Examination Feedback for EEE118 – Electronic Devices and Circuits
Spring Semester 2011-12

Feedback for EEE118 Session: 2011-2012

Feedback: Please write simple statements about how well students addressed the exam paper in general and each individual question in particular including common problems/mistakes and areas of concern in the boxes provided below. Increase row height if necessary.

General Comments:

Overall poor average performance.
A large number of students were clearly unprepared for this exam, either for its format or unable to put in appropriate revision. I understand there have been a large number of early walk outs during the exam and as a result, there are a number of bad fails. However there are also a number of good performances suggesting widely differing student capabilities.

Question 1:

Most people answered 1a without problems, although there were a few errors (the most common being to have these the wrong way around). Most candidates could follow the methodology of 1b and 1c, and made good attempts, but there were quite a few with errors in the calculation. Those that attempted 1d gave good answers, but many left this part un-answered; this despite many clues being given that something like this could be included.

Question 2:

This question mainly tested understanding of gereration/recombination and diffusion. Those who understood scored highly but a significant number had little idea, indicating lack of depth of understanding. Section (d) was designed to stretch fundamental working knowledge and was only answered correctly by a few.

Question 3:

Of those who engaged fully with this question it was answered reasonably well. Most marks were lost through lack of detail in the descriptive answers. Most had a good attempt at the calculation parts but lack of care with the calculations lost marks.

Question 4:

Most were able to get 4a correct, but there were some major misunderstandings from a few. Few made a good answer to 4b, but several were close, just with simple errors in the calculation. It is surprising the number of students who could not draw a triangular waveform. Answers to 4c were mixed; several students did this very well, others did very badly clearly not understanding this at all. Even for some, simple questions like the use of capacitors (for coupling) were difficult- some gave very worrying responses.

Question 5:

In part (a) a significant number of students failed to see how straight forward this part was. Part (b) was answered OK but some had difficulty in handling exponentials and logs. Not many could link bond strength with J_o which again indicated weak understanding of the fundamentals.

Question 6:

6a was generally answered well. It is clear that few really understood the Zener diode regulator circuit in 6b Despite the fact that this is really rather easy. Most could draw and describe the peak and clamp detector, but a few got there the wrong way around and surprisingly a few started to describe regulator circuits. Most knew what the circuit in 6d was, but there were quite a few with errors in the drawings of the waveshapes.