

Feedback for EEE339 Session: 2014-2015

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:

Many of the individual parts to questions were well attempted but some students could not attempt all parts of the questions that they chose to answer. You need to cover all parts of the course as an individual question may cover several topics. It was obvious that many students had a very limited depth of understanding to some of the more descriptive questions. This understanding comes from studying the material **well in advance** and seeking clarification if there is something that you do not understand.

Question 1:

Part(a) – Generally a poor attempt at describing cache memory. This was bookwork straight from your notes but it did require a good understanding in order to describe it well.

Part(b) – Generally well attempted. Marks lost for not working to 8 bits and in a few cases, using non-restoring division.

Part(c) – Extended bookwork requiring a good explanation. Again, straight from your notes but few people gained full marks.

Question 2:

Part(a, b, c, d) – Well attempted by most.

Part(c) – Many students gave an example to show that shift-and-add multiplication does not work for 2s complement numbers but did not explain why which was what the question asked for.

Part(d) – Most got a mark for stating that there are more iterations as n gets large but few realised that ultimately the clock frequency is limited by the propagation delay in the adder.

Question 3:

Part(a, b) – Most students picked up marks on this bookwork but surprisingly few got full marks on the description of a stack. Again, it's down to knowing your notes well as a bare minimum.

Part(c) – A reasonable attempt at this but no really good solutions. Remember to describe your states to pick up full marks.

Question 4:

Part(a) – A very poor attempt at this bookwork.

Part(b) – Students either did very well or very badly on this part. If you plan to tackle the Verilog question make sure that you know the basic constructs well.

Part(c) – Generally well attempted but some students missed out the fact that unlike a normal shift register, the data wraps around, hence the name.

Part(d) – Extended bookwork, few people knew this.

Question 5:

The main problem is a. (ii) and b. (ii). For a. (ii), when giving the proof, many students did not give the right convolution equation. For b. (ii), the second sequence is not periodic as the period is not an integer.

Question 6:

The main problem is b and many struggled to give the required explanation for a minimum phase system.

Question 7:

This is fine and most of the students had no problems with it.

Question 8:

This is the most difficult question. For a, the main issue is the Euler's formula. For b, the main issue is to calculate the summation and find the response at the three frequencies. For c, the only requirement is that you should memorize the relevant statement for advantages and disadvantages.