

Name:

Class Teacher:

Date:



OCR J276

GCSE Computer Science




REVISION BOOKLET

1.8 ETHICAL, LEGAL, CULTURAL AND ENVIRONMENTAL CONCERNS

Content in J276 GCSE Computer Science:

- 1.1 Systems Architecture
- 1.2 Memory
- 1.3 Storage
- 1.4 Wireless and Wired Networks
- 1.5 Network Topologies, Protocols and Layers
- 1.6 System Security
- 1.7 Systems Software
- 1.8 Ethical, Legal, Cultural and Environmental Concerns
- 2.1 Algorithms
- 2.2 Programming Techniques
- 2.3 Producing Robust Programs
- 2.4 Computational Logic
- 2.5 Translators and Facilities of Languages
- 2.6 Data Representation

1.8 ETHICAL, LEGAL, CULTURAL AND ENVIRONMENTAL CONCERNS

TOPIC			
How to investigate and discuss Computer Science technologies while considering:			
Ethical issues			
Legal issues			
Cultural issues			
Environmental issues			
Privacy issues			
How key stakeholders are affected by technologies			
Environmental impact of Computer Science			
Cultural implications of Computer Science			
Open source vs Proprietary software			
Legislation relevant to Computer Science:			
The Data Protection Act 1998			
Computer Misuse Act 1990			
Copyright Designs and Patents Act 1988			
Creative Commons Licensing			
Freedom of Information Act 2000			

1.8 ETHICAL, LEGAL, CULTURAL AND ENVIRONMENTAL CONCERNS

**HOW TO INVESTIGATE AND DISCUSS COMPUTER SCIENCE TECHNOLOGIES WHILE
CONSIDERING**

ETHICAL ISSUES

LEGAL ISSUES

CULTURAL ISSUES

ENVIRONMENTAL ISSUES

PRIVACY ISSUES

HOW KEY STAKEHOLDERS ARE AFFECTED BY TECHNOLOGIES

ENVIRONMENTAL IMPACT OF COMPUTER SCIENCE

CULTURAL IMPLICATIONS OF COMPUTER SCIENCE

OPEN SOURCE VS PROPRIETARY SOFTWARE

LEGISLATION RELEVANT TO COMPUTER SCIENCE

THE DATA PROTECTION ACT 1998

COMPUTER MISUSE ACT 1990

COPYRIGHT DESIGNS AND PATENTS ACT 1988

CREATIVE COMMONS LICENSING

FREEDOM OF INFORMATION ACT 2000

EXAM QUESTIONS

QUESTION 1

A law firm currently use a Local Area Network (LAN) linked to a Wide Area Network (WAN).

Fig 3 lists some actions that may take place in the law firm's office. Tick **one** box in each row to show which legislation applies to each action.

Fig. 3

Action	Data Protection Act 1998	Computer Misuse Act 1990	Copyright Designs and Patents Act 1988
Using a picture for the law firm's new logo without the original creators permission.			
A secretary accessing a lawyer's personal email account without permission.			
Making a copy of the latest Hollywood blockbuster movie and sharing it with a client.			
Storing customer data insecurely.			
A lawyer installing a key logger on the secretary's computer.			
Selling clients personal legal data to a marketing company without their permission.			

QUESTION 2

Even though the computer devices they own still work, people often want to buy the most up-to-date models, such as the latest smartphone. Discuss the impact of people wanting to upgrade to the latest smartphone. In your answer you might consider the impact on stakeholders, technology, ethical issues and environmental issues.

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QUESTION 3

The accident and emergency department of a hospital uses a computer system to decide the order in which patients are treated. Describe advantages of using a computer system instead of a person to decide the order, and the need for this system to be reliable. The quality of written communication will be assessed in your answer to this question.

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QUESTION 4

A school uses off the shelf, proprietary software for managing pupils' attendance, and customised, open source software for managing pupils' examinations. Describe the difference between proprietary and open source software.

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Explain the legal issues that a school should consider when choosing the software for managing pupils' attendance and examinations. The quality of written communication will be assessed in your answer to this question.

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QUESTION 5

Apu has a handheld e-book reader that allows him to store and read electronic books. The manufacturer of the e-book reader provides proprietary software, which Apu can use to transfer the e-book from the CD-ROM to the e-book reader. Describe what is meant by proprietary software.

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Explain **one** advantage to the manufacturer of providing proprietary software instead of open source software.

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QUESTION 6

Lauren is a Computing teacher. She is building a website for her Computing class where they can share ideas, send each other programs and discuss computing concepts. The students will have individual accounts that they can log into. Discuss the ethical and legal issues Lauren will have to consider when setting up the website. The quality of your written communication will be assessed in your answer.

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