COMPUTER SCIENCE TRIPOS Part II – 2012 – Paper 7

5 Comparative Architectures (RDM)

(a) How can specialising a processor design for a specific application domain help
to reduce its power consumption? [7 marks]

(b) For many applications chip-multiprocessors consume less power when compared
to a superscalar uniprocessor design of equal performance. Why is this the case?
[7 marks]

(c) Why does a vector processor offer a particularly energy efficient solution to
execute some types of program? [6 marks]