

Topic 9: Ethical, legal and environmental impact of digital technology on wider society	Do I understand how to ...
Legislation	<ul style="list-style-type: none"> • demonstrate knowledge and understanding of: <ul style="list-style-type: none"> – the Consumer Contracts (Information, Cancellation and Additional Charges) Regulations 2013; – the Copyright, Designs and Patents Act 1988; – the Data Protection Act 1998; and – the Computer Misuse Act 1990; • identify typical breaches of the Copyright, Designs and Patents Act 1988, including software piracy and software licensing infringements; • demonstrate and apply knowledge and understanding of: <ul style="list-style-type: none"> – the eight principles of the Data Protection Act 1998; and – the rights of the data subject and the responsibilities of the data controller and Information Commissioner in ensuring the Data Protection Act 1998 is enforced; • describe the terms hacker, virus and spyware and how these relate to the Computer Misuse Act 1990.
Moral and ethical considerations	<ul style="list-style-type: none"> • describe the ethical impact of technology on society, referring to the following: <ul style="list-style-type: none"> –internet misuse; –access to personal information; –social media misuse; –the implications of global positioning system (GPS) and tracking; –concerns about the security of personal data.

10 Kane's Kabs allow users to book taxis using a mobile phone app. They use GPS to provide users with additional information about the taxis they have ordered.

(a) What do the letters GPS stand for?

Global Positioning System [1]

(b) The mobile phone app automatically activates GPS on the user's smart phone.

Why might some users have a problem with this happening?

- Location available to other app users.
- Concerned about security/privacy. [1]

(c) The office staff in Kane's Kabs have reported a range of health problems associated with regular computer use. These are listed in the table below.

Complete the table by giving **one** way (apart from regular breaks) in which the health problem listed can be prevented.

Health problem	Method of preventing problem (Regular breaks cannot be used)
Back pain	Adjustable chairs <u>OR</u> Consideration of posture. [1]
RSI	Ergonomic hardware <u>OR</u> Use of wrist rests. [1]
Eye strain	Anti-glare screens <u>OR</u> Regular eye tests [1]

[Turn over



(d) Anne has a lot of client data and she must ensure her company complies with the Data Protection Act.

(i) List **two** principles of the Data Protection Act.

1. Personal data should be accurate and up-to-date.
2. Personal data should not be kept for longer than necessary. [2]

(ii) Encryption can help protect data. Describe the process of data encryption.

- Uses special software to encode or scramble data before it is transmitted.
- The data is unreachble if intercepted. [2]
- Users with extraction key software unscramble

(e) Anne is also worried that her work may be used by other people without her permission. What law is designed to stop this happening?

Copyright Designs and Patents Act [2]



9 Legislation is in place for digital technology users.

(a) Health and Safety laws protect computer users.

(i) Overuse of computers can cause RSI. What is RSI?

Repetitive strain injury [1]

(ii) How can a user adjust the settings on a computer monitor to minimise eyestrain?

Adjust brightness/contrast. [1]

(b) (i) What is the name of the Act that protects the intellectual property rights of individuals and organisations?

Copyright Designs & Patents Act [1]

(ii) Give **one** example of how the law in (b)(i) could be breached by an individual.

Listening/downloading music illegally using unlicensed software [1]



- (c) (i) What is the official title of the person who is responsible for enforcing the Data Protection Act?

Information Commissioner [1]

- (ii) State **three** principles of the Data Protection Act.

1. Fair and lawful

2. Used for specific purpose

3. Accurate and up-to-date

[3]

[Turn over

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10 Jim buys a new computer game. He makes a copy and gives it to his friend.

(a) What law has he broken?

Copyright Designs and Patents Act [1]

(b) Below is a table containing six principles. Place a tick (✓) beside **two** Data Protection Act principles that are incorrect.

Principle	Tick (✓)
Data should be used fairly and lawfully.	
Data should be adequate and relevant to the purpose for which it was collected.	
Data should be kept without security.	✓
Data should be kept for as long as the user of the data decides.	✓
Data should be processed within the rights of the data subject.	
Data should be kept accurate and up to date.	

[2]

(c) State **one** responsibility for each of the following individuals regarding the Data Protection Act.

(i) Information Commissioner

Has overall responsibility for enforcing the DPA, provides advice to business/government [1]

(ii) Data Controller

Decides what data the organisation needs to collect and how it will be used, stored and processed. [1]

[Turn over]



11 Jonathan is learning about computer legislation.

- (a) Place the following legislation in the table, beside the appropriate statement.
(Not all words will be used.)

Computer Misuse Act		Consumer Contract Regulations
Data Protection Act		
Statement	Legislation	
To protect personal data	Data Protection Act	
To enable prosecution of hackers	Computer Misuse Act	

[2]

- (b) List **two** forms of social media misuse.

1. Cyberbullying OR Trolling.
2. Identity theft OR Data Theft.
3. Defamation.
4. False news.

[2]

- (c) List **two** steps that an organisation can take to stop hackers gaining entry to a computer system.

1. User codes/logins and passwords
2. Firewall
3. Two-factor authorization.
4. Levels of access
4. Encryption

[2]

THIS IS THE END OF THE QUESTION PAPER

