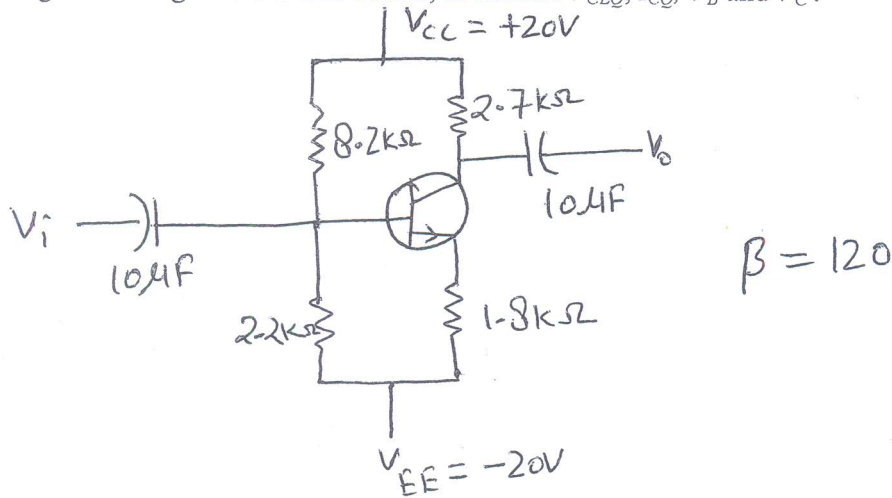
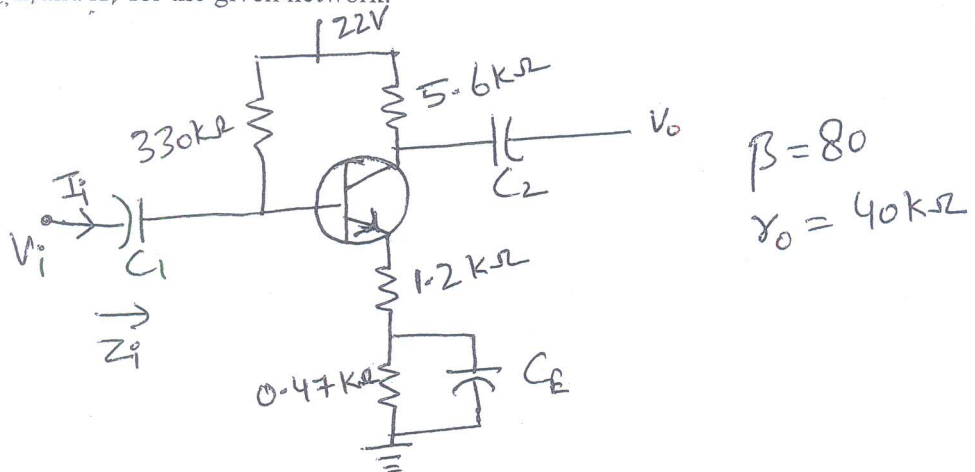


*Note: All questions are compulsory. Carrying of mobile phone during examination will be treated as case of unfair means.*

1. For the given voltage divider bias circuit, determine  $V_{CEQ}$ ,  $I_{CQ}$ ,  $V_B$  and  $V_C$ . [5]



2. Determine  $r_e$ ,  $Z_i$  and  $A_V$  for the given network. [5]



3. (a). What is the expected amplification of a BJT amplifier if the dc supply is set to zero volts. Give reason to support your answer. [1.5]
- (b). Derive the expression of  $S(I_{CQ})$  for voltage divider bias circuit. [1.5]
- (c). Show that for emitter follower circuit  $A_V = 1$ . [2]