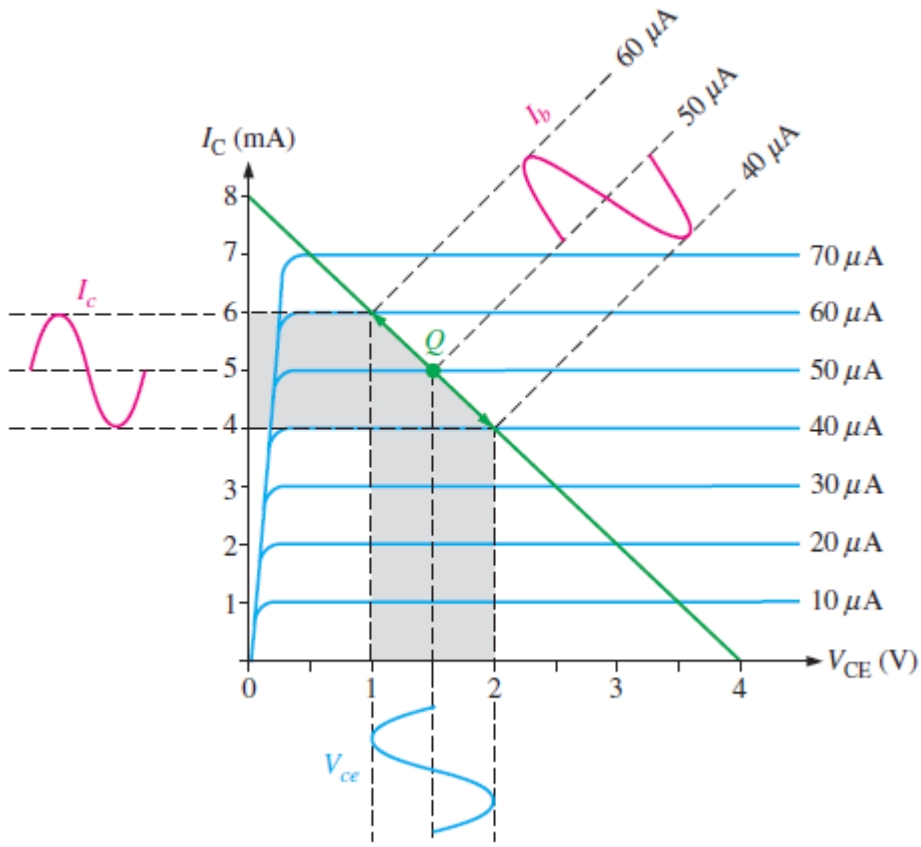
Electronic Circuits II - Tutorial 04

BJT Amplifiers 1

Problems

Q1

What is the lowest value of dc collector current to which a transistor having the characteristic curves in Figure can be biased and still retain linear operation with a peak-to-peak base current swing of 20 μA?



Sol 1

Less than 2 mA and greater than 1 mA

Q2	What is the highest value of I_C under the conditions described in Problem 1?
Sol 2	Less than 7 mA and greater than 6 mA

Q3	If the dc emitter current in a transistor is 3 mA, what is the value of r'_e?
Sol 3	... 8.33 Ω ...

Q4	If the h_{fe} of a transistor is specified as 200, determine β_{ac}.
Sol 4	200