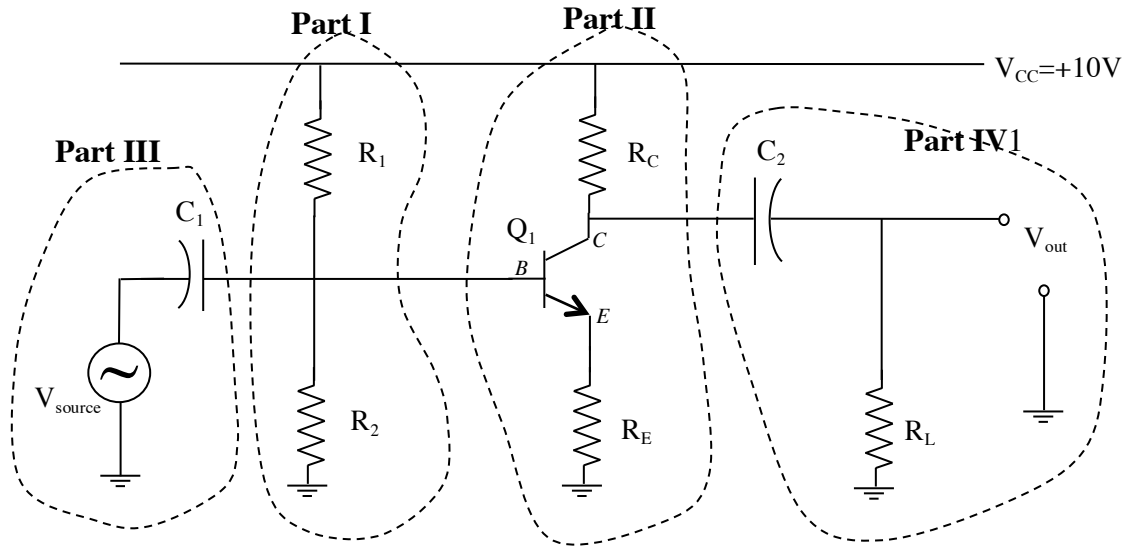


**PHY2250 - HW 8**

- (1 point) In a given transistor circuit, the emitter current is 25mA and the collector current is 24.6mA. What is the base current?
- (4 points) In the following amplifier schematic,  $R_1=5k\Omega$ ,  $R_2=2k\Omega$ ,  $R_C=1k\Omega$  and  $R_E=500\Omega$ .



- Referring to "Part I", what is  $V_B$ , the DC voltage at the transistor's base?
  - What is  $V_E$ , the voltage at the emitter?
  - Given  $V_E$ , what are  $I_E$  and  $I_C$ ? (Use  $\beta_{DC}=100$ .)
  - What are the role of the capacitors  $C_1$  and  $C_2$ ? i.e. why might you want them there?
- In the text, Chapter 28, *Question 5*.
  - Problem 28-30
  - Problem 28-38
  - What is the function of capacitor  $C_E$  in the circuit shown in Figure 29-3?