

## 2005 Paper 8 Question 3

### Digital Communication II

- (a) Outline the mechanism that most TCP implementations use today to set the retransmission timer dynamically. [10 marks]
- (b) TCP uses additive increase multiplicative decrease (AIMD) for congestion avoidance in the steady state. Describe *two* optimisations that modern TCP variants use to improve performance when there is moderate packet loss. [5 marks]
- (c) What might you propose to solve the problem of repeated slow-start of TCP in networks where packet loss due to noise was high (e.g. 50% packet loss probability), but there was still the possibility of congestion? [5 marks]