PEARSON Edexcel

Mark Scheme (Results)

Summer 2025

Pearson Edexcel International GCSE In Information and Communication Technology (4IT1)

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.

- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.

- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.

- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.

- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.

- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.

- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.

- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

- Mark schemes will indicate within the table where, and which strands of QWC, are being assessed. The strands are as follows:

  i) ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear
  ii) select and use a form and style of writing appropriate to purpose and to complex subject matter
  iii) organise information clearly and coherently, using specialist vocabulary when appropriate.

Question Number	Answer	Mark
1a	**The only correct answer is B – Hard disk drive** *A is not correct because it processes data and instructions* *C is not correct because it is a unique address for a NIC that is assigned by the manufacturer* *D is not correct because it is a short-range wireless communication method*	**(1)**

Question Number	Answer	Mark
1b	Any **one** from: • Online servers • Online storage • Hosted storage • Online applications/software • Hosted applications/software	**(1)**

Question Number	Answer	Mark
1c	**The only correct answer is B – ISP** *A is not correct because it prevents access to results that match the list of unacceptable URLs* *C is not correct because it provides users with a way to find information in web pages stored on web servers* *D is not correct because it is a type of software application used to request and display information stored on web servers*	**(1)**

Question Number	Answer	Mark
1d	Award up to **two** marks for a linked explanation such as: • Quicker access to files / faster data transfer speeds / lower latency (1) because it has greater bandwidth (1).	**(2)**

Question Number	Answer	Mark
1e	Any **two** from: • IP (address) • MAC (address) • Device name	**(2)**

Question Number	Answer	Mark
1f	Award **one** mark for each correct line: **Do not award** answers with more than one line to or from any of the boxes.	**(3)**

Question Number	Answer	Mark
1gi	Award up to **two** marks for a linked description such as: • Connecting two different types of network (e.g. a WAN and a LAN) (1) by translating data from one protocol to another (1).	**(2)**

Question Number	Answer	Mark
1gii	(Web) Server	**(1)**

Question Number	Answer	Mark
1giii	**The only correct answer is C – Personal area network** *A is not correct because NFC is a short-range wireless connection and LANs cover a larger area, such as a building, than that provided by NFC.* *B is not correct because NFC is a short-range wireless connection and MANs cover a larger area, such as a city, than that provided by NFC.* *D is not correct because NFC is a short-range wireless connection and WANs cover a larger area, such as the globe, than that provided by NFC.*	**(1)**

Question Number	Answer	Mark
1giv	Award up to **two** marks for a linked description such as: • Devices connect via Bluetooth/Wi-Fi/USB (1) and the client shares the host's mobile broadband/3G/4G connection (1).	**(2)**

Question Number	Answer	Mark
1gv	Award up to **two** marks for a linked description such as: • Identify a subscriber (1) to (connect to) the network (1). • Store data about the account (1) such as the phone number / security information (1). **Do not accept:** 'connect to the Internet' for connect to the network.	**(2)**

Question Number	Answer	Mark
1gvi	**The only correct answer is B – HTTPS**	
	A is not correct because it stands for Global Positioning System that uses radio signals from satellites to show your exact position on Earth.	
	C is not correct because it stands for Uniform Resource Locator is used to find a web page on the World Wide Web.	
	D is not correct because it stands for Universal Serial Bus which is a standard for wired connectivity that can also supply electric power.	**(1)**

Question Number	Answer	Mark
1hi	Any **one** from:	
	• Legal protection of work for the owner (sole authority to use and distribute it).	
	• Prevents anyone from publishing / copying the creative work of others (without permission).	**(1)**

Question Number	Answer	Mark
1hii	Award up to **two** marks for a linked explanation such as:	
	• Different file sizes (1) mean more bandwidth is required for some than others (1).	**(2)**

Question Number	Answer	Mark
2ai	**The only correct answer is C – 1024** *A is not correct because it is the number of bits in a byte.* *B is not correct because it is the number of kilobytes in a megabyte.* *D is not correct because it is the number of bytes in a megabyte.*	**(1)**

Question Number	Answer	Mark
2aii	**The only correct answer is B – Backup** *A is not correct because it is used to scan for malware / prevent malware from accessing or operating on computers.* *C is not correct because it is used to reduce the size of a file.* *D is not correct because it is used to prevent the contents of a file from being understood.*	**(1)**

Question Number	Answer	Mark
2aiii	**The only correct answer is B – Flash memory devices use solid state media** *A is not correct because hard disk drives use magnetic media.* *C is not correct because optical devices use optical media such as CDs and DVDs.* *D is not correct because solid state drives use solid state/flash memory media.*	**(1)**

Question Number	Answer	Mark
2aiv	**The only correct answer is D – SSD** *A* is not correct, although CDs are more energy efficient than HDDs, they are not as energy efficient as SSDs. *B* is not correct, although DVDs are more energy efficient than HDDs, they are not as energy efficient as SSDs. *C* is not correct because HDDs use the most energy compared to the other examples.	**(1)**

Question Number	Answer	Mark
2av	Award **one** mark for: • **Each set** of file blocks together (ignore additional blocks if they are in order). *Does not have to be in alphabetical order, so could be: W1 W2 Y1 Y2 Y3 X1 X2 Z1 Z2* Award **one** mark for: • **At least 7** free space blocks **together**. Correct Answer: 	**(2)**

Question Number	Answer	Mark
2b	**The only correct answer is C – Smartphone** *A is not correct because it is a large, powerful computer that can do a lot of complicated processing tasks quickly.* *B is not correct because it is a process of keeping pages queued in order, ready to be printed by a printer.* *D is not correct because it is a peripheral device used to output sound.*	**(1)**

Question Number	Answer	Mark
2ci	Award up to **two** marks for a linked description such as: • To allow the user (1) to carry out a task (1).	**(2)**

Question Number	Answer	Mark
2cii	Any **two** from: • Cheaper / free • Customisation / can be modified • Users can fix bugs • Longevity / not reliant on a single provider/company • Community support and collaboration • Interoperability and standards compliance Award "access to source code" if mark point 2 or 3 not already awarded.	**(2)**

Question Number	Answer	Mark
2d	**The only correct answer is C – Screen resolution**	
	A is not correct because it is an actuator that is used to make something happen in the real physical world.	
	B is not correct because it refers to the ability to install additional components in the PC.	
	D is not correct because it refers to the physical size of the screen not the picture quality.	**(1)**

Question Number	Answer	Mark
2ei	Any **three** from:	
	• It is at least eight characters long.	
	• It is a mix of letters, numbers and symbols/special characters (at least two to be mentioned)	
	• It is a mix of uppercase and lowercase letters.	
	• It is made up of random characters / it is not a common word / not personal data or content.	**(3)**

Question Number	Answer	Mark
2eii	Award up to **two** marks for a linked description such as:	
	• Preventing access (to files/directories) (1) by unauthorised users (1).	
	• To set user rights (1) to read / write files (1).	**(2)**

Question Number	Answer	Mark
2eiii	Award up to **two** marks for a linked explanation such as:	
	• They are harder to replicate/steal (1) because they rely on unique physical traits (e.g. fingerprints, facial features) (1)	**(2)**

Question Number	Answer	Mark
2fi	Any **one** from: • RAM (Random Access Memory) • Cache • Flash • Virtual (memory) Award examples of RAM for the first bullet point.	**(1)**

Question Number	Answer	Mark
2fii	Any **one** from: • ROM is non-volatile • ROM cannot be edited • ROM is permanent • Data is retained when power is off	**(1)**

Question Number	Answer	Mark
2gi	Award up to **two** marks for a linked explanation such as: • The computer's performance will be improved / processes are carried out more quickly (1) because digital media files can use lots of memory / because there will be less reliance on the HDD/virtual memory (1). • More programs can run at the same time (1) meaning there will be less reliance on the HDD/virtual memory (1).	**(2)**

Question Number	Answer	Mark
2gii	Award up to **two** marks for a linked explanation such as: • It prevents system crashes / optimises performance (1) by ensuring every program has access to the memory it needs (1).	**(2)**

Question Number	Answer	Mark
2h	Any **one** from: • 2.4 billion • 2,400,000,000 • 2.4×10^9 Ignore: clock cycle / per second.	**(1)**

Question Number	Answer	Mark
3a	Any **two** from: • Keyboard • Mouse / tracker ball / track pad / touch pad / joystick • Graphics tablet • Digital pen / stylus • Digital camera /web cam • Microphone • Scanner • **Touch** screen	**(2)**

Question Number	Answer	Mark
3b	Award up to **four** marks for **two** linked descriptions such as: • Allows for improved/more streamlined communication/collaboration (1) enhancing efficiency and productivity / reducing costs associated with traditional methods of communication (1). • It provides access to global/wider markets (1) leading to increased sales / potential for growth / increased competition (1). • It provides access to a global workforce (1) potentially attracting a talented, motivated workforce (1). • Teams/Business can be located anywhere (1) reducing the need to travel/travel costs / reducing the need for office space (1). • It provides access to big/transactional data (1) helping to understand customer behaviour / tailoring the product/service more precisely to their customer/market (1).	**(4)**

Question Number	Answer	Mark
3c	Award up to **two** marks for a linked explanation such as: • Files can be accessed conveniently/on any device (1) because it offers accessibility from any location (1). • Buy cheaper devices (1) because less storage required on local device (1). • No need to (automatic) back up/secure data (1) because this is the host's responsibility (1). • The storage capacity is not limited (1) because online storage is scalable (1). • It is easy to collaborate (1) because users can share files (1).	**(2)**

Question Number	Answer	Mark
3d	Award up to **two** marks for a linked explanation such as: • Risk to the security of his device/personal data (1) because it could potentially contain malware/malicious software/phishing content (1).	**(2)**

Question Number	Answer	Mark
3e	Any **two** from: • reduced social interaction (in-person) / increased isolation • (increased) cyberbullying / trolling • reduced physical activity	**(2)**

Question Number	Answer	Mark
3f	Any **two** from: • Verify identity/age of users • Report button • Moderation/filtering of posts / Moderators • Privacy settings / Block users	**(2)**

Question Number	Answer	Mark
3g	Any **two** from: • Chat • Rate • Reply • Share • Friend lists • Profiles • Suggestions / Recommendations • Like • Feed / Timeline • Help (features) • Feedback • Discussion Boards / Forums / Comments / Posts • Experience Points / Leaderboard • Status • Notifications	**(2)**

Question Number	Answer	Mark
4a	Any **two** from: • Basket/cart • Checkout • Secure payment • Product catalogue • Search feature Accept for MP4, an identification of **one** feature of a product catalogue, if MP4 **not** already awarded. These features include: • Images of products • Product descriptions • Product prices • Ratings by customers • Product code • Number in stock	**(2)**

Question Number	Answer	Mark
4b	Award up to **two** marks for a linked description such as: • Using browser cookies (1) which store information about the user's selections (1). • Storing data locally (1) so the browser can retrieve and display the saved data (1).	**(2)**

Question Number	Answer	Mark
4c	Award up to **two** marks for a linked description such as: Right to: **One** from (1) • access their data (e.g. download a copy of their profile information). • have their data rectified/deleted (e.g. the ability to close their account and remove their data). • object to data processing that is likely to cause damage/distress to them. • prevent processing for direct marketing (e.g. being sent newsletters or emails). • object to decisions that are taken by automated means. • request to know how their data is being used. Because the data protection law states: **One** from (1) • used fairly and lawfully • used for limited, specifically stated purposes • used in a way that is adequate, relevant and not excessive • must be accurate • kept for no longer than necessary • handled according to people's data protection rights	**(2)**

Question Number	Answer	Mark
4d	Award up to **two** marks for a linked explanation such as: • AI tools could automate repetitive design tasks (e.g. generating layouts, optimising images, coding standard components) (1) reducing the demand for (junior/entry-level) designers / frees up designers to focus on more creative/complex projects (1). • Proficiency with/knowledge of AI combined with web design expertise (1) could lead to new job opportunities (e.g. AI Design Specialist, AI Ethics Consultant) (1). • Businesses requiring websites using AI tools to generate them (1) leading to less demand for web design companies / job losses (1).	**(2)**

Question Number	Answer	Mark
4e	Award up to **two** marks for a linked explanation such as: • Saves cost / Easier to set up (1) because there is no need for a dedicated server / professional/specialist to set the network up (1). • More resilient (1) because there is no single point of failure (1).	**(2)**

Question Number	Indicative content
4f	• Flexibility with time management • Savings on time and money from commuting • Potential for longer working hours • Consideration of work-life balance • Difficulty disconnecting from work • Feelings of loneliness and isolation • Impact on mental health • Evaluation of personal preferences and priorities • Need for self-discipline and motivation • Assessment of overall job satisfaction

Level	Mark	Descriptor (AO3 – Discuss)
	0	**No rewardable material.**
1	1-3	A limited number of points will be identified, which may only support one point of view. At least one point will have evidence to support it. The discussion will have few (if any) links to the scenario. There may be a conclusion, but this is likely to be a simple statement. The response will lack clarity and organisation.
2	4-5	A range of points will be identified, which compare different points of view, though the discussion may be unbalanced. Some points will be supported by evidence. The comparisons will include links to the scenario but may include some generic points. A conclusion will be included, which will link with the comparison, though the link may be implicit. The response will show some focus but may not be well organised.
3	6-8	The discussion compares a range of different points of view. Most points will be supported by evidence. The majority of the discussion will link to the scenario. A conclusion will be given that clearly links to the comparisons made in the discussion. The response will show good focus and organisation.

Question Number	Answer	Mark
5a	Any **two** from: • Economic Disparities • Infrastructure Limitations • Educational Disparities • Geographic Location • Social, Religious and Cultural Factors • Government Policies • Technological Literacy • Language Barriers • Disability Access • Gender Disparities	**(2)**

Question Number	Answer	Mark
5b	Award up to **two** marks for a linked explanation such as: • It increases inequality/gap (1) because those with access have more opportunities (accessing information, education, and job opportunities) (1). • Further disadvantages already vulnerable communities (1) because of increased poverty (1). • It increases isolation (1) reducing understanding of different cultures/world events (1). • Builds stronger communities (1) because it increases the amount of time that people spend together (in-person) (1).	**(2)**

Question Number	Answer	Mark
5c	Award up to **two** marks for a linked description such as: • Mining for/extraction of raw materials required (1) causes habitat destruction / soil erosion (1). • Production process using non-renewable/finite resources (1) depleting natural resources (1). • Factories / production facilities require more land/increased land use (1) could lead to deforestation/habitat destruction to make way (1). • Recycling old devices to produce new ones (1) reduce the amount of e-waste (1). • Employing sustainability practices in production (1) to prevent depletion of natural resources (1).	**(2)**

Question Number	Answer	Mark
5d	Award up to **two** marks for a linked explanation such as: • Results are not relevant/too broad (e.g. rally not related to farming) (1) because the search terminology/key words not specific enough (1). • Results are out of date/not recent (e.g. second result from 2003) (1) because search filters for dates have not been applied (1). • Results are not reliable (e.g. miracle solutions reversing climate change) (1) because the search terminology/key words not specific enough (1).	**(2)**

Question Number	Answer	Mark
5e	Award up to **two** marks for a linked description such as: • Use descriptive/specific keywords (1) that accurately describe what they are searching for / helps the search engine understand their intent (1). • Use search operators (quotation marks for exact phrases, minus sign for excluding certain terms, and site: operator for searching within specific websites or domains) (1) to help narrow down search results (1). • Use search filters (1) to refine/narrow search results (e.g. by content type, by date) (1).	**(2)**

Question Number	Indicative content
5f	- Access to health information and services - Health-tracking apps and wearable devices - Eye strain and headaches from screen time - Disrupted sleep patterns - Reduced physical activity - Impact on mental health and well-being - Importance of moderation in ICT use - Balancing screen time with outdoor activities - Seeking professional advice when needed - Promoting a healthy lifestyle offline

Level	Mark	Descriptor (AO3 – Discuss)
	0	**No rewardable material.**
1	1-3	A limited number of points will be identified, which may only support one point of view. At least one point will have evidence to support it. The discussion will have few (if any) links to the scenario. There may be a conclusion, but this is likely to be a simple statement. The response will lack clarity and organisation.
2	4-5	A range of points will be identified, which compare different points of view, though the discussion may be unbalanced. Some points will be supported by evidence. The comparisons will include links to the scenario but may include some generic points. A conclusion will be included, which will link with the comparison, though the link may be implicit. The response will show some focus but may not be well organised.
3	6-8	The discussion compares a range of different points of view. Most points will be supported by evidence. The majority of the discussion will link to the scenario. A conclusion will be given that clearly links to the comparisons made in the discussion. The response will show good focus and organisation.