AAST
Faculty of Engineering
CE-Department
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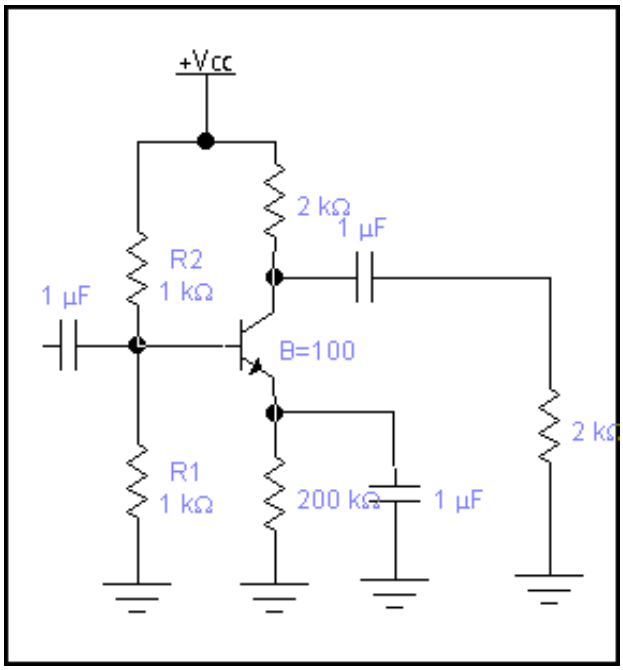
Sixth term
EC233: Electronic Circuits I
Year: 2004/2005
Sheet:2

1-For the amplifier shown in circuit:
a-Find the values of R_1 and R_2 for I_{CQ}=8mA.
b-Determine the symmetrical output voltage swing for the values of part a.
c-Draw the ac and dc load lines.
d-Determine the power dissipated by the transistor and that dissipated by R_L V_{cc}=20V.



Figure(1)

2-Determine Av, Ai,and Rin for the amplifier shown in figure when:
R_L=R_B=5KΩ, h_{ib}=40Ω, β=300,and R_E is as follows:
a-R_E =1000Ω ,
b-R_E =500Ω ,
c-R_E =100Ω , d-R_E=0.

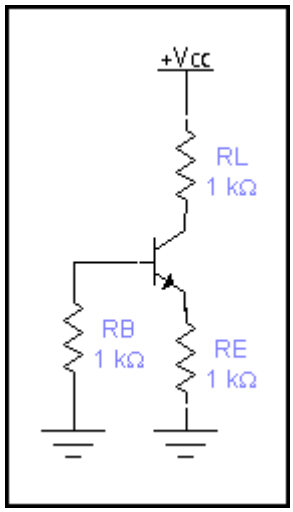
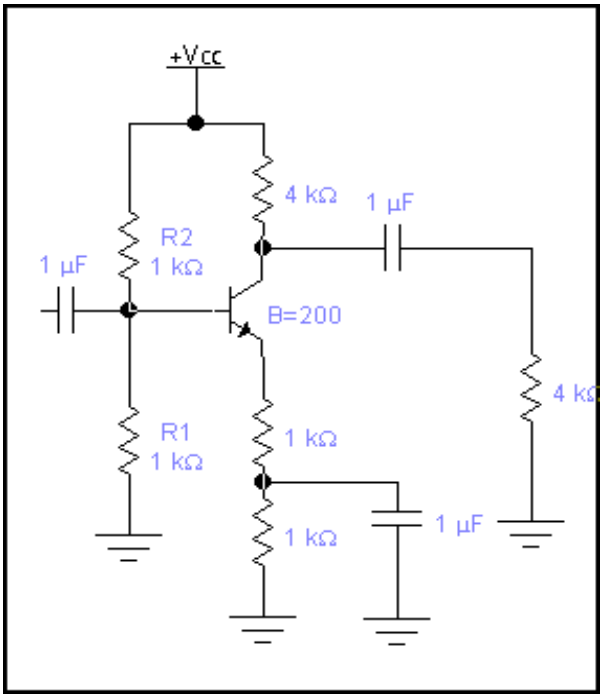


Figure (2)

3-For the circuit shown in figure, select I_{CQ} and V_{CEQ} for maximum symmetrical output voltage swing.
a-Determine the values of R_1 and R_2 in order to achieve this operating point.(Vcc=12v)
b-Find the maximum symmetrical output swing.
c-Determine the power dissipated by the transistor and the power delivered to the load.



Figure(3)