

**Comments** General comments on Section B: many diagrams were too small and illegible. In even more cases, handwriting was bad, and it was impossible to read parts of answers. It is the student's responsibility to write clearly and make their intentions clear. It is not the examiner's responsibility to make guesses as to what is meant.

Section B Q1: average 50%, stddev 4.6. It was surprising to see such a low average for a question which covered straightforward material from the course. Positives: almost everyone seemed to know what polygon soup is; most people understood the need to impose structure on soup; most people understood what was meant by scan conversion and the Z-buffer.

Negatives: a some people showed no evidence of having looked at the lecture notes, and invented strange (and mostly useless) graph structures for representing structured polygonal data.

Section B Q2: average 59%, stddev 5.7. This was an easy question, being largely bookwork and not requiring much original thought in the exam.

The biggest negative here was that many students didn't act on the instructions. Despite the question saying "Your answer should include definitions of all terms and their numerical ranges", many people ignored this, especially when it came to vectors, and did not define N, V, R, etc. Others did not use diagrams at all, when the question asked for them.

For Section C: please see the attached from Tim Morris.

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COMP27112  
Review of Section C

Question 3

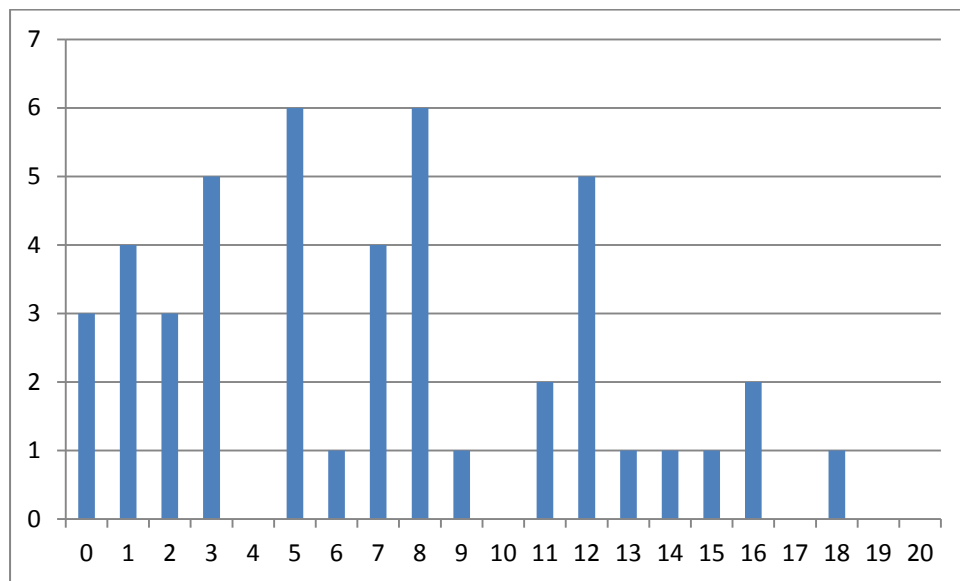
The mark distribution is shown below. The question was generally answered badly. Typical causes for poor marks were:

Part a: incomplete description of the algorithm.

Part b: not realising that the properties of a pixel are its grey/colour value, therefore not writing the equations for computing differences in these.

Part c: partial answer, or more often a completely wrong answer.

Part d: the question was intended to guide students to a suggested answer to this part – identifying blobs based on colour values and then describing them by moments of area, perimeter etc.



Question 4

The mark distribution is below. The quality of answers was much higher. The distribution is skewed by students who (I think) answered two section B questions and nothing in section C. The outcome of this is they receive the higher mark in section B only.

Part a was in general well answered, as there is very little alternative to a top view, but there are alternatives to the lighting, e.g. a light adjacent to the camera, or a ring of lights surrounding the cake. Some students introduced local/ambient illumination models from the Graphics section, which was wrong.

Part b – the typical error was in thresholding then edge detecting, when these should have been done in the other order. Some suggested that the cake be placed on a complimentary coloured surface and the image thresholded, which was sensible. Marks were lost due to students writing insufficient detail in the answer.

Acceptable answers to part c included thresholding, template matching. Again, marks were lost due to lack of detail.

Acceptable answers to part d included any method of mapping the clear areas of the cake.

Students generally missed the point in part e – the key word in the answer was calibration.

