

2001 Paper 7 Question 3

Comparative Architectures

A processor is to be selected for use in a battery powered embedded device that will incorporate the functions of a mobile phone, Personal Digital Assistant (PDA), web browser, and audio/video player.

- (a) Discuss how the above requirements might influence the instruction set architecture, micro-architecture, and physical implementation of a processor suitable for the above device. [15 marks]
- (b) Describe how you would go about determining whether a candidate CPU would provide sufficient performance to implement fully the embedded device's specification. [5 marks]