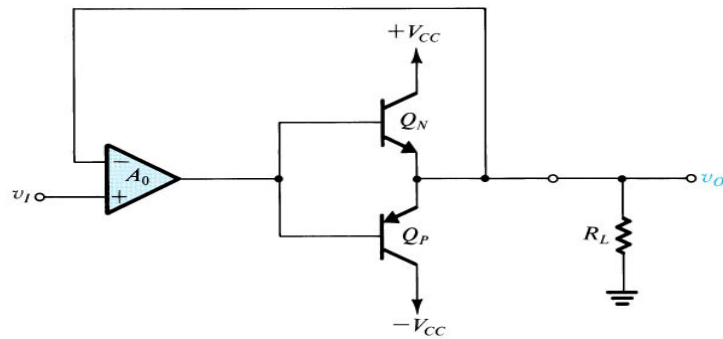


Find and comment the transfer function of the circuit below. Assume the necessary assumptions.



Design the AB-Class output stage below, considering the necessary assumptions. Assume input ac-coupling and:

- $V_{CC} = +/- 5V$     $R_L = 8.2\Omega$
- $V_{o\_max} = 2.5V$
- quiescent condition:    $I_Q = 5mA$     $V_{OQ} = 0V$
- $I_{SS\_QN} = 1.346pA$ ;  $I_{SS\_QP} = 862.2fA$ ;  $I_{SS\_Q1} = 96.26fA$
- $\beta_{QP} = \beta_{QN} = 150$
- $\beta_{Q1} = 250$

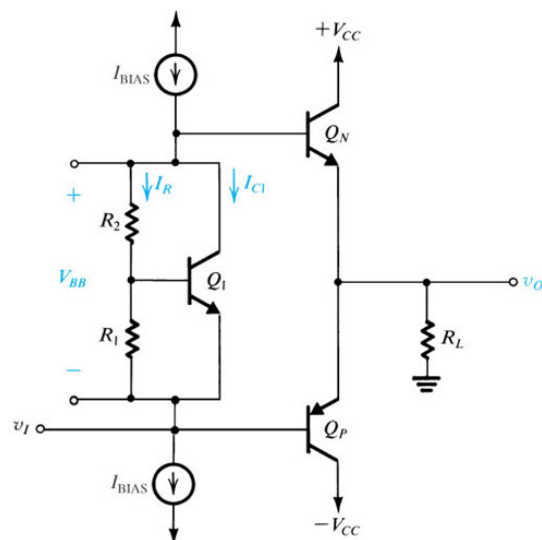
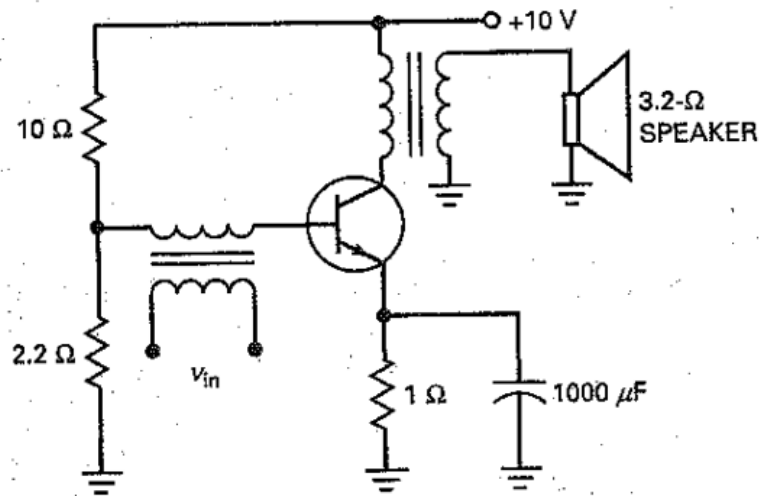
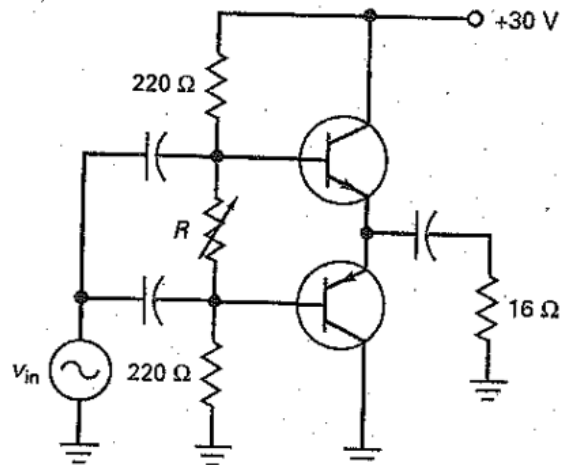


Figure 12-40



- 12-21 If  $V_{BE} = 0.7 \text{ V}$  in Fig. 12-40, what is the dc emitter current?
- 12-22 The speaker of Fig. 12-40 is equivalent to a load resistance of  $3.2 \Omega$ . If the voltage across the speaker is  $5 \text{ V pp}$ , what is the output power? What is the efficiency of the stage?

Figure 12-41



- 12-24 What is the maximum power dissipation of each transistor of Fig. 12-41?
- 12-25 What is the maximum output power in Fig. 12-41?

- 12-26 What is the quiescent collector current in Fig. 12-42?
- 12-27 In Fig. 12-42, what is the maximum efficiency of the amplifier?

Figure 12-42

