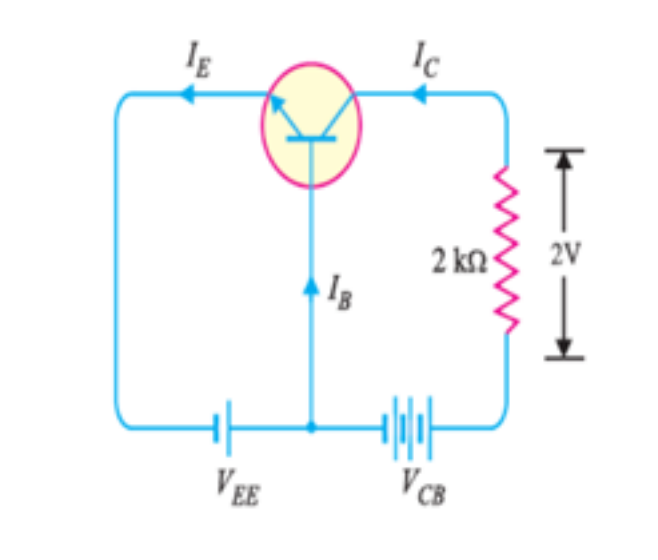


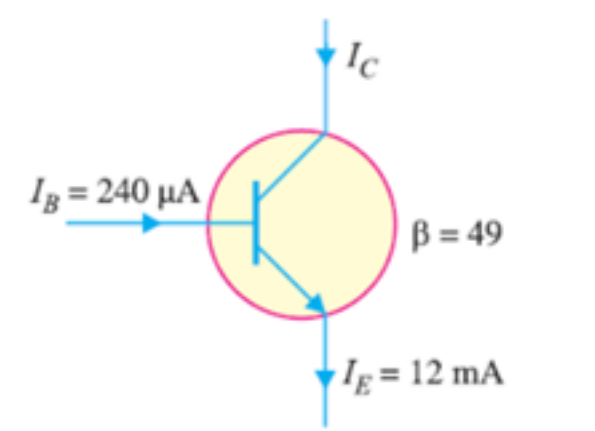
	TUTORIAL 3		
1	In a common base connection, $I_E = 1 \text{ mA}$, $I_c = 0.95 \text{ mA}$. Calculate the value of I_B		
2	In a common base connection, current amplification factor is 0.9. If the emitter current is 1 mA, determine the value of base current		
3	In a CB connection, $I_C = 0.95 \text{ mA}$ and $I_B = 0.05 \text{ mA}$. Find the value of α		
4	In a CB connection, the emitter current is 1 mA. If the emitter circuit is open, the collector current is 50 μA . Find the total collector current. Given $\alpha = 0.92$.		
5	Find the value of β if	(i) $\alpha = 0.9$	(ii) $\alpha = 0.98$ (iii) $\alpha = 0.99$

6 In a common base connection, $\alpha = 0.95$. The voltage drop across $2\text{ k}\Omega$ resistance which is connected in the collector is 2 V . Find the base current.



7 Calculate I_E in a transistor for which $\beta = 50$ and $I_B = 20\text{ }\mu\text{A}$

8 Find the α rating of the transistor shown in Figure below. Hence determine the value of I_C using both α and β rating of the transistor.



9 A transistor has the following ratings: $I_C(\text{max}) = 500 \text{ mA}$ and $\beta_{\text{max}} = 300$. Determine the maximum allowable value of I_B for the device.

10 Figure following shows the open circuit failures in a transistor. What will be the circuit behavior in each case.

