Hosts X and Y are communicating through the data network provided by the switches A, B, C and D and the links interconnecting them as shown above. Initially all packets are travelling through switches A, C and D.

(a) A packet is corrupted on the link between C and D. Describe the events that take place to recover from the error when

(i) an end to end flow and error control protocol is in operation [5 marks]

(ii) flow and error control are performed on a hop by hop basis [5 marks]

(b) Switch C fails. Describe the events that follow to recover when

(i) the network is a datagram network [5 marks]

(ii) the network is connection oriented [5 marks]