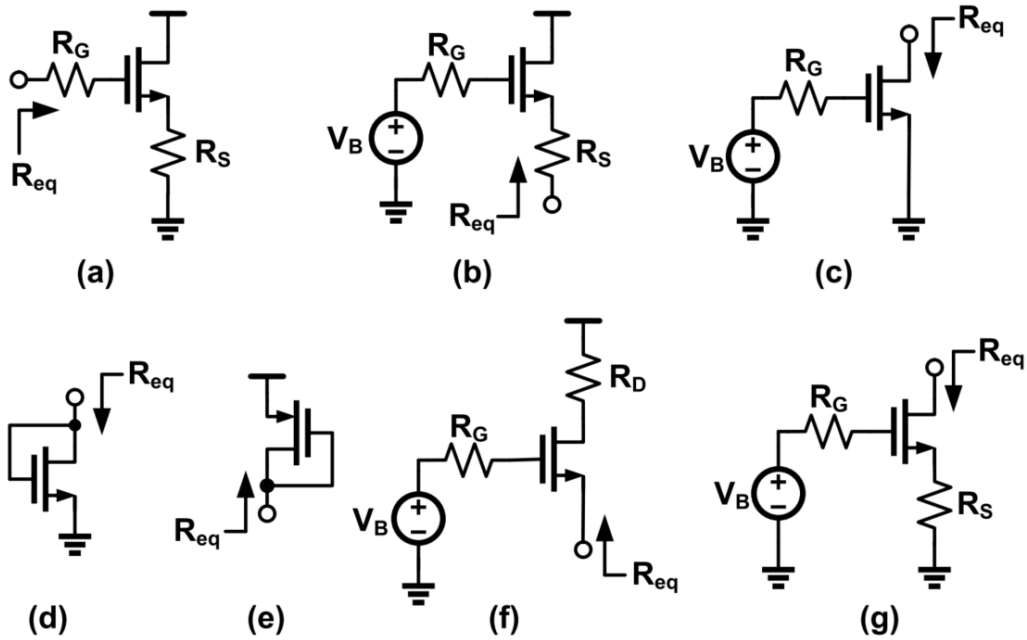1. Using incremental model, derive the expression for equivalent impedance of the configurations shown below. You may assume all transistors are biased in saturation region and $r_{ds} \neq \infty$

(a)   (b)   (c)

(d)   (e)   (f)   (g)

2. Using the results from Problem 1, determine the equivalent impedance for the configurations shown below. You may assume all transistors are biased in saturation region and $r_{ds} \neq \infty$

(a)   (b)   (c)   (d)   (e)