MODULE I · OCR J277 1.6.1 · NOT ON CAMBRIDGE 0478

Impacts and the law

Ethical and privacy, **cultural** and **environmental** impacts, the **Data Protection Act 2018**, the **Computer Misuse Act 1990**, the **Copyright, Designs and Patents Act 1988** and **software licences**. **Every card is GCSE only: Cambridge 0478 students can skip this module.** Laws as at November 2026; spec versions as checked in November 2026.

01 Ethics and privacy (I1) GCSE only

Ethical Is it morally right or wrong? Who benefits, who is harmed? Legal can still be unethical.

Examples AI and automation replacing jobs; biased AI decisions; who is to blame when a driverless car crashes; monitoring staff; cyberbullying.

Privacy Control over what personal data is collected, stored and shared.

Examples Location tracking; cookies and profiling; CCTV and facial recognition; data leaks and sales.

Trade-off Surveillance improves safety and security but reduces privacy.

02 Cultural impacts (I2) GCSE only

Cultural How people live, communicate, work and spend free time.

Changes Video calls and social media connect people but cut face-to-face contact; streaming, online shopping, remote working; high street shops close.

Social media Fake news spreads fast; mental health pressure; "always on" for work.

Digital divide Gap between people with and without access to technology and the internet.

Causes Cost, location (rural broadband), age, skills, a country's wealth. Effect: disadvantage in jobs, education, online services.

03 Environmental impacts (I3) GCSE only

Making Mining rare and precious metals; energy and water in factories; carbon emissions.

Using Electricity for devices and data centres (run 24 hours a day, need cooling).

E-waste Discarded electronic devices. Lead and mercury leak from landfill into soil and water; some shipped abroad and burned.

Upgrades Short lifespans, more e-waste. 120 laptops over 8 years: every 2 years = 480; every 4 years = 240.

Helps Recycle, repair, refurbish; video calls cut travel; less paper; smart systems save energy; sensors monitor pollution.

04 Data Protection Act 2018 (I4) GCSE only

Purpose Controls how organisations collect, store and use personal data (works with the UK GDPR).

Personal data About a living, identifiable person (data subject). Sensitive data (e.g. health) gets extra protection.

Data must be Fair, lawful, transparent; for specified purposes; limited to what is needed; accurate; kept no longer than necessary; secure.

Rights Informed; access (subject access request, usually within one month); correct; erase; restrict; object; portability; automated decisions.

Regulator ICO (being replaced by the Information Commission, Data (Use and Access) Act 2025): investigates, orders changes, fines.

05 Computer Misuse Act 1990 (I5) GCSE only

Purpose Makes accessing or damaging computer systems and data without permission illegal.

Offence 1 Unauthorised access to computer material, even if nothing is changed. Up to 2 years.

Offence 2 Unauthorised access with intent to commit or facilitate further offences (e.g. fraud). Up to 5 years.

Offence 3 Unauthorised acts to impair a computer: deleting data, malware, denial of service. Up to 10 years.

Also Making, supplying or obtaining attack tools is illegal. Authorised access (penetration testing with permission) is legal. Sentences as at Nov 2026.

06 Copyright, Designs and Patents Act 1988 (I6) GCSE only

Purpose Protects intellectual property: no copying or using work without the owner's permission.

Copyright Software, code, text, music, images, films, art. Automatic, no registration. Lasts 70 years after the creator dies.

Prohibits Copying, sharing, selling or downloading without permission (piracy); using others' images, music or code without a licence; more installs than licensed.

Allows Use with permission or a licence; owner can sell or license rights.

Patent Protects an invention; must be applied for; up to 20 years.

07 Software licences (I7) GCSE only

Licence Legal agreement on how software may be used, copied and distributed. Protects the developer's copyright and income.

Open source Source code provided; users can change it. Usually free; customisable; community fixes bugs. Limited official support.

Proprietary No source code; commonly bought off-the-shelf; licence fee. Tested, supported, regular updates. Cost; cannot modify; restricted use.

Recommend Choose one, then benefits and drawbacks applied to the scenario (e.g. no programmers, needs support: proprietary).

08 The 8-mark Discuss question GCSE only

Where Paper 1, marked with an asterisk (*). Usually on impacts, the law or licences.

Do Cover both sides; apply every point to the scenario and stakeholders; finish with a supported conclusion.

Level 3 6-8 marks: accurate, detailed, applied, balanced, clear conclusion.

Level 2 3-5 marks: some application; may be one-sided; weak conclusion.

Level 1 1-2 marks: a list of general points with little link to the scenario.

01

Hacking: Computer Misuse Act. **Personal data**: Data Protection Act. **Copying work**: Copyright, Designs and Patents Act.

02

Just **looking** without permission is already **offence 1**. Nothing has to be changed.

03

Copyright is **automatic**; a **patent** must be applied for.

04

Open source means **source code you can change**, not just "free".