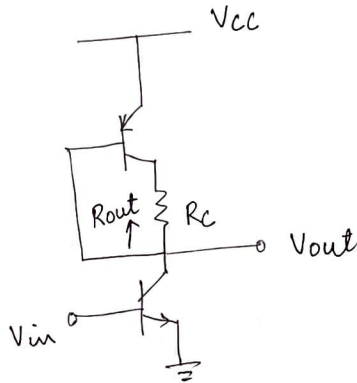


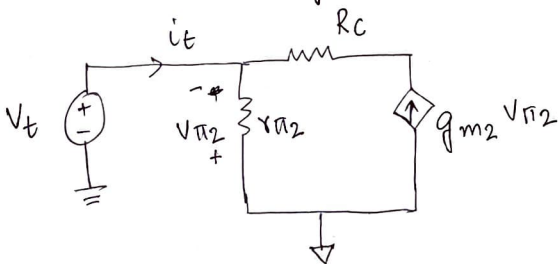
This is the corrected solution to Q5.

Q5) Calculate the output impedance of the following circuit.



Corrected Solution

The small signal model to calculate R_{out} .



$$i_t = -\frac{V_{\pi 2}}{r_{\pi 2}} - g_{m 2} V_{\pi 2}$$

$$V_t = -V_{\pi 2}$$

$$\Rightarrow R_{out} = V_t / i_t = -V_{\pi 2} / i_t$$

$$\Rightarrow R_{out} = \frac{1}{(g_{m 2} + \frac{1}{r_{\pi 2}})} = (1/g_{m 2}) \parallel (r_{\pi 2})$$