Student Name:

Student ID:

Date: 15/11/2012

EHB262E Electronics II
Quiz 1

1) Please circle TRUE if you think that the statement is true; FALSE otherwise.

   a. Voltage amplifiers preferably have high output resistances.
   TRUE / FALSE

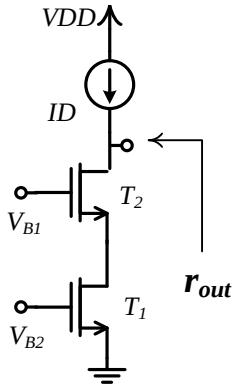
   b. Transresistance amplifiers preferably have low output resistances.
   TRUE / FALSE

   c. BJTs have threshold values under which they are in cut-off region.
   TRUE / FALSE

   d. Small signal models are for finding DC operating points.
   TRUE / FALSE

   e. Gain of an amplifier depends on its load resistance.
   TRUE / FALSE

2) Suppose that *ID* is an ideal current source, and both V_{B1} and V_{B2} are DC bias voltages. Determine the small signal output resistance $\boldsymbol{r_{out}}$ in terms of g_{m1}, g_{m2}, r_{o1}, and r_{o2} (not necessarily all of them).



Grading: 1) 50% (10% each), 2) 50%

Duration: 15 minutes