The following question was asked on a 3x5 card. I copied it word for word, with underlining as given on the card.

4. I wish we would get more prepared for the exams by our professor. As in what to expect or teach us strategys on how to deal with the “surprises” we got on exams. Such as things we have never seen before. There are problems we have never seen on homeworks, ~~quizzes~~, class problems or anywhere. That throws off students who already struggle with test anxiety even more. I feel like professors should want their students to do good and not feel “tricked” every evaluation that comes. But if that is not the goal, ok.

I would like to respond through an email message, since we have a great deal of technical work to cover in our class meetings. Let me start by thanking the person who wrote this, taking the time to express your concerns.

Next, let me say that I do want students to do well. I have worked for decades to try to find ways to help students do well.

However, I need to re-emphasize what I said on the first day of classes: Engineers are called on to solve technical problems that have not been solved before. That is the defining characteristic of engineers, that sets them apart from other fields. Every design problem involves solving problem that have not been seen before. I believe that it is my responsibility to help students move in the direction of being able to do this, to begin the process of learning how to apply concepts to new situations. To that end, it is our goal to design problems that students have not seen before, to design problems that test whether the students have really learned the concepts. Our goal is to have problems that students cannot solve by following a process without understanding that process. So, yes, as I said on the first day of classes, we are intending to come up with problems that you have not seen before. We need to make sure that you can solve them using the concepts you have been taught, but they should be new problems, each time. This is hard to do, but that is the goal.

I have tried to teach strategies for approaching problems. I have emphasized taking a systematic approach, for example by naming nodes, and then redrawing the circuit using those named nodes. I did an equivalent resistance problem in class that was every bit as difficult as the problem on Quiz 3, for example. I emphasized strategies as I worked on that problem.

Dealing with exam anxiety is a difficult thing. I do not want to minimize the significance of this issue. However, I believe that everyone will have stressful situations in all of your future employment. Learning how to deal with these stressful situations is part of your preparation for your future career.

If anyone wants to talk about this further, I would be happy to do so, but at this point I would like to ask that these discussions not be during class today.

Sincerely, Dr. Dave