

2000 Paper 13 Question 3

Digital Communication I

Compare circuit switching and packet switching, paying attention to channel characteristics and resource efficiency. [7 marks]

What is *wave division multiplexing* (WDM)? Is it more like circuit switching or packet switching and why? [7 marks]

Wave length conversion is the process, either optical or optical–electronic–optical, of receiving a signal on one wavelength and transmitting on another.

How does wave length conversion ease the problem of routing optical carriers in a network? [3 marks]

“The huge capacity of WDM systems will mean that IP becomes redundant.” Discuss. [3 marks]