COMP27112 2013-14

Section B

Question 1

This question was reasonably well-answered with an overall average of 56%. I was surprised that some students appeared not to know why we use 4x4 matrices in Computer Graphics, something which was mentioned in almost all (if not all) lectures, as well as being the focus of one lab exercise. Most people understood and were able to properly describe the model/camera duality, and also the approach to breaking a complex transformation into a sequence of simple transformations. What let most students down was their diagrams, which the question specifically asked for. Some students draw good, clear diagrams; most drew poor, unclear, and very very small diagrams; a few students didn't draw any diagrams.

The mark distribution is shown below.

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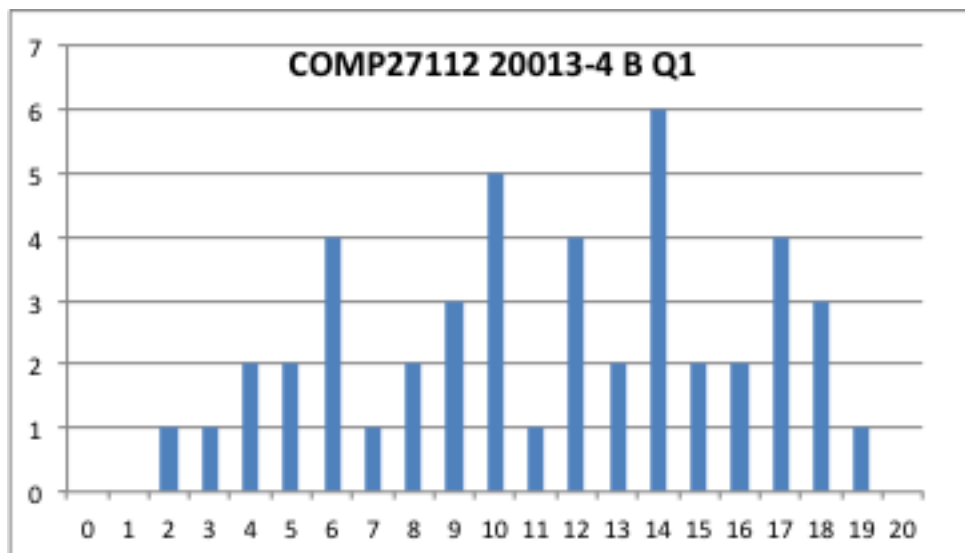
Section B

Question 2

This question was well-answered with an overall average of 69%, which makes me reflect that the question was perhaps a little too easy. I was surprised that some students were not able to discuss the nature of "approximations" used in Computer Graphics, something which was mentioned in almost all (if not all) lectures. In the section on the local illumination model, many students just wrote down formulae, with no explanation or narrative. Some students draw good, clear diagrams; most drew poor, unclear, and very very small diagrams; a few students didn't draw any diagrams.

The mark distribution is shown below.
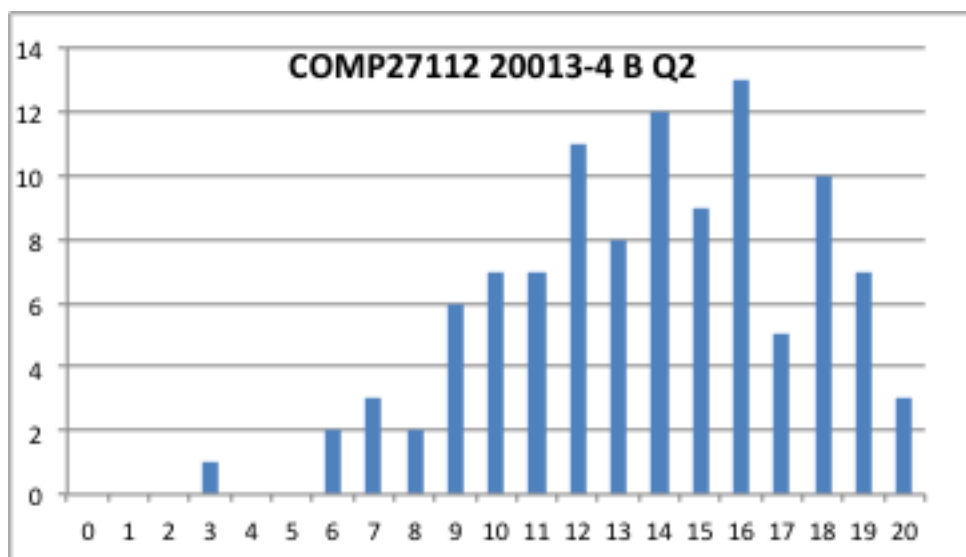
Section C

Question 3

The question was generally well answered. The only weakness in the answers was that some independent thinking was required and some students did not seem to appreciate this. Instead, they repeated examples from the handout that were loosely related to the expected answer.

The final part of the question, asking about how the accuracy would be evaluated, was done badly – very few realised that a huge amount of test data was required. Some even suggested a specific figure for the accuracy.

The mark distribution is shown below.
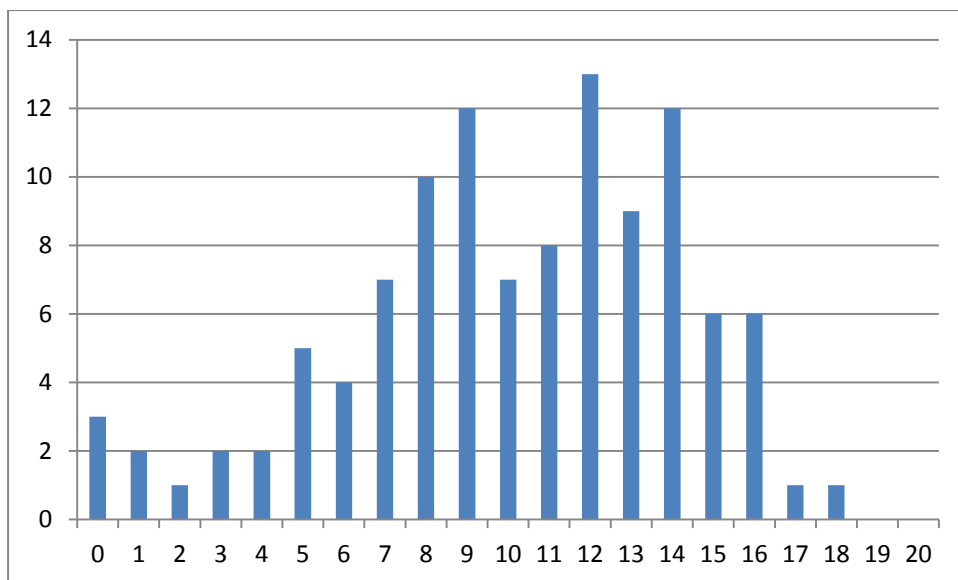
Question 4

Fewer people attempted this question, but it was also, in general, well answered. The major problem was that many students suggested using thresholding as a means of differentiating between road and vehicle, possibly because thresholding was used extensively in the labs. These failed to realise that a vehicle might be brighter OR darker than the road, so thresholding is not an appropriate method to choose. They could have written about background subtraction (which was demonstrated in the final lecture of the course), or, they could have used colour picking – by identifying a range of colours that correspond to road, it's possible to select the non-road (therefore vehicle) pixels.

The mark breakdown is below.