MODULE I IMPACTS AND THE LAW · I1

Ethical and privacy impacts of digital technology: mark scheme

22 marks · OCR J277 spec 1.6.1 (impacts of digital technology on wider society: ethical issues, privacy issues)

How to use. One mark per bullet up to the maximum shown. **/** separates alternative words; **//** separates alternative answers for the same mark. Words in (brackets) are not needed for the mark. "..." means the point depends on the one before it. **NE** = not enough on its own. Question 5* is marked with levels of response (below the table). Legislation (Data Protection Act 2018 and others) is taught in I4 to I6 and is not required here; credit an accurate reference to it where it supports a point.

QUESTION	ANSWER	MARKS	GUIDANCE
1(a) J277 1.6.1	Whether a use of technology is (morally) right or wrong // fair or unfair // good or bad for people Who benefits and who could be harmed (by a use of technology)	**1**	1 mark for either bullet. Do not accept "against the law" / "illegal" alone (that is a legal issue). Do not accept an example alone (e.g. "cyberbullying") with no meaning given. "How technology affects people" alone = NE.
1(b) J277 1.6.1	Location // GPS position // places visited Name Date of birth Email address Phone number Contacts (list) Photos / videos / voice recordings Messages Call history Browsing / search history // websites visited Which apps are used / for how long Health / fitness data (e.g. steps, heart rate) Payment / bank card details Purchases made	**2**	1 mark each to max 2. Credit any other valid type of personal data. Mark the first two answers only. Do not accept "data" / "information" / "personal details" alone (NE).
2(a) J277 1.6.1	Legal but still unethical: True Cookies used to build a profile of interests: True Agreeing to terms means no privacy issues: False Deleting a shared photo deletes every copy: False	**4**	1 mark per correct row. A row with both boxes ticked scores 0.

QUESTION	ANSWER	MARKS	GUIDANCE
3(a) J277 1.6.1	Wearers lose control of who has / sees their (personal / health) data ... ... because it is sold / passed on to other organisations (they may not know about / have not chosen) Health data (heart rate / sleep) is sensitive / private ... ... and their name is attached so it can be linked to them // they can be identified The GPS routes show where each run starts / finishes ... ... which could reveal the wearer's home address / daily routine / when they are out The data is stored on the company's servers / by several organisations ... ... so it could be leaked / stolen / accessed without permission (and seen by others)	**2**	Mark in pairs: 1 mark for the issue, 1 mark for the linked explanation (...). Max 2. Credit any other valid privacy issue with an explanation. "Their data is shared" alone = 1 mark at most. Do not accept "it is not private" / "invasion of privacy" alone (NE).
3(b) J277 1.6.1	Insurance companies could charge some wearers more // refuse them cover ... ... because the data suggests poor health / poor sleep // this is unfair / discrimination (based on data they did not agree to share) Knowing a wearer's running route / times could put them at risk ... ... of being followed / stalked // of their home being burgled while they are out Organisations could use the data to target wearers with adverts / offers ... ... which may pressure them / play on health worries If the data is leaked by a buyer ... ... the wearer could be a victim of fraud / identity theft / blackmail Wearers may feel their trust has been broken // feel stressed / worried ... ... because their data was used in a way they did not expect	**2**	Mark in pairs: 1 mark for the harm, 1 mark for the linked explanation (...). Max 2. Credit any other valid harm with an explanation. Do not award a pure privacy point that repeats 3(a) (e.g. "other people can see their data"). Do not accept "they could be hacked" alone (NE).

QUESTION	ANSWER	MARKS	GUIDANCE
4(a) J277 1.6.1	The program may be biased // may treat some groups of applicants unfairly ... ... because it learned from past decisions that may have been unfair / biased // it repeats past mistakes Suitable applicants could be rejected wrongly ... ... and no person checks, so the mistake is not spotted // they lose the chance of a job It is unclear who is responsible / to blame for a wrong decision ... ... the agency, the program's developer or no one // the decision is hard to challenge Applicants may not know that a program (not a person) made the decision ... ... so they cannot ask for it to be explained / checked // it is not transparent Staff who used to sort applications may lose their jobs ... ... because the program now does their work	**2**	Mark in pairs: 1 mark for the issue, 1 mark for the linked explanation (...). Max 2. Credit any other valid ethical issue with an explanation. Do not accept "AI makes mistakes" alone (NE) unless linked to an effect on the applicants.

4(b)
J277 1.6.1
	Applications are sorted in less time (than by staff) // more applications can be dealt with
	Saves money on staff (wages) // fewer staff needed to sort applications
	Can work at any time / 24 hours a day
	Applies the same rules to every application // (more) consistent decisions
		1	1 mark for any bullet. Credit any other valid benefit to the agency. Accept "faster" only when linked to sorting / processing the applications; "faster" alone = NE. Do not accept "it is fairer" (the scenario points to possible bias) or "it is cheaper" alone (NE) unless linked to staff / wages.

5* J277 1.6.1	Mark using the levels of response and indicative content below.	**8**	Read the whole answer, decide the level, then the mark within it. A one-sided answer (only benefits, or only drawbacks) cannot reach Level 3.

Question 5*: levels of response

LEVEL	DESCRIPTOR
Level 3 **6 to 8 marks**	Accurate, detailed knowledge of both ethical and privacy issues. Points are applied to this company and its drivers throughout, not just listed. Benefits are weighed against drawbacks, with impacts on more than one stakeholder. A clear line of reasoning reaches a supported conclusion (e.g. go ahead, do not, or go ahead with changes).
Level 2 **3 to 5 marks**	Reasonable knowledge, mostly accurate. Some points are applied to the scenario. Covers both ethical and privacy issues, but one may be thin; or the answer is mainly one-sided. Some structure; any conclusion is weak or not fully supported.
Level 1 **1 to 2 marks**	Basic knowledge, with some inaccuracy. Mostly general points with little link to the company or drivers. Points are listed rather than discussed; little or no structure.
0 marks	Nothing worthy of credit.

Question 5*: indicative content (not a checklist; credit any other valid point)

BENEFITS	DRAWBACKS
Company • Knows where every van and parcel is; can give customers accurate delivery times • Can plan better routes, saving time and fuel / money • Can find a stolen van and its parcels quickly • Camera gives evidence after an accident, complaint or damaged / missing parcel • Can spot unsafe or tired driving and act on it • Can check that work time is used for work **Drivers** • Safety: help can be sent quickly after an accident or breakdown; the van can be found • Camera evidence can protect a driver from a false complaint • Safer driving protects drivers and other road users (wider society) **Customers** • Live tracking; fewer lost parcels	**Ethical** • Constant watching suggests the company does not trust its drivers; lower morale, stress • Time-at-address data may create pressure to rush, skip breaks or drive unsafely • Data could be used unfairly to discipline or dismiss drivers, without context (e.g. a long stop to help an elderly customer) • Drivers may feel they cannot refuse the monitoring if they want to keep their job • Is it right to film people during breaks, when they are not working? **Privacy** • Drivers lose control over what is recorded about them, including private moments and phone calls on breaks • GPS on breaks can reveal personal places visited (e.g. a doctor's surgery) • Unclear who can watch, how long data is kept, whether it is shared • Stored videos and locations could be leaked or accessed without permission • Customers / members of the public near the van may also be recorded
Weighing up / conclusion (examples): the surveillance improves safety and security but reduces drivers' privacy; a supported middle position is acceptable, e.g. keep GPS for work hours only, switch the camera off during breaks or record only when an incident happens, tell drivers what is collected and why, limit who can view it, keep it secure and delete it after a set time. Any conclusion is credited if it follows from the points made.	

Total: 22 marks