

2000 Paper 3 Question 6

Computer Design

Gordon Moore's law originally applied to memory size (in bits), but also applies to processor speed (in MIPS). However, main memory access latency does not follow Moore's law.

- (a) What is Moore's law? [4 marks]
- (b) Why doesn't main memory latency decrease in proportion to processor cycle time? [6 marks]
- (c) What mechanisms are used to hide poor main memory access times and why do these mechanisms work? [10 marks]