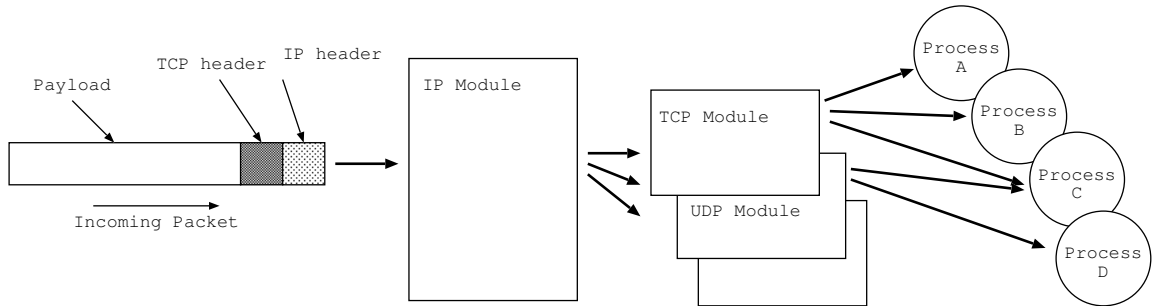## 2010 Paper 5 Question 8

Digital Communication I

(a) The diagram below shows an abstraction of the modules involved in processing an incoming packet on an Internet host.

Explain how these modules process the header fields in the incoming packet so that the data is delivered to the correct process. [6 marks]

(b) The Transmission Control Protocol (TCP) utilises a *3-way handshake* at the start of a connection. Explain, with reference to sequence numbers, how this operates and the purpose of the third packet in this exchange. [8 marks]

(c) What is meant by a *TCP port*? Make reference to how ports are used at client and server when a web browser opens a TCP connection of a web server.
[6 marks]