

Name: .....  
(First name *and* surname - CAPITAL LETTERS please)

Current school: .....



St Paul's School  
FOUNDED 1509

**16+ Examination**

**SAMPLE PAPER**

**Computing**

**45 Minutes**

### **Instructions to Candidates**

- Write your name in the space at the top of this page.
- Write your answers in the spaces provided on the question paper.
- If you run out of room for an answer, use the back of that sheet.
- Not all exam boards cover the same content; you are **not** expected to complete all sections.

### **Information for Candidates**

- The number of marks available is shown in brackets [ ] at the end of each question or part question.
- The marks allocated and the spaces provided for your answers are a good indication of the length of answer required.
- Calculators are not allowed.

*Not all exam boards cover the same content; you are not expected to complete all sections.*

0. Are you going to be sitting GCSE/IGCSE Computer Science in the summer of 2025?

.....

(Write 'no' or, if known, which board.)

1. The units for the different magnitudes of data are typically measured in terms of powers of 10 or powers of 2. [5]

a. Using either powers of 10 or 2: how many bytes are there in 4 megabytes?

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b. In terms of powers of 10, how many bytes are there in 4 gigabytes?

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c. Write an expression to give the time needed to transmit 17MB file over a 500Mbps connection.

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2. Convert the following decimal numbers to unsigned binary numbers [4]

a. 94

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b. 201

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c. 13.625

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3. Convert the hex number 19F3 to binary. [3]

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4. Compare and contrast while, for and repeat loops. [6]

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5. How many bytes are there in an IP v4 address, e.g. 192.168.0.1? How many unique addresses are there? [3]

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6. In the website URI <https://intranet.stpaulsschool.org.uk/computing/index.html> which part:

[3]

a. is the protocol used?

.....

b. is the domain?

.....

7. The following quote is taken from Wikipedia, please fill in the blanks — several answers might be the same word:

[7]

**Wi-Fi** is a family of \_\_\_\_\_ network protocols based on the IEEE 802.\_\_\_\_\_ family of standards, which are commonly used for \_\_\_\_\_ area networking of devices and access to the \_\_\_\_\_, allowing nearby \_\_\_\_\_ to exchange \_\_\_\_\_ by \_\_\_\_\_ waves.

**Please turn over for question 8.**

8. The question has several parts and is less about objective facts, but a chance to share subjective opinions. Try to be reasonable, knowledgeable, and thoughtful. [4 each]

a. AI based systems like ChatGPT and Claude write really good code, why should programmers be really careful of such obviously useful tools?

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b. The majority of laptop users run Windows, Mac OS or even a Chromebook, so what advice would you give someone who wanted to run Linux on their machine?

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- c. Most students nowadays code in a modern high level language such as Python, Rust or JavaScript, but why should you learn an older language like C?

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*This page has been left intentionally blank; it can be used for rough work or as additional space from above. Please label answers clearly or put a line through rough work.*

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