

## 1997 Paper 7 Question 2

### VLSI

You are required to implement a serial point-to-point link using application-specific VLSI chips. The speed of the link is to be 1 gigabit/sec and the connection to the two communicating computers is to be 64 bits wide.

Sketch a possible architecture using two chips for each interface. The sketch should indicate the major components within each chip and which current technology is appropriate for each chip. [10 marks]

How many gates and pins do you estimate each chip will contain? Justify your answer on the basis of the design requirements. [10 marks]