

COMPUTER SCIENCE TRIPOS Part IB – 2025 – Paper 7

3 Economics, Law and Ethics (ki287)

- (a) Provide examples to illustrate (i) adverse selection and (ii) moral hazard, defining relevant terms. [5 marks]
- (b) Ouchbridge hospital handles sensitive medical data from patients. If there is any data breach, Ouchbridge hospital may face large fines. Ouchbridge hospital is considering buying antivirus software. How does adverse selection affect the process of selecting which software to buy? [5 marks]
- (c) Painbridge hospital has cybersecurity insurance. How does this affect moral hazard? [5 marks]
- (d) King's Ache & Break hospital has limited financial capacity and must choose to secure either financial data only or medical data only, but not both. A malicious actor will try to get unauthorised access to either financial only or medical data only. Which game does the interaction between the King's Ache & Break hospital and the malicious actor look like? Use relevant game theory terms and discuss what the optimal strategy would be. [5 marks]