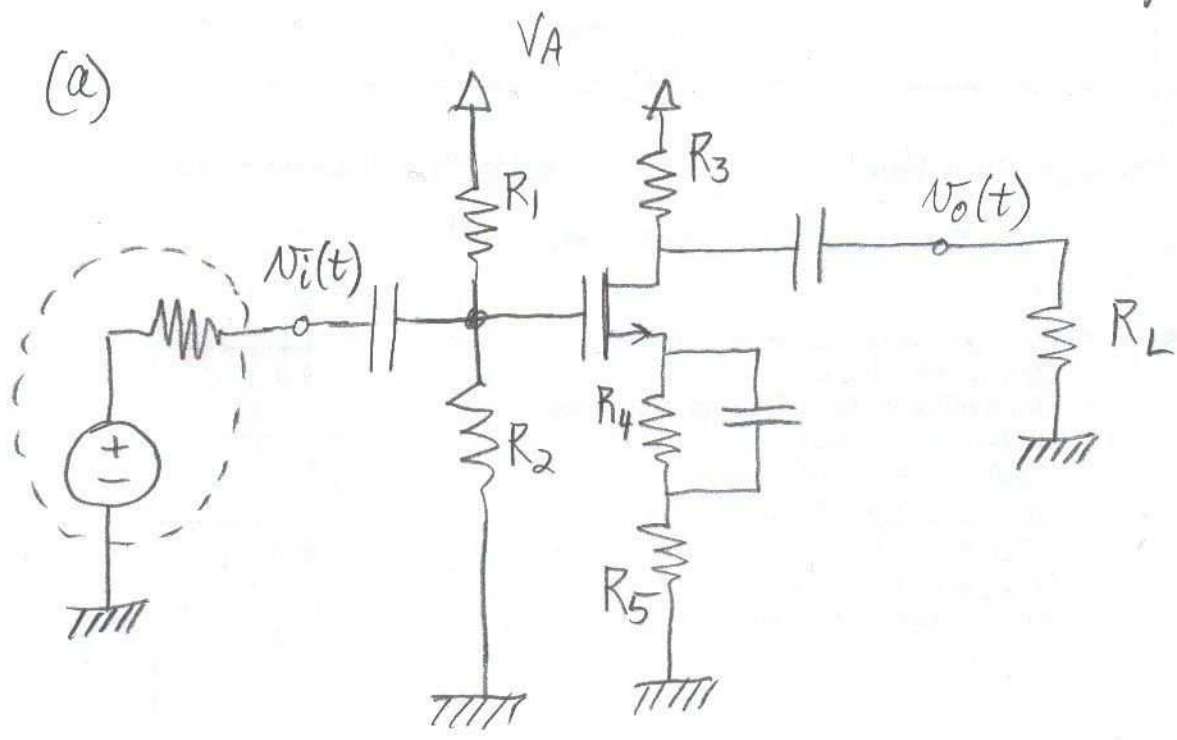


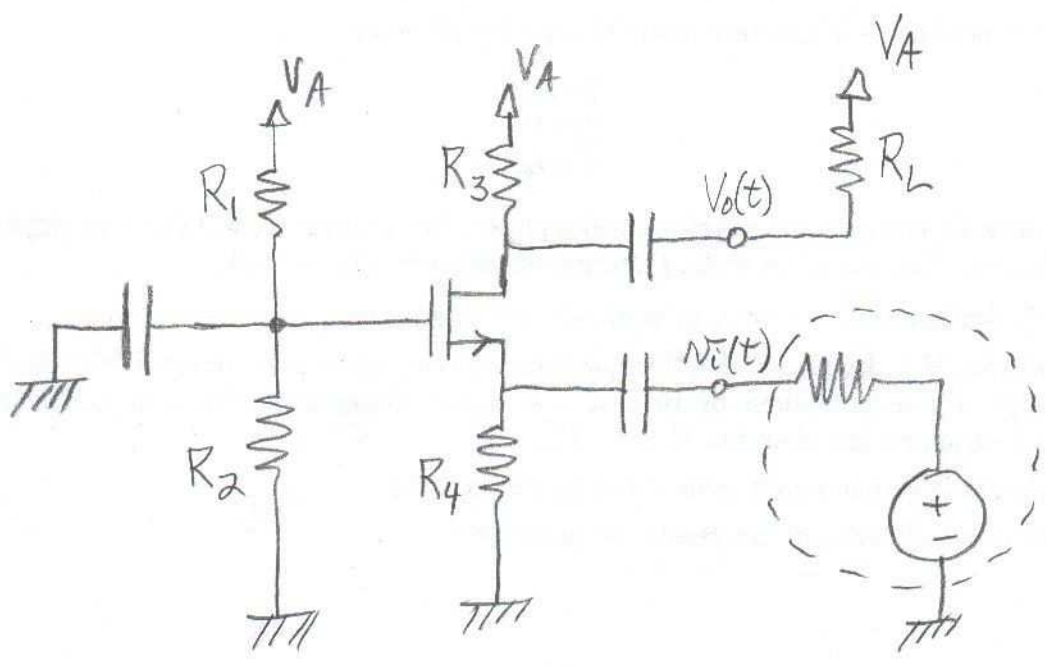
Sketch the small signal AC models of the amplifiers :

(1)

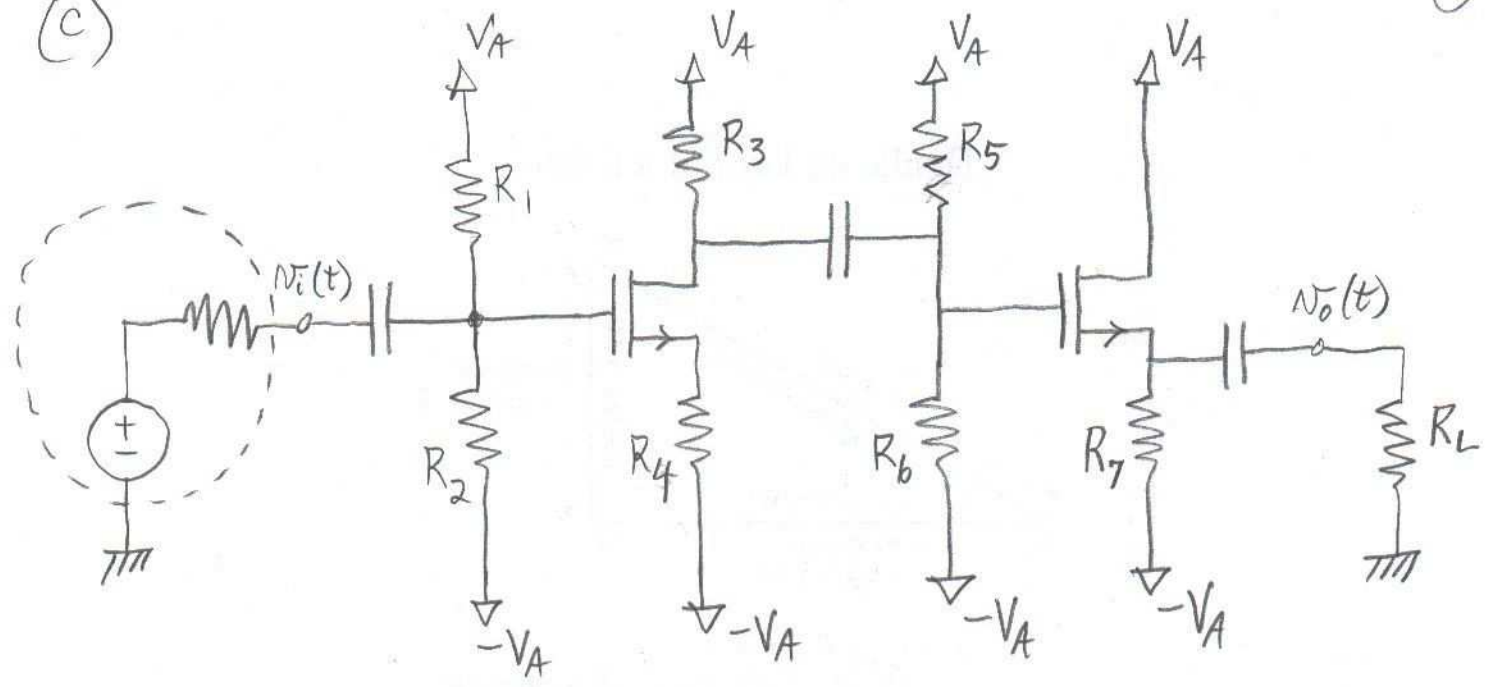
(a)



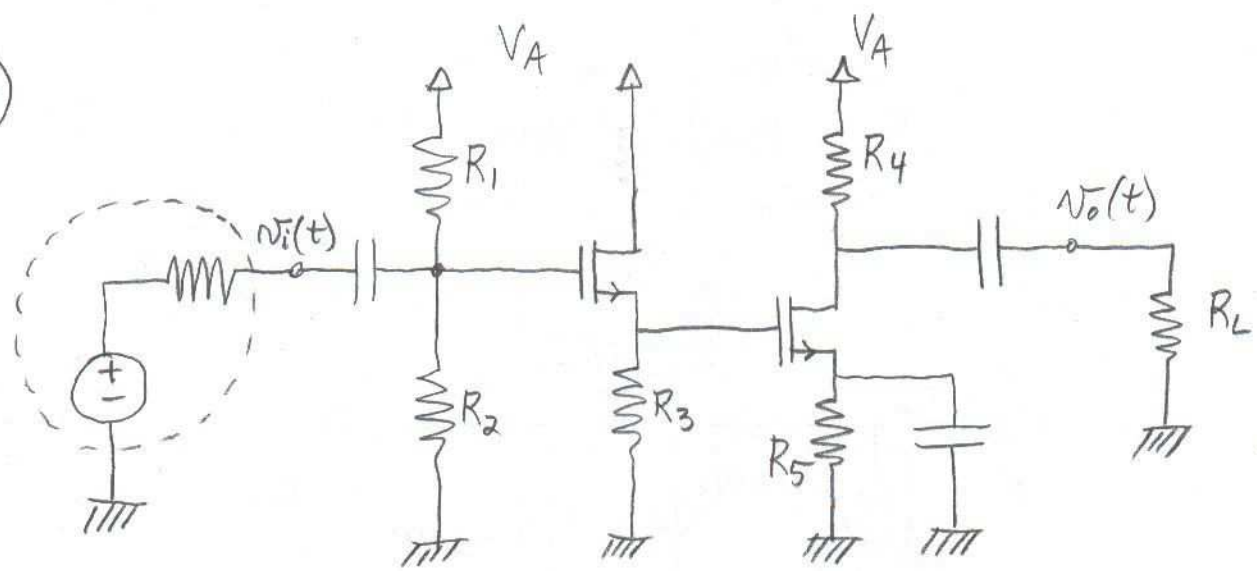
(b)



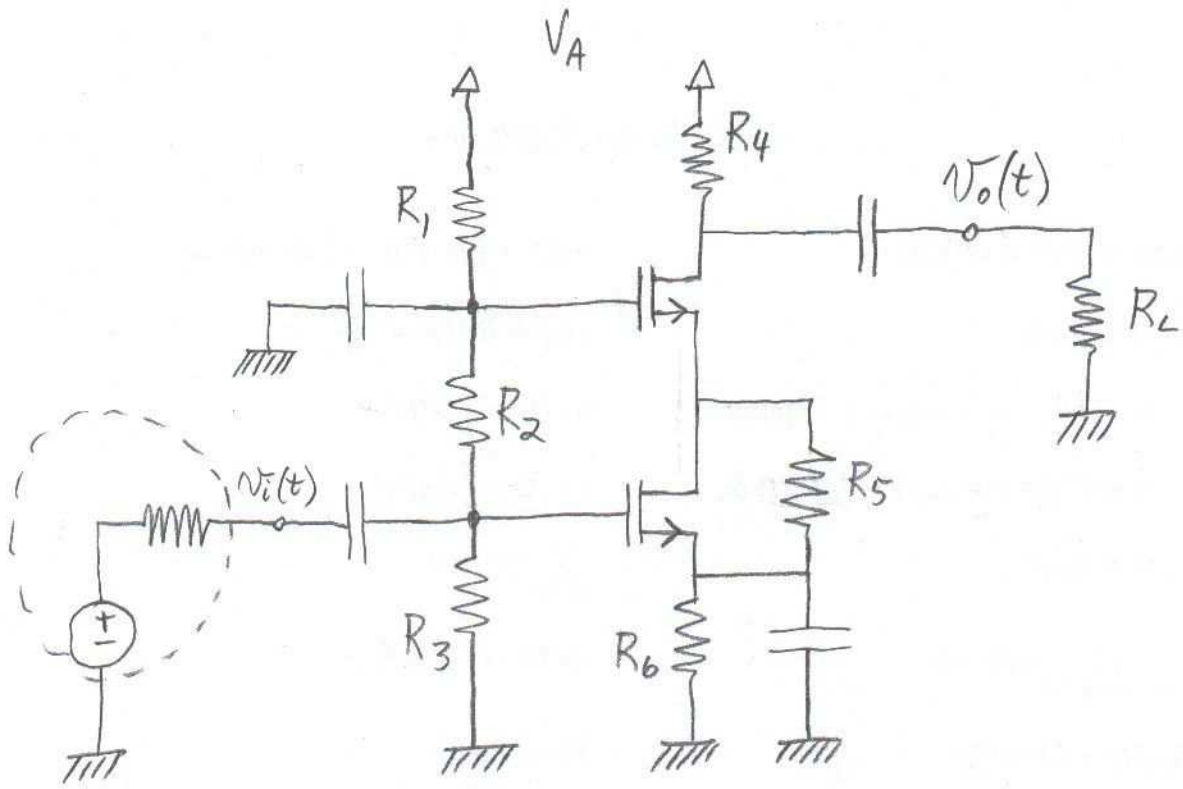
(c)



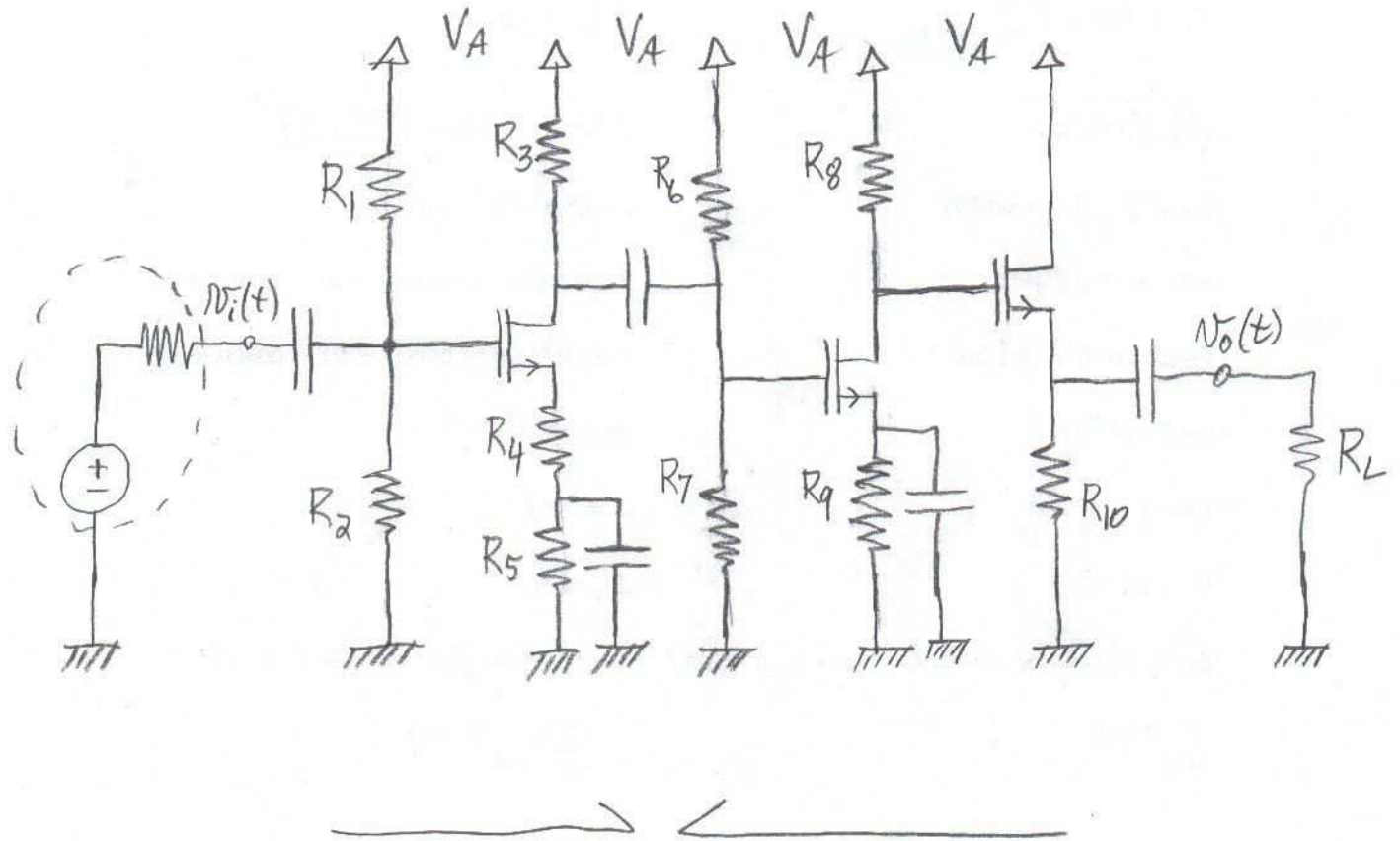
(d)



(e)

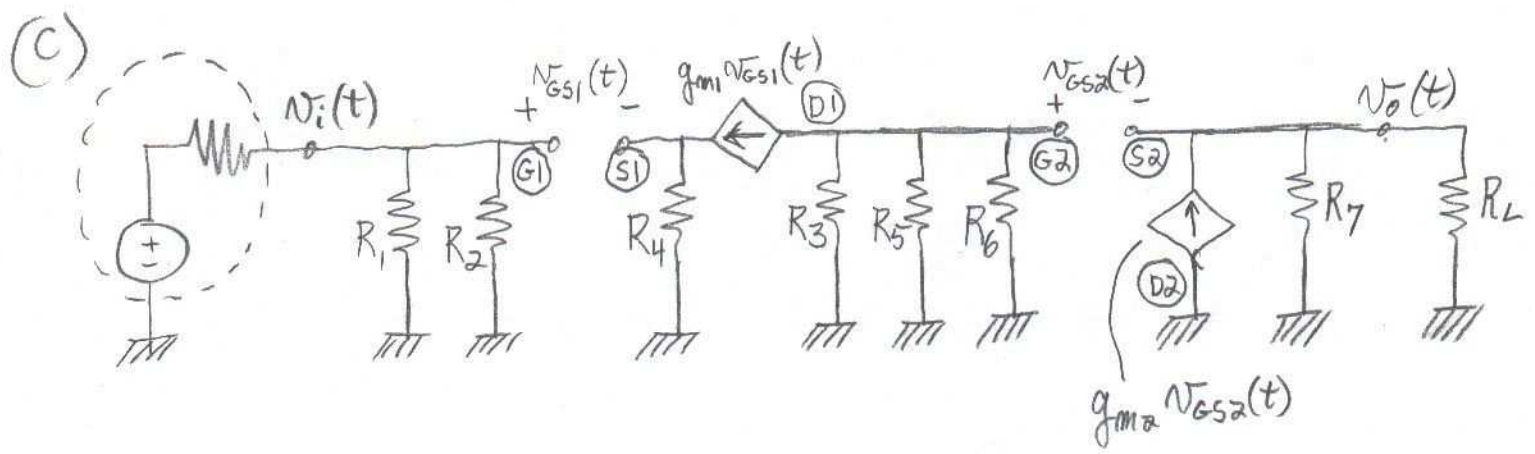
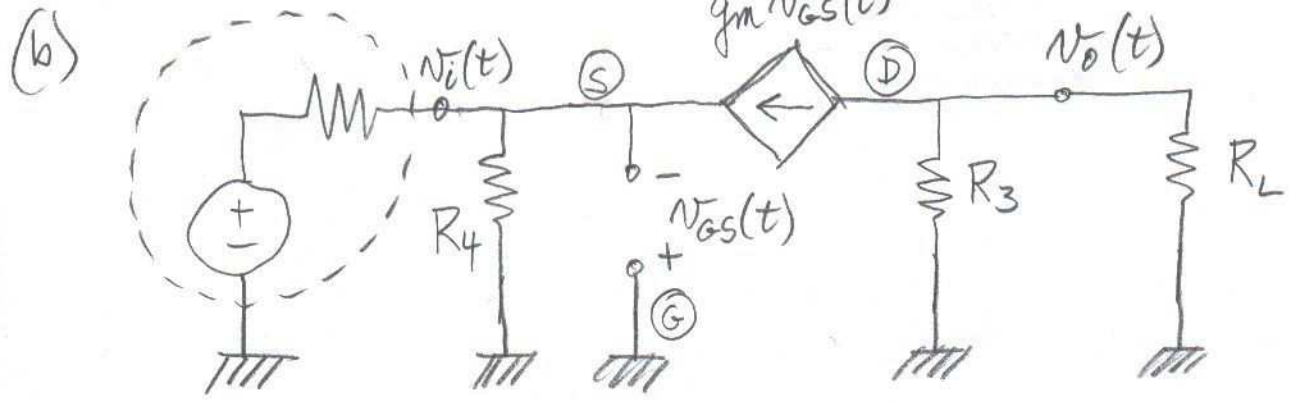
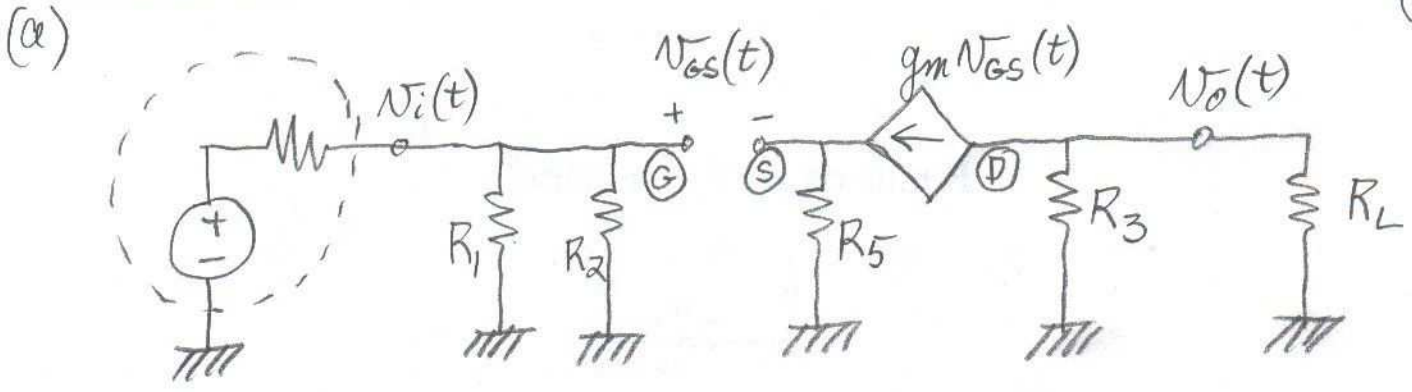


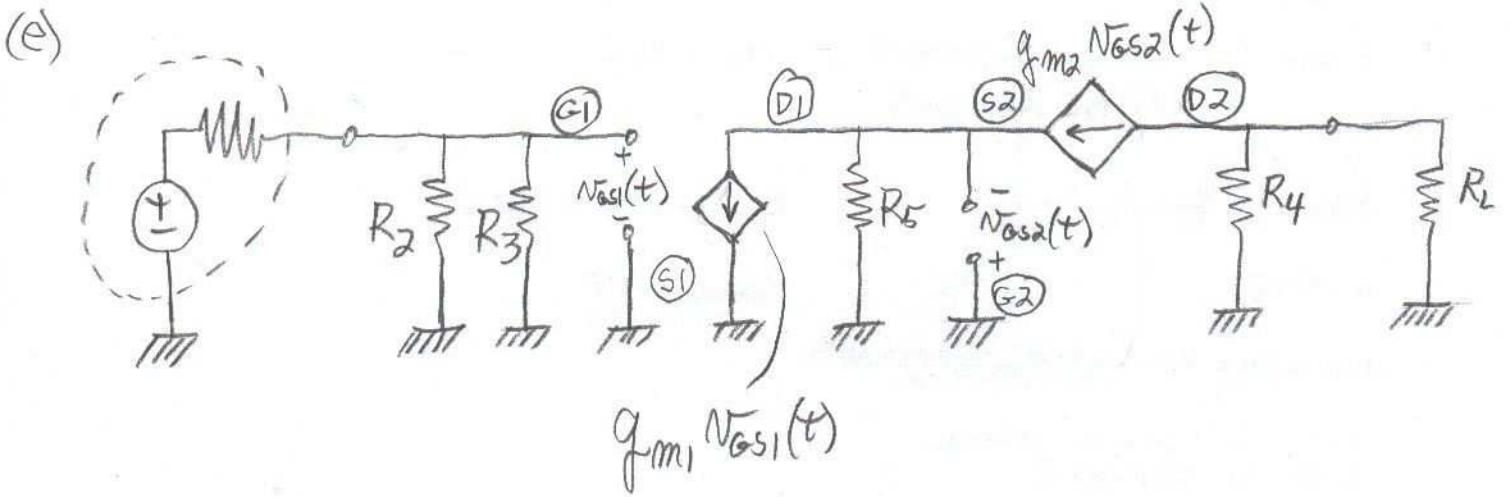
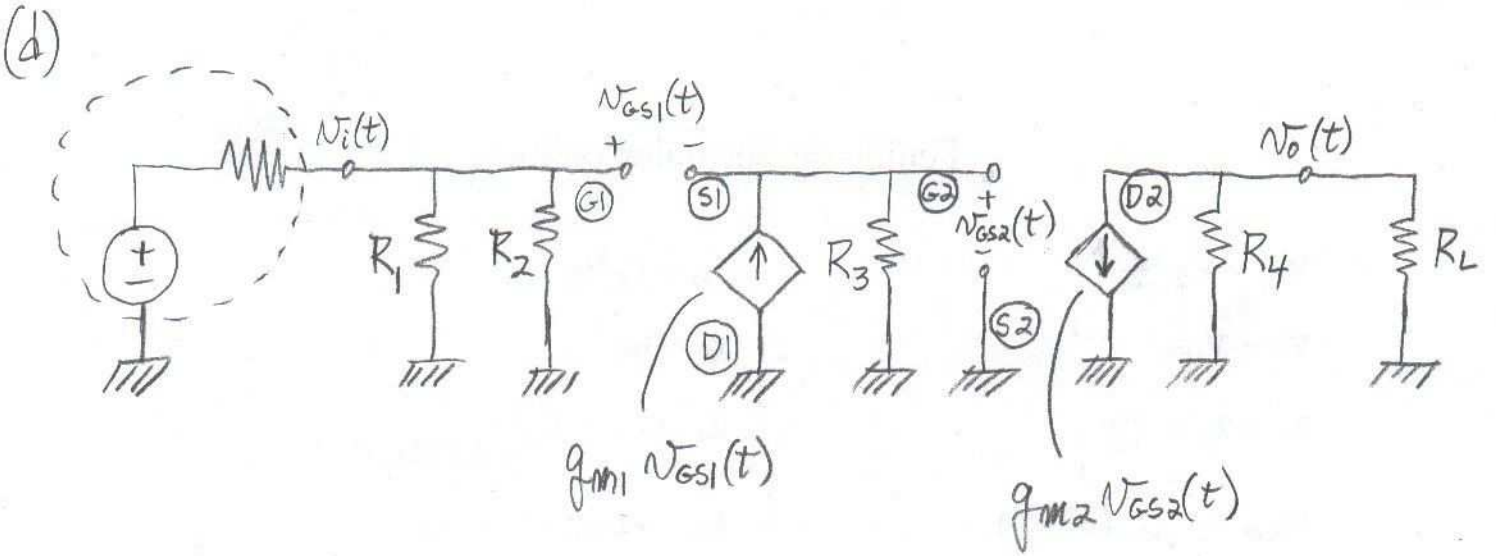
(f)



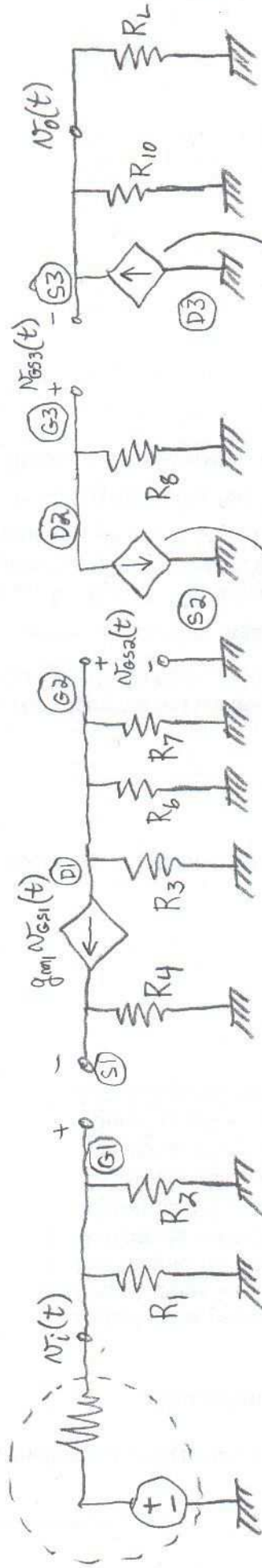
Answers:

(4)





(F)



$g_{m3} N_{G53}(t)$

$g_{m2} N_{G52}(t)$

(6)