


Ministry of Higher Education		
Higher Institute for Engineering and Technology at El-Manzala		
First semester : 2023/2024		Level: 1
Department: Electronic Engineering.		Code: COM313
Sheet No. (5)		
Course title: Fundamental of electronics	Examiner: Dr. Mohamed Abdel Rahman	

**Question (1):**

For the common emitter bipolar junction transistor amplifier shown in figure 1 , determine the operating mode and the output voltage value related to the following cases ?

- $\beta=300$ .
- $\beta=50$ .

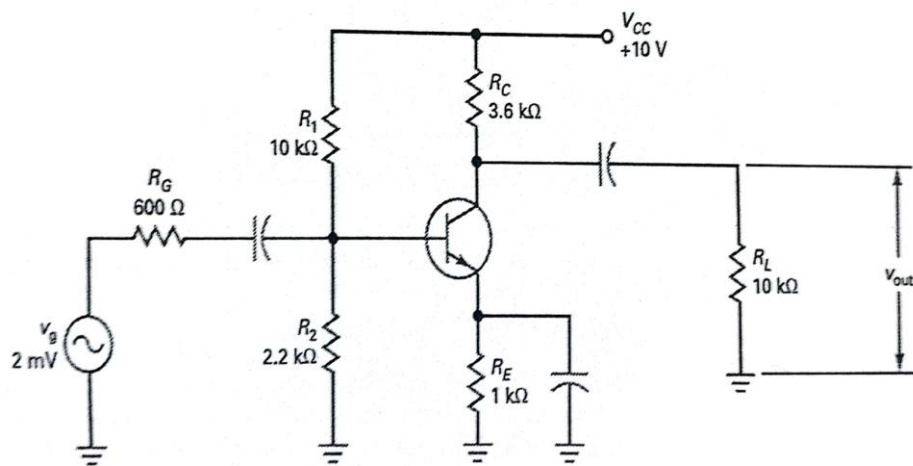


Fig 1

**Question (2):**

For the common emitter bipolar junction transistor amplifier shown in figure 2 , determine the following:-

- The voltage gain,  $A_v$  .
- Input impedance ,  $R_{in}$ .
- Output impedance ,  $R_{out}$ .
- The output voltage across the load resistor ,  $V_{out}$  .

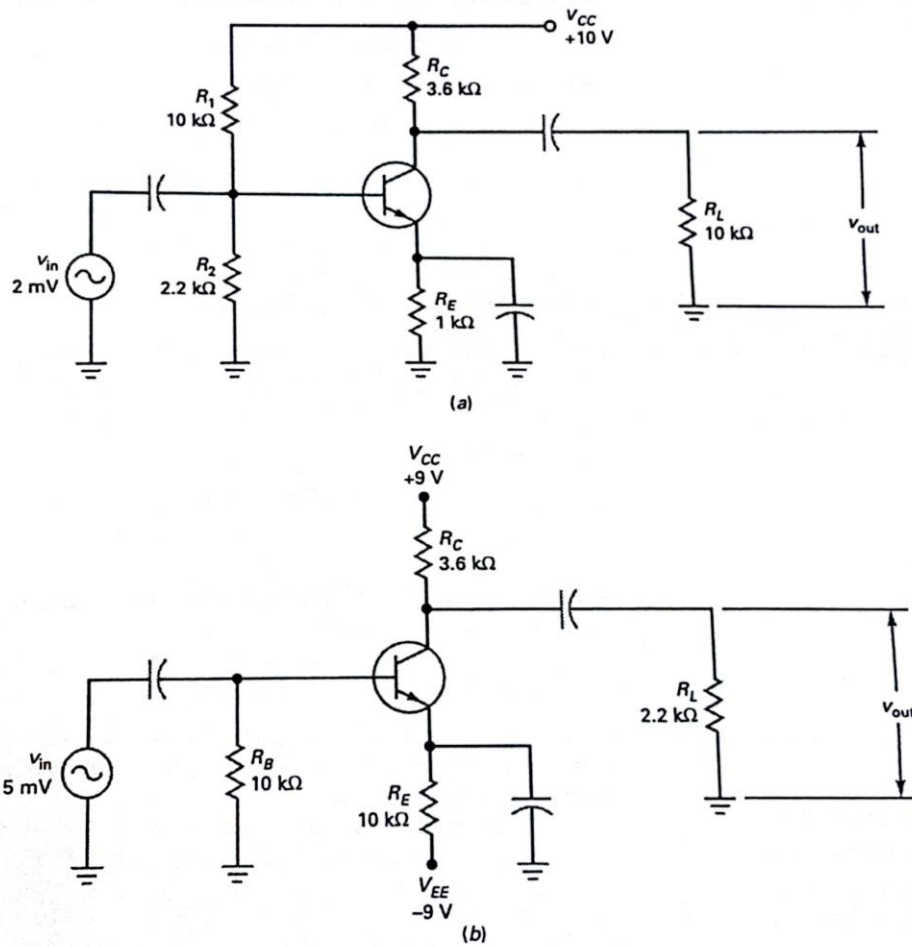


Fig 2