Assignment Questions

(1) Derive the voltage gain, current gain, input impedance and output impedance of common Emitter using small signal model.

(2) Derive the voltage gain, current gain, input impedance and output impedance of JFET common Drain Amplifier

(3) Derive the voltage gain, current gain, input impedance and output impedance of MOSFET common Source amplifier with unbypassed Rs.

(4) Derive Av, AI, Zi, & Zo for common emitter amplifier with Emitter Resistor using small signal model.

(5) What is a DC load line?

(6) What is operating point?

(7) List out advantages of h-Parameters?

(8) How to obtain AC equivalent of a network?

(9) Why CE configuration is commonly used in applications.

(10) Determine the operating point and draw dc load line and ac load line analysis of BJT and MOSFET.