

## COMPUTER SCIENCE TRIPOS Part IB – 2026 – Paper 7

### 4 Economics, Law and Ethics (ah793)

- (a) Describe virtue ethics, Ubuntu ethics, consequentialism and deontology. Explain and define all relevant ethical concepts. [6 marks]
- (b) Your company wants to develop a secure messaging application, but worries that the UK government could legally compel it to remove electronic protection (encryption) or to build functions that allow for the interception of messages. How could the Government do this, and under which legislation? [2 marks]
- (c) The company needs to decide how to build a secure messaging application even in the scenario described in Part (b). To do so, they consider two design options:

Option A: Design the system using End-to-End Encryption (E2EE). This ensures maximum user privacy and security, but means the company cannot be compelled to decrypt data because it does not hold the keys.

Option B: Design a Key Escrow system. This allows the company to maintain high security for users while ensuring they can assist law enforcement if the application is used to cause harm.

Identify the key questions that arise under the four ethical frameworks. Given these considerations, what is your preferred design choice? Justify your answer. [12 marks]