

Mark Scheme (Results)

January 2013

GCSE Information and Communication
Technology (5IT01)

Unit 1: Living in a Digital World

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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.
- Candidate can be credited where they have given two or more correct responses in a single answer space, but have given incorrect or blank responses elsewhere.

Question Number	Answer	Do not accept	Additional Guidance	Mark
1(a)(i)	C			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1(a)(ii)	D			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1(a)(iii)	Any two from: <ul style="list-style-type: none"> • Small(er) / Light(er) / Handheld / Compact • (Long/longer/better) Battery life • 3G (connectivity) / always connected • Touchscreen • Multifunctional 	'Portable' on its own.	For multifunctional mark, candidates can give an example of how a feature is used (e.g. using the phone as a camera)	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1(b)	Any two from: <ul style="list-style-type: none"> • Headphones / earphones • Headset • Microphone • Speakers • Docking station • FM receiver/transmitter • Hands free (set) • Fitness sensor • (Portable) keyboard • Printer 	<ul style="list-style-type: none"> • Charger • Storage (of any kind) • Camera 		(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1(c)	<p>One benefit from:</p> <ul style="list-style-type: none"> • Can use mapping software for navigation • Can use apps that require location to use/play e.g. geo-tagging • Automatic location for some services such as weather/shopping • Save time switching on location features if needed • Locate the smartphone/Tom if lost • Friends/family/colleagues can know location <p>One drawback from:</p> <ul style="list-style-type: none"> • Uses battery more quickly • Allows the location of the smartphone / Tom to be shared with those people that Tom does not want to know his location (unwanted people) • Invasion of privacy (e.g. stalking/criminal behaviour) • Could allow unwanted targeted marketing 	<p>Drawback:</p> <p>Hacking</p>		(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1(d)	<p>Any one from:</p> <ul style="list-style-type: none"> • Online/web/internet software • Online/web/internet storage 		Cloud computing involves a combination of online data storage and hosted applications.	(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1(e)(i)	A			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1(e)(ii)	Any one from: <ul style="list-style-type: none"> • Navigating using maps • Used in applications such as compass/camera/other named application • Easier viewing of web pages/sites/documents/movies etc • Switching device off when dropped • Change keyboard layout • Come out of sleep mode/turn screen on when moved 	'Playing games'		(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1(f)(i)	Any two features from: <ul style="list-style-type: none"> • Don't need to plug in peripherals such as monitor / keyboard/ mouse • Simplified settings • Installing Apps is easier than installing traditional software • Touch screen/ intuitive interface / gesture input 	Answers related to portability (size/weight)	Answers refer to tablets such as iPad. Accept any suitable answers referring to traditional tablets.	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1 (f) (ii)	Any one from: <ul style="list-style-type: none"> • Can easily charge multiple devices • Don't need multiple/dedicated chargers • Fewer H+S issues 			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (a) (i)	D			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (a) (ii)	An appropriate description: <ul style="list-style-type: none"> • (SD) card (1) placed into the tablet computer (1) • Pair the devices (1) using Bluetooth/WiFi/WiFi direct (1) • Connect the camera and the tablet computer (1) using a cable/wire/port (1) • Email the image from the camera (1) and open the email on the tablet computer (1) • Upload the image to a website (1) and download it on the tablet computer (1) • Synchronise the devices. (Their image files) (1) using cloud storage (1) 			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (a) (iii)	Any two from: <ul style="list-style-type: none"> • Bandwidth/(amount of data that can be/is being transferred) • Number of devices/people using the connection • Latency / (delay between requesting and receiving the data) • Type of connection e.g. Bluetooth is slower than WiFi • Strength of signal / interference / distance from router / physical blocks (walls) 	Response that simply states a connection type e.g. 'Bluetooth' without expansion. Size of the image.	Responses comparing wired to wireless gain 0 marks.	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (b) (i)	Explanation to include two from: IMAP protocol synchronises the emails (on all authenticated devices) (1) POP3 deletes mail from server after downloaded by client (1)		An example of response could be: IMAP keeps a copy of the email on both the server and the smartphone (1) whereas POP3 deletes mail from server after it has been downloaded to the phone (1)	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (b) (ii)	A			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (c) (i)	Any one from: <ul style="list-style-type: none"> • Turn off computer when not being used • Change settings e.g. (display) brightness / Hibernate (frequency) • Buy a more efficient PC/screen / equipment • Update the operating system 			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (c) (ii)	Any one from: <ul style="list-style-type: none"> • Reduced paper (e.g. from printing / sending letters). • Less need to travel (e.g. for work/ leisure) • Computers are used in manufacturing to reduce waste / improve efficiency • Reduced packaging/printed materials due to digital downloads • The internet/computer use has facilitated a greater awareness of environmental issues. 			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (d) (i)	Any two benefits from: <ul style="list-style-type: none"> • Don't need local storage space • Can use any device/anywhere with internet connection • Don't need to update software • Collaborate with other people/work from multiple locations (using cloud computing) 			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (d) (ii)	Any one drawback from: <ul style="list-style-type: none"> • Not available without internet connection • Not as feature rich • Privacy/security issues (e.g. virus) • Dependent on service being available • Can be slow • Automatic updates can affect the user experience 			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (d) (iii)	Data Protection (Act) / DPA / DP Act			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (a) (i)	Any one from: <ul style="list-style-type: none"> • Paypal • Google Checkout • Amazon Checkout • (RBS) WorldPay • Nochex • SagePay Go • Third Party Payment (Service / Processor) • Bank transfer / Account transfer • E-voucher / (gift) voucher • E-cheque 	Credit / debit card/cheque/cash		(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (a) (ii)	Any two from: <ul style="list-style-type: none"> • Faster buying experience e.g. Express checkout / only need to sign in before buying / don't have to enter personal details every time • Order tracking / purchase history • May receive a discount / rewards • Personalised shopping/targeted marketing • Wish lists / Save items • Receive updates (e.g. special offers /deals) 	Quick / easy without expansion		(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (b) (i)	<p>An explanation</p> <ul style="list-style-type: none"> • To check that the customer is real (1) to prevent automatic sign ups (1) • To prevent fraud (1) by verifying the customer's identity (1) • To verify the customer's email address (1) so that the customer can be contacted if username / password is lost / forgotten (1) <p>Max 1 mark for:</p> <ul style="list-style-type: none"> • To prevent the account being used (1) • To make sure that fraud is not occurring / to prevent fraud (1) 		An explanation requires linked responses for maximum marks. Individual statements score 1 mark maximum.	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (b) (ii)	A			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (b) (iii)	Any two from: <ul style="list-style-type: none"> • Have to wait for delivery / items might not arrive • Cost of delivery / hidden costs • Cannot test / try on / see it (physical product) / product not as described • Need to organise / hassle of returning product if not liked • Product damaged during delivery • Security issues (e.g Fraudulent sites / identity theft) • Need to be computer literate / have access to suitable payment method • The shopping experience can lack personal interaction with sales staff 	Phishing (as a security issue)		(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (c) (i)	<p>Any two examples from:</p> <ul style="list-style-type: none"> • Personal information (e.g. address / gender / name / email) • Product(s) purchased /purchase details (price, payment details, date of purchase) • What adverts are clicked on / pages/links visited • Referral site, next site • Date/time people visit/enter/leave the site • Browser/hardware used / IP address • Location 			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (c) (ii)	<p>Any one use from:</p> <ul style="list-style-type: none"> • Allows the business to target their marketing • Sales statistics (e.g. business can see how many visitors bought items/conversion rates) • The business can see which adverts were most successful • Enhanced shopping experience through personalisation of webpage (e.g. personal welcome message/ nearest store) • Browser/device specific page layout • Informing stock control 			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (d) (i)	Any one from: <ul style="list-style-type: none"> • Physical blocks e.g. walls • Interference (from other devices) • Bottlenecking / too many devices using the signal • Distance (from router) 			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (d) (ii)	A description to include two from: <ul style="list-style-type: none"> • Mobile devices are portable (by design) (1) • Wired connection limits the range / location it could be used (1) • Tom and Jasmine may need to install access points in their home or office (1) • Some devices do not have the ability to connect / lack of LAN ports (1) 			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (d) (iii)	<p>Explanation to include two from:</p> <ul style="list-style-type: none"> • WiFi Direct uses pairing / no access point/router needed (1) • Connecting devices is much simpler / can be done at the touch of a button (1) • All connections are automatically encrypted (1) • Connection would be stronger in areas of the house with weak WiFi signal (1) 			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (a) (i)	<p>Any two from:</p> <ul style="list-style-type: none"> • Release news / status updates (about new products) • Post images / videos (of products) • Allow users to post messages / ask questions / give feedback • Interact/link with customers (e.g. 'add friends' / follow customers / let customers 'like'/'follow' the store / polls) • Viral marketing 	<p>Advertisements / offer deals / discounts / competitions, without explanation.</p>		(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (a) (ii)	<p>Any one from:</p> <ul style="list-style-type: none"> • Blog e.g. Wordpress / Youtube • Micro-blog e.g. Twitter • Virtual worlds / gaming communities • Webmail • Online workspaces (e.g. Web conferencing) • Online social spaces (e.g. Skype /MSN) • User-generated reference site / Social bookmarking • Forum / Message boards • Wikis • Chatroom • Virtual Learning Environment / VLE 	Facebook/Social network	<p>Accept proprietary names e.g. Twitter, second life, stumbleupon</p> <p>If response contains unknown proprietary name please research it</p>	(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (a) (iii)	<p>A description to include:</p> <p>Users post messages/images about their opinion (1) which can then be 'liked'/reposted/replied to (1)</p>		Responses must refer to / imply "supporting a campaign" to gain credit.	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (b) (i)	<p>Explanation to include:</p> <ul style="list-style-type: none"> • Promotes interactions (1) from customers to improve customer relations (1) • A positive review/rating (1) may lead to increased sales (1) • Reviews of some products may give useful feedback (1) on the products to sell/offer/improve in future (1) 		An explanation requires linked responses for maximum marks. Individual statements score 1 mark maximum.	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (b) (ii)	<p>A description to include:</p> <ul style="list-style-type: none"> • To prevent offensive or inaccurate comments (1) • protecting the company and/or customers / which would have a negative effect on the company image (1) 			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (b) (iii)	B			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (c) (i)	<p>Benefit (any one from):</p> <ul style="list-style-type: none"> • Can buy products at cheaper prices • Very wide range of products / rare objects available • Wide range of sellers in one place • Can decide to buy based on user feedback • Can pay using 3rd party payment / Paypal to keep identity safe 			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (c) (ii)	<p>Drawback (any one from):</p> <ul style="list-style-type: none"> • Product / condition may not be as described • Postal charges may be very high • Potential for fraud / misuse (e.g. 'ghost' bids from sellers) • Cannot return items to private sellers • Might not win the item • Have to wait until auction ends (before purchase is final) 			(1)

Question Number	Indicative content
4 (d)	<p>Indicative content discussing why high street stores are struggling to compete with online shops</p> <ol style="list-style-type: none"> 1. Convenience – people don't have to go out / websites can remember previous orders 2. Online stores offer cheaper deals due to lack of overheads such as shop fitting, staffing etc. 3. Online stores can offer a much wider range of items by using 'just in time' (i.e. getting them from suppliers when ordered) delivery 4. Online stores can offer wider range of products and they can sell worldwide e.g. UK made products sold to US 5. Online stores can get customers to buy more by identifying and highlighting products based upon tracking of buying habits 6. High street stores cannot stay open for shopping for as long due to staffing costs and availability 7. Customers can more easily shop around for cheap deals on the internet using price comparison sites 8. Customers can use cash back sites to get money back when shopping online 9. Customers can get reduced rates by group buying 10. Customers can read impartial reviews of the best product 11. Some items e.g. music are available digitally online and lots of people now buy and consume music in this way 12. More and more people are gaining access to the internet which means online stores' customer base is increasing 13. Shoppers sometimes don't like to be hassled by shop employees / enjoy shopping in private

Level descriptors follow on the next page.

Markers should start by awarding a mark based on a best-fit holistic view of its content and subsequent discussion.

QWC - If this mark is at the bottom of a level (mark 0, 1, 3, or 5) then Quality of Written Communication does not need to be considered and the mark can be awarded, unchanged.

However, if the mark is at the top of a level, (mark 2, 4, or 6) and the response does not match the QWC descriptor for the level in which the mark lies, then the mark must be reduced by 1.

Level	Mark	Descriptor	
	0		No rewardable content.
1	1-2	Content	A brief and generalised response about why high street stores are struggling to compete.
		Discussion	Response will provide little, if any, discussion of the reasons.
		QWC	Everyday language is used and the response lacks clarity and organisation. Spelling, punctuation and the rules of grammar are used with limited accuracy.
2	3-4	Content	Response will be mostly accurate and will include a number of reasons why high street stores may be struggling to compete.
		Discussion	The response must discuss some of the reasons, but these may not always be accurately justified.
		QWC	Some specialist terms are used and the response shows some focus and organisation. Spelling, punctuation and the rules of grammar are used with some accuracy.
3	5-6	Content	An accurate response that identifies a range of reasons.
		Discussion	The discussion includes valid justifications of most of the identified reasons.
		QWC	Appropriate specialist terms are used consistently and the response shows good focus and organisation. Spelling, punctuation and the rules of grammar are used with considerable accuracy.

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (a) (i)	<p>Any two from:</p> <ul style="list-style-type: none"> • Can work around needs of family / work-life balance • Can become more involved with family / community / friends • No need to travel / no time/money wasted travelling • Can work when suited / flexible hours 			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (a) (ii)	<p>Any one from:</p> <ul style="list-style-type: none"> • Harder to monitor performance • (May) not work as hard when unsupervised • More distractions • Staff may feel isolated • Less contactable / interaction • Loss of corporate identity • Difficult to read body language • Data security/Data protection issues 			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (a) (iii)	Any one from: <ul style="list-style-type: none"> • 2G • 2.5G • 3G • 3.5G • 4G • LTE / Long term evolution • Mobile Broadband • HSPA / High speed packet access • HSDPA/ High speed download/downlink/data packet access • HSUPA / High speed upload/uplink packet access • WAP / Wireless Application Protocol • WiFi • Wireless • Wireless Fidelity • Wireless Internet • GPS / Global Positioning System/Satellites 		For 'G' in the first 5 marking points, accept 'Generation'	(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (a) (iv)	<p>An explanation to include three from:</p> <ul style="list-style-type: none"> • Apps are marketed widely • Mobile apps are often cheap or free • You can design your own Apps • Can enhance social status when comparing Apps • Devices are designed to make the use of Apps easier • Allow quick/easy access to services/information • Can replace other devices e.g. sat nav • Companies encourage their distribution as they get revenue • Can be used to increase productivity • Can customise a device('s functionality) 			(3)

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (b) (i)	Any one from: <ul style="list-style-type: none"> • Webcam • Web camera • VoIP phone • Voice Over IP phone • Microphone • Headset / Headphones/ Earphones/ Earpiece • Speakers 	Camera (on its own)		(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (b) (ii)	One from: <ul style="list-style-type: none"> • Low bandwidth • High latency • Interference • Blocked signal • Other apps are using the connection • Other people are using the connection 	'Poor signal' without explanation		(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (b) (iii)	Any one from: <ul style="list-style-type: none"> • Costs less to send multiple messages • Can see if someone is available to chat / busy etc. • Easy file exchange • Easier for group communication • See when/if someone is typing 	Instant messaging is free Do not accept easier/quicker without further expansion		(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (b) (iv)	A description to include: <ul style="list-style-type: none"> • Making information unreadable/ scrambling/encoding the data (1) so that it can only be read by anyone with the key / can't be accessed without the key (1) 			(2)

Question Number	Indicative content
5 (c)	<p>Indicative content discussing advantages to business of use of GPS-enabled smartphones</p> <ol style="list-style-type: none"> 1. Keep records of communication 2. Set calendared tasks and alerts / reminders 3. Easily re-direct drivers for deliveries e.g. if there is a traffic incident / driver breakdown / unknown/unexpected route 4. Save time / money on deliveries due to efficient routing using navigation software 5. Can track driver location to ensure that they are on task / where they should be 6. Use apps for productivity e.g. task lists 7. Enhances employees' security 8. Multifunctional, so saves money 9. Access company documents on the move 10. Flexible working / Employees can access work at any time 11. Use camera for capturing product images / recording incidents / making face calls / scanning barcodes etc. 12. Geotagging images 13. Employees may use as marketing tool e.g. tweeting product news, updating company social network site whilst on the move 14. Enhancing device security 15. Keep in touch via email / phone / chat / SMS

Level descriptors follow on the next page.

Markers should start by awarding a mark based on a best-fit holistic view of its content and subsequent discussion.

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However, if the mark is at the top of a level, (mark 2, 4, or 6) and the response does not match the QWC descriptor for the level in which the mark lies, then the mark must be reduced by 1.

Level	Mark	Descriptor	
	0		No rewardable content
1	1-2	Content	A brief, list-style response, with most of the suggested advantages given being valid.
		Discussion	Response may include some discussion of the suggested advantages, not all of which is valid.
		QWC	Everyday language is used and the response lacks clarity and organisation. Spelling, punctuation and the rules of grammar are used with limited accuracy.
2	3-4	Content	A number of valid advantages are included
		Discussion	Some valid discussion of the suggested advantages is presented.
		QWC	Some specialist terms are used and the response shows some focus and organisation. Spelling, punctuation and the rules of grammar are used with some accuracy.
3	5-6	Content	A range of valid advantages is included, with some reference to the advantages that are provided by GPS.
		Discussion	A valid discussion of most of the suggested advantages is presented
		QWC	Appropriate specialist terms are used consistently and the response shows good focus and organisation. Spelling, punctuation and the rules of grammar are used with considerable accuracy.

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