


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. (4)		
Course title: Fundamental of electronics	Examiner: Dr. Mohamed Abdel Rahman	

### Question (1):

For the following amplifier circuit shown in figure 1, Calculate the following:

- The voltage of  $V_B$  ,  $V_C$  ,  $V_E$  ,  $V_{CE}$  and operating point.
- The DC input power.

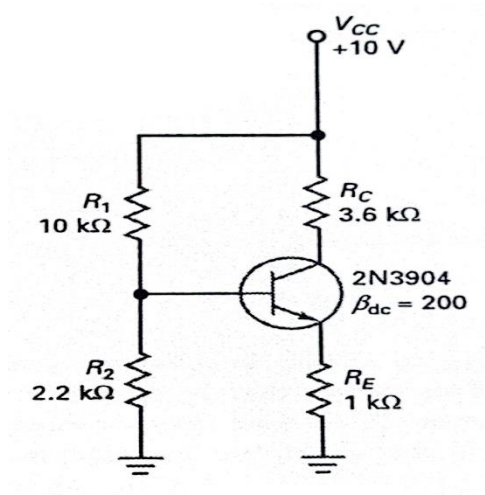


Fig 1

### Question (2):

In figure 2 ,Calculate the values of  $R_1$ ,  $R_2$ ,  $R_E$  and  $R_C$  when  $\beta_{dc} = 250$ ,  $I_C = 10$  mA

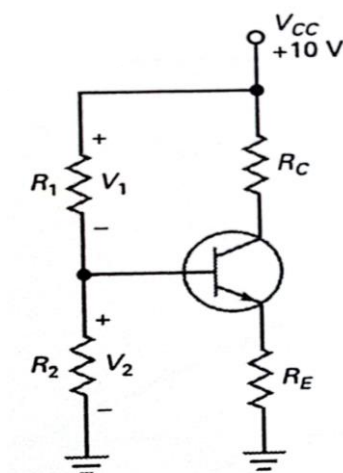


Fig 2

**Question (3):**

In figure 3 ,What is the collector voltage if emitter resistor is increased to  $1.8\text{ k}\Omega$ .

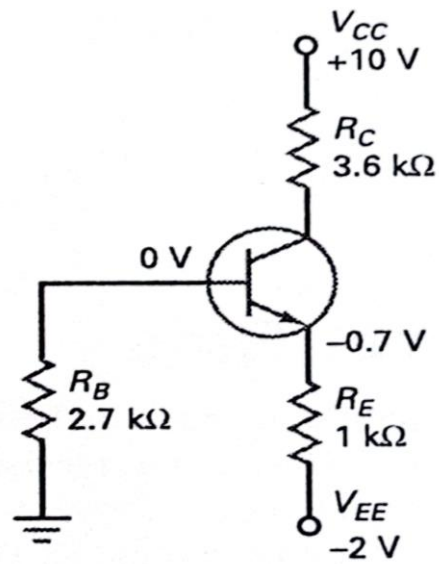


Fig 3