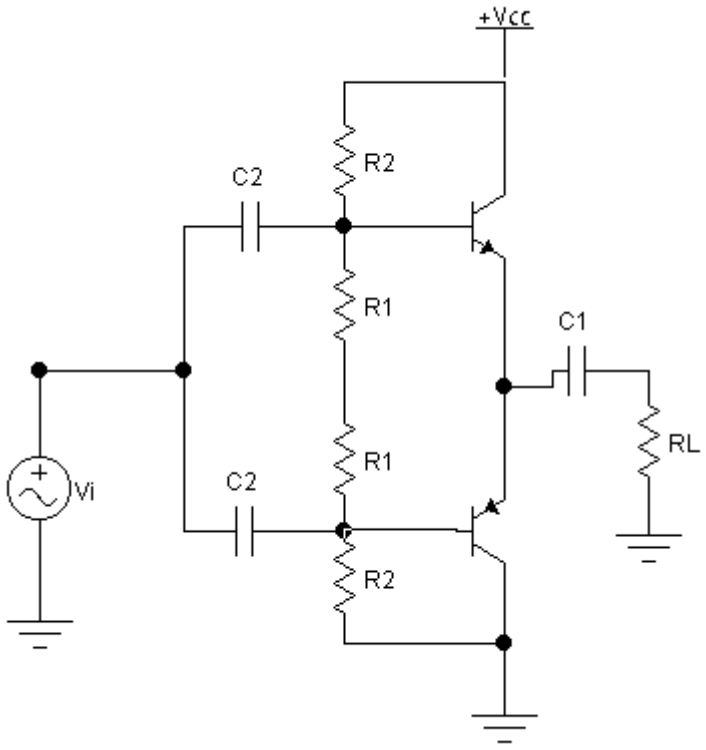
AAST **Sixth term**
Faculty of Engineering **EC233: Electronic Circuits I**
CE-Department **Year: 2004/2005**
Instructor:Dr.M. El-Banna **Sheet:4**

1- Design a complementary symmetry class **B** power amplifier to drive a 12 Ω load. Refer to the circuit below. Use V_{CC} = 18 V, V_{BE} = 0.7 V and β = 60. Calculate the total power dissipated in the load, the input resistance, and the power rating of the transistor. Select values of R_1 and R_2 and C_1 for a 20 Hz to 20 kHz frequency response and for a current gain of A_i = 20.



2- Design a complementary symmetry class **B** power amplifier to drive an 8 Ω load. Using V_{CC} = 12 V, V_{BE} = $\pm$0.7 V, β = 60 and a frequency range of 100 Hz to 15 kHz. Use the circuit of the previous problem with a required current gain of A_1 = 20. frequency response and for a current gain of A_i = 20.

a- Find the quiescent voltages and currents.
b- Find the maximum power delivered to the load.
c- Select values for R_1,R_1, and C_1.
d- Determine R_{in}.

Use the above circuit diagram.