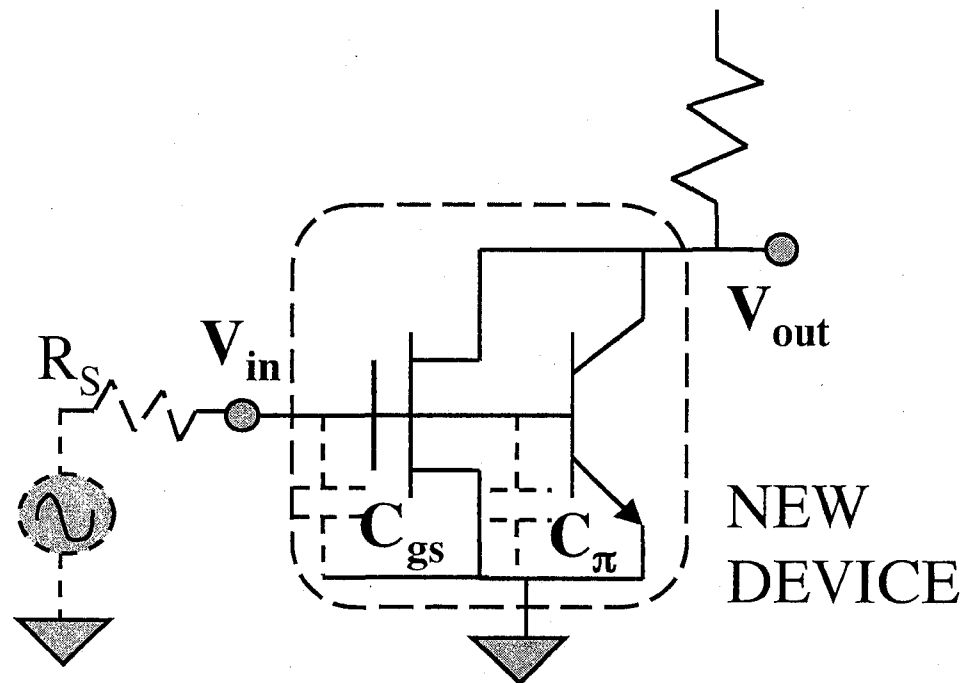


A device technologist has created a NEW DEVICE--
part MOS, part BJT--with “drive current” given by:
 $I_{\text{Drive}} = I_D(\text{MOS}) + I_C(\text{BJT})$. The schematic is as follows.



To achieve maximum small-signal (ac) voltage gain, at what operating point should we bias the NEW DEVICE?
What is the ac gain and bandwidth?