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Computer science
Higher level
Paper 3

4 May 2026

Zone A morning | **Zone B** morning | **Zone C** morning

1 hour

Instructions to students

- Do not turn over this examination paper until instructed to do so.
- A clean copy of the **computer science case study** is required for this examination paper.
- Read the case study carefully.
- Answer all questions.
- The maximum mark for this examination paper is **[30 marks]**.

Answer **all** questions.

1. (a) State **two** benefits of penetration testing in a healthcare facility, such as a hospital. [2]
 (b) Outline **one** challenge of the white box approach to penetration testing. [2]

 2. (a) Cybersecurity analysis teams compile a comprehensive report at the end of the penetration testing process.
 Outline **two** uses of this report for a healthcare facility, such as a hospital. [4]
 (b) Outline **two** ethical concerns of conducting penetration testing while the healthcare facility is in operation. [4]

 3. Evaluate **two** increased cybersecurity risks associated with the use of Internet of Things (IoT)-enabled medical devices in the hospital. [6]

 4. *MTPH* requires a combination of testing techniques that minimize disruption to the hospital's operations and allow it to develop a response plan to address complex and frequent cyberattacks.
 Evaluate the testing techniques and response strategies that may be used to protect *MTPH* against complex and frequent cyberattacks. [12]
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