## COMPUTER SCIENCE TRIPOS Part II – 2017 – Paper 9

## 11 Principles of Communications (JAC)

- (a) What are the key differences between the data centre network environment and the broader, general Internet eco-system? How do these lead to simpler choices for offering performance guarantees for traffic? [10 marks]
- (b) Network coding can be used to combine packets redundantly to provide error protection, but also to reduce the number of transmissions and retransmissions necessary. It is used in the transport layer, from each source, and in the network layer, combining data from multiple sources. How might a combination of these techniques simplify buffering in simple wireless devices that you might find in an Internet of Things (IoT) environment? [10 marks]