

# Advance Information for Summer 2022

## GCSE (9–1)

### Computer Science

#### J277

We have produced this advance information to help support all teachers and students with revision for the Summer 2022 exams.

#### Information

- This notice covers component J277/01 Computer Systems.
- There is no advance information for J277/02 Computational Thinking and Algorithms.
- There are no restrictions on who can use this notice.
- It is advised that teaching and learning should still cover the entire subject content in the specification.
- The information is presented in specification order and not in question order.
- Do **not** take this notice into the exam.
- This document has **3** pages.

#### Advice

- This notice is meant to help students to focus their revision time
- You should consider how you revise other parts of the specification, for example to review whether other topics may provide knowledge which helps your understanding in relation to the areas being tested in 2022.
- Students and teachers can discuss this notice.
- Students can ask their teachers for advice.

If you have any queries about this notice, please call our Customer Support Centre on **01223 553998** or email [general.qualifications@ocr.org.uk](mailto:general.qualifications@ocr.org.uk).

**J277/01 Computer Systems**

| <b>Specification Reference</b>   | <b>Name of topic</b>                                    | <b>Sub part of topic directly assessed</b>   |
|--|---|--|
| 1.1 Systems architecture   | 1.1.1 Architecture of the CPU                           | <p>The purpose of the CPU</p> <p>Common CPU components and their features.</p> <p>Von Neumann architecture</p>   |
| 1.2 Memory and storage   | 1.2.1 Primary storage (Memory)                          | <i>All subtopics to be covered</i>   |
|  | 1.2.2 Secondary storage                                 | <i>All subtopics to be covered</i>   |
|  | 1.2.3 Units   | The units of data storage  |
|  | 1.2.4 Data Storage                                      | <p>Numbers.</p> <p>Characters.</p> <p>Images.</p> <p>Sound.</p>  |
|  | 1.2.5 Compression                                       | <i>All subtopics to be covered</i>   |
| 1.3 Computer networks, connections and protocols                             | 1.3.1 Networks and topologies                           | <p>Factors that affect the performance of networks.</p> <p>The hardware needed to connect stand-alone computers into a Local Area Network.</p> <p>The Internet as a worldwide collection of computer networks.</p> |
|  | 1.3.2 Wired and wireless networks, protocols and layers | <p>Modes of connection.</p> <p>Encryption.</p> <p>IP addressing and MAC addressing.</p> <p>Standards.</p> <p>Common protocols.</p>   |
| 1.4 Network security   | 1.4.2 Identifying and preventing vulnerabilities        | Common prevention methods.   |
| 1.6 Ethical, legal, cultural and environmental impacts of digital technology | 1.6.1 Ethical, legal, cultural and environmental impact | <p>Impacts of digital technology on wider society.</p> <p>Legislation relevant to Computer Science.</p>  |

## END OF ADVANCE INFORMATION



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