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Mark Scheme (Results)

November 2023

Pearson Edexcel International GCSE In Information and Communication Technology (4IT1) Paper 01

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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
1ai	A	**(1)**

Question Number	Answer	Mark
1aii	C	**(1)**

Question Number	Answer	Mark
1b	An explanation such as: • Saves time / quicker (1) because there is no need to travel to the venue (1) or • More convenient (1) because an online booking system is always available (1)	**(2)**

Question Number	Answer	Mark
1c	A description to include two from: Protects information as it is transferred (1) by making unreadable (1) unless you have the key (1)	**(2)**

Question Number	Answer	Mark
1d	A	**(1)**

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Question Number	Answer	Mark
1e	A	**(1)**

Question Number	Answer	Mark
1f	Any two from: • Credit/Debit card • Third party payment processor • Cryptocurrency • Gift card / voucher • Bank transfer Accept proprietary names	**(2)**

Question Number	Answer	Mark
1gi	C	**(1)**

Question Number	Answer	Mark
1gii	An explanation to include two from: Some people do not have access to (some) technology (1), so this would limit their audience (1) and raise issues of inequity (1)	**(2)**

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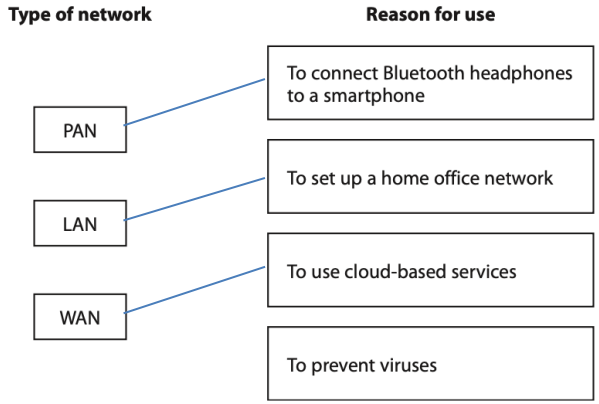
Question Number	Answer	Mark
1h	Any one from: • Placing bids • Search • Timing auctions • Listing types	**(1)**

Question Number	Answer	Mark
1i i		**(3)**

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Question Number	Answer	Mark
1i ii	Any one from: • Each device can share its own resources and request resources from the other devices in the network. • A network model that means computers do not rely on servers to provide shared resources. • Data is stored locally on the networked devices.	**(1)**

Question Number	Answer	Mark
1i iii	A description to include two from: To uniquely identify a Network Interface Controller [accept 'computer' for NIC] (1) on a local area network (1) via a number that has been allocated by the manufacturer (1) and cannot be changed (1)	**(2)**

Question Number	Answer	Mark
1i iv	Two explanations, each to include **two** linked points such as: • Increases transmission speed (1) because wired connectivity has lower latency / greater bandwidth (1) • More reliable (1) because signal is shielded from other electromagnetic interference (1) • More secure (1) because receiver has to be physically connected to the sender (1)	**(4)**

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Question Number	Answer	Mark
1i v	A description to include two from: • The user's (profile) data is downloaded from a server (1) and stored on each machine (1) after they log on (1) • The user's data is synchronised (1) with the server / during log on/off (1)	**(2)**

Question Number	Answer	Mark
2a	A description to include two from: • More applications/instructions (1) can be accessed by the processor (1) before it has to revert to virtual memory (1) • More RAM increases the speed at which tasks can be done (1) as less paging has to be done / less use of virtual memory (1)	**(2)**

Question Number	Answer	Mark
2b	3,500,000,000	**(1)**

Question Number	Answer	Mark
2ci	• DVD (drive) • Blu-ray (drive)	**(2)**

Question Number	Answer	Mark
2cii	Two explanations, each to include **two** linked points such as: • Less robust / don't last as long (1) because the disks are fragile / can scratch/snap easily (1) • Slower access time (1) because solid state uses electrical charges / optical disk drives are mechanical (1)	**(4)**

Question Number	Answer	Mark
2di	C	**(1)**

Question Number	Answer	Mark
2dii	An explanation such as: To move program instructions between storage and memory (1) so that as many programs as possible can run at the same time (1) *To consider at STP: to ensure all programs are allocated memory, to protect memory, to allow sharing of memory where possible, to keep track of available memory etc*	**(2)**

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Question Number	Answer	Mark
2diii	D 0.2 GiB (209,715) 2000 KiB (2000) 0.02 MiB (20.48) 0.002 TiB (2,147,483.648)	**(1)**

Question Number	Answer	Mark
2div	Any two from: • Source code is available to view • Source code is permissible to edit • Large community of developers	**(2)**

Question Number	Answer	Mark
2dv	A	**(1)**

Question Number	Answer	Mark
2dvi	A	**(1)**

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Question Number	Answer	Mark
3a	Any two from: 1. Social network 2. Wiki 3. Forum 4. Video sharing 5. Blog 6. Social bookmarking Award mark for 'User-generated reference' unless mark point 2 or 3 already awarded. Award mark for 'User-generated content' unless mark point 4 or 5 already awarded.	**(2)**

Question Number	Answer	Mark
3b	C	**(1)**

Question Number	Answer	Mark
3c	A description such as: Users should be offered the right to opt out / prevent the use (1) of tracking/privacy features such as cookies (1)	**(2)**

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Question Number	Answer	Mark
3d	A description such as: • User profiles can be set (1) to adapt identifying information (name/image etc) (1) • Accessibility options can be set (1) to allow the site to be more user-friendly/readable (1) • Specific content can be shown/excluded (1) based on user preferences (1)	**(2)**

Question Number	Answer	Mark
3e	D	**(1)**

Question Number	Answer	Mark
3fi	Any two from: • Router • Gateway • Modem Allow • Hub • Switch	**(2)**

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Question Number	Answer	Mark
3fii	An explanation to include two from: Compression reduces the amount of data used by the file (1) meaning there is less data to transfer (1) making the transfer faster/cheaper (1) Check 'smaller' at STP	**(2)**

Question Number	Answer	Mark
3fiii	An explanation to include two from: It is more secure (1) because there are more options for the key (it uses 256-bit encryption) (1) and it generates a new key for each packet sent (1)	**(2)**

Question Number	Answer	Mark
3fiv	A description such as: • Include more keywords (1) that will match with user searches (1) • Include links to the site from other sites (1) that are already popular (1) (PageRank)	**(2)**

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Question Number	Answer	Mark
3g	An explanation to include two from: • Affordability (1) because of economic position of certain countries (1) • Lack of infrastructure (1) because of geographical restrictions (1) • No legal/ethical right to access (1) because of social/political/religious restrictions (1)	**(2)**

Question Number	Answer	**Mark**
4a	Two descriptions such as: • Connectivity (1) to call people / share messages / images (1) • Use NFC (1) to pay for food/drink/merchandise / have digital ticket read (1) • GPS (1) to tag the location of photos/videos/posts (1)	**(4)**

Question Number	Answer	**Mark**
4b	A description such as: • (Connect to the smartphone using) Wi-Fi / Bluetooth (1) by selecting the device name/ SSID (1) Or • Create a hotspot / Tether (1) using Wi-Fi / Bluetooth (1)	**(2)**

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Question Number	Answer	Mark
4ci	An explanation to include two from: • It saves time (1) because the ticket does not have to be read manually (1) as the ticket details can be validated from a database (1)	**(2)**

Question Number	Answer	Mark
4cii	A	**(1)**

Question Number	Answer	Mark
4ciii	An explanation to include two from: • Less interference (1) because the wired signal is shielded / the wireless signal is not shielded (1)	**(2)**

Question Number	Answer	Mark
4civ	Any two from: • Less space required (to locate the server on site) • Storage can be bought flexibly • The host manages backups / maintenance	**(2)**

Question Number	Indicative content
4d	Legal implications for venue. Privacy & Data Protection. • Provides legal grounds if needing to prove damage/misuse etc. • Places legal responsibility on venue. • Policies may be required for staff and customers • Training and/or specialist staff required • Data management may need to be evidenced • Possible fines / legal action for breaches Ethical implications for venue and visitors: • Trust vs protection. • Civil liberties vs individual freedom. • Nothing to hide argument.

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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	Two explanations, each to include **two** linked points such as: • Improved communication (1) because people can talk to each other using a range of tools / quicker to send messages / messaging can be grouped to allow teams to work more effectively (1) • Access to global markets and workforce (1) because people can access/work in their own language / culture / time zones (1) • Information can be better managed and used (1) because people can collaborate more easily / data can be organised and searched/filtered (1)	**(4)**

Question Number	Answer	Mark
5b	A description such as: • Keep your personal information private / block unknown/worrying users (1) so others cannot mimic you / access your information (1) • Report suspicious activity (1) which then safeguards other users (1) • Choose a secure password / use a firewall / anti-malware (1) to prevent unauthorised access to your account (1)	**(2)**

Question Number	Answer	Mark
5c	Two explanations, each to include **two** linked points such as: • Users feel more isolated / reduced cohesion in teams (1) due to less social interaction (1) • Negative effect on physical health (1) due to reduced activity (1) • Negative effect on mental health (1) due to cyberbullying (1)	**(4)**

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Question Number	Indicative content
5d	• The manufacture of digital devices • The use of digital devices • The disposal of digital devices • Ways of mitigating the environmental impact of digital devices. For consideration at STP: Renewables, recycle, reuse, remanufacture, ICT systems used for data collection and analysis about energy consumption to support sustainability, ICT for monitoring, sustainability laws and rules, strategies based on decisions made using ICT, carbon footprint, compliance, education/training of decision makers

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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.

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