

2006 Paper 7 Question 2

Digital Communication II

- (a) Flow control mechanisms in networks can be loosely categorised as *open loop*, and *closed loop*.
- (i) Describe the closed loop feedback control scheme employed by the Transmission Control Protocol (TCP) in the Internet today for flow and congestion control. [6 marks]
- (ii) The telephone network of today and the Resource Reservation Protocol (RSVP) and associated services proposed for the future Internet provide open loop control. Briefly explain the functions of *signalling*, *admission control* and *policing* in these types of networks. [3 marks each]
- (b) Traffic sources are described as elastic or inelastic. Outline how an inelastic traffic source can be characterised and how this relates to the type of network resource guarantees it may need. [5 marks]