

2004 Paper 13 Question 3

Digital Communication I

- (a) Define the terms *latency* and *capacity* as applied to communication channels. [2 marks]
- (b) Is there a strict relation between the two? [1 mark]
- (c) Show how the latency of a channel can have a direct effect on the capacity of a higher-layer channel which uses it. [10 marks]
- (d) How can the capacity of the higher-layer channel be improved (keeping the characteristics of the underlying channel unchanged)? [4 marks]
- (e) In what circumstances might these improvements have only limited benefit? [3 marks]