

COMPUTER SCIENCE TRIPOS Part IB – 2014 – Paper 5

2 Computer Design (SWM)

- (a) For RISC processors like ARM and MIPS, how is the work needed to undertake a subroutine call split between hardware and software? [6 marks]
- (b) Operating system calls use some form of software exception. How is a software exception similar to a subroutine call, and how do they differ? [8 marks]
- (c) Subroutine calls cause a control hazard. What is a control hazard and how are they handled on MIPS and ARM processors? [6 marks]