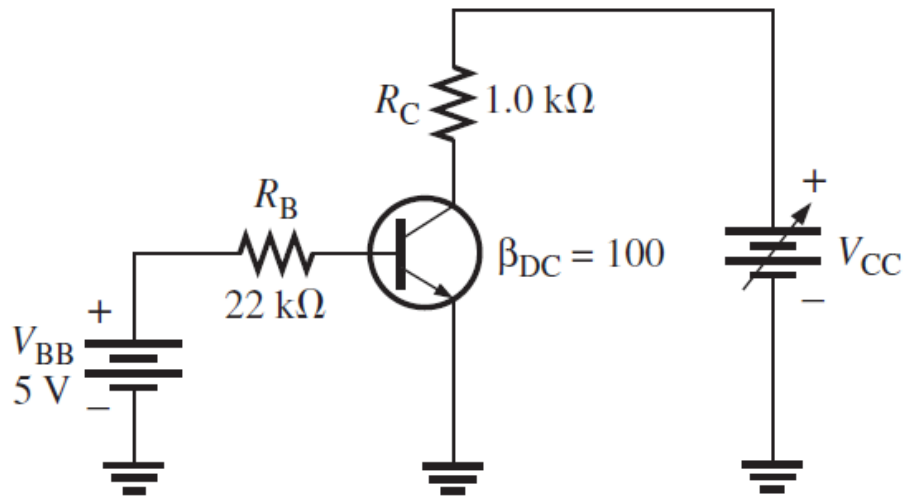# Physics

Note ASSIGNMENT will be Hand Written and Need to be Submitted on Monday before 12 PM

Q No 1 [10 pts]

(a). For the transistor circuit in Figure, what is V_{CE} when V_{IN} 0 V?

(b). What minimum value of I_B is required to saturate this transistor if β_{DC} is 200? Neglect VCE(sat).

(c). Calculate the maximum value of R_B when $V_{BB} = 4V$. to operate it in Active region according to conditions given in option (b).

Q No 2[5pts]

2. Explain the purpose of a thin, lightly doped base region.

Q No 3 [5 pts]

Briefly Explain the terms Forward Biasing and reverse biasing