Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (please print)

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ECE 3355 -- Quiz #6

December 1, 2011

Keep this quiz closed and face up until you are told to begin.

1. This quiz is closed book, closed notes. You may use one 8.5” x 11” crib sheet, or its equivalent.

2. Show all work on these pages. Show all work necessary to complete the problem. A solution without the appropriate work shown will receive no credit. A solution which is not given in a reasonable order will lose credit.

3. It is assumed that your work will begin on the same page as the problem statement. If you choose to begin your work on another page, you must indicate this on the page with the problem statement, with a clear indication of where the work can be found. **If your work continues on to another page, indicate clearly where your work can be found. Failure to indicate this clearly will result in a loss of credit.**

4. Show all units in solutions, intermediate results, and figures. Units in the quiz will be included between square brackets.

5. Do not use red ink. Do not use red pencil.

6. You will have 30 minutes to work on this quiz.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/20

Room for extra work

Assume that the device with the characteristics given below in Figure 1, has the symbol given in Figure 2. The device is called a Kayzkeynumbor.

1. Assume that the Kayzkeynumbor is to be used in the region marked as B in Figure 1. Find a circuit model that could be used to solve for the biasing scheme, and give the test or tests that would be used to determine whether a correct guess had been made in choosing that circuit model. Make sure that all polarities are clear and unambiguous.
2. Find the model that could be used for the Kayzkeynumbor in small signal applications, when biased into region C.

 

Room for extra work

ECE 3355 -- Quiz #6 – December 1, 2011 – Solution

Assume that the device with the characteristics given below in Figure 1, has the symbol given in Figure 2. The device is called a Kayzkeynumbor.

1. Assume that the Kayzkeynumbor is to be used in the region marked as B in Figure 1. Find a circuit model that could be used to solve for the biasing scheme, and give the test or tests that would be used to determine whether a correct guess had been made in choosing that circuit model. Make sure that all polarities are clear and unambiguous.
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