



Rewarding Learning

General Certificate of Secondary Education

2005

Information and Communication Technology

Full Course

Paper 1

Higher Tier

[G5803]

MONDAY 23 MAY, AFTERNOON

**MARK
SCHEME**

GCSE INFORMATION AND
COMMUNICATION TECHNOLOGY 2005

AVAILABLE
MARKS

Full Course

Paper 1

Higher Tier

Mark Scheme

1	(a) B	[1]	
	(b) C	[1]	
	(c) C	[1]	
	(d) B	[1]	
	(e) D	[1]	
	(f) C	[1]	
	(g) A	[1]	
	(h) C	[1]	
	(i) D	[1]	
	(j) C	[1]	10
2	(a) Offline [1] Address book [1] BCC [1] Viruses [1]	[4]	
	(b) Notifies the receiver of how important the sender considers the message	[1]	5
3	(a) Scanner/scanning or scanned [1] or scan [1]	[1]	
	(b) Crop	[1]	
	(c) They produce images that take up a lot of space [1] If you zoom in on part of the image you can see individual pixels [1]	[2]	

<p>(d) Any one from: Don't have to wait for film to be developed [1] Images can easily be stored – don't take up a lot of space [1] Images can easily be edited [1]/deleted [1]/viewed [1] Easily inserted into article [1] Don't have to take time to scan them [1] No expense of film [1] No film needed [1] No development costs [1]</p>	[1]	5
<p>4 (a) Any two from: D:16 [1] H:16 [1] H:17 [1] I:7 . . . I:14 [1]</p>	[2]	
<p>(b) = AVERAGE(H7:H14) [1] or H7 + H8 + H9 + H10 + H11+ H12 + H13 + H14/8 or H16/8 or sum (H7 : H14)/8 =IF(H7<H17, "Below", "Above") [1]</p>	[2]	
<p>(c) Currency</p>	[1]	
<p>(d) Centred Across Selection/Merged not "Centred" on its own or description thereof [1]</p>	[1]	
<p>(e) Highlight formula and cells below [1] Go to Edit and Fill Down [1] or Click on corner of cell with formula [1] Drag down to all cells below [1] or Copy formula from original cell [1] Highlight destination cells and paste [1]</p>	[2]	
<p>(f) Any one from: Automated calculations [1] Easy to change values if make a mistake [1] Can present data using a chart [1] Can present data effectively [1] Can view trends or patterns [1]</p>	[1]	
<p>(g) Any one from: Borders [1] Shade headings [1] Different fonts [1]/style [1] Use colour to make headings stand out [1] Insert Company logo [1]</p>	[1]	10
<p>5 (a) Text /Graphics that appears at top of every page Accept top of document [1]</p>	[1]	

- (b) (i) Any **one** from:
 Can easily edit it [1]
 Don't have large quantities of blank paper sitting around [1]
 Can save money as don't pay someone to design it [1] [1]
- (ii) Any **one** from:
 Looks professional [1]
 Cheaper if buy in bulk [1] but not if said cheaper in (b) [1]
- 6 (a) (i) Watch movies [1] Watch TV [1]
 Play music [1] Make movies [1]
 Play games [1] Copy music [1]
 Burn CDs/DVDs [1] [3]
- (ii) When the computer is turned off the data in RAM is lost [1]
or RAM is volatile [1] [1]
- (iii) Any **two** from:
 RAM is used to store programs being run [1] **or** applications
 being used [1] **or** data being edited [1] more RAM
 means higher/quicker performance of computer system [1] [2]
- (b) (i) Makes the link between Gillian's computer and the web servers
 on the Internet
or provides connection to the Internet [1] [1]
- (ii) Any **two** from:
 E-mail [1] weather/news [1]
 Webspace [1] user help [1] filtering/parental control [1]
 Firewall [1] (first line virus protection) [2]
- (c) (i) Any **one** from:
 An operating system is a piece of software which manages the
 resources on the computer system [1] and allows communication
 between the user and the computer [1] [1]
- (ii) Graphical User Interface [1]
- (d) Back [1] **or** Forward [1] **or** Refresh button [1] Autocomplete [1]
 Favourites [1] Find [1] Popup blocker [1]
 History [1] Search [1]
 Description thereof [1] [3]
- (e) Windows [1] + [1] a part of the screen where the user can see separate
 applications or several can be opened at once [1]
 Icons [1] + [1] a picture or graphic or symbol which represents a program/file,
 e.g. My Documents **or** which is a shortcut to a program [1] **or** which opens
 a program [1]
 Menus [1] + [1] an onscreen list from which the user can choose an
 operation to be performed, e.g. pull down menu
 Pointers [1] + [1] a cursor which moves around the screen and allows
 users to point or select item [1]
Three from above four possibilities [6]

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- 7 (i) Name: Joystick [1]
 Explanation: Used for playing games [1]
 or cursor control using buttons [1] [2]
- (ii) Name: Digital Camera (**accept** camera) [1]
 Explanation: Photos are downloaded via a USB lead to the computer
 (**accept** upload from floppy) [1]
 [1] for acceptable method of upload
 [1] for name, [1] for explanation [2]
- (iii) Name: Scanner [1]
 Explanation: Paper copies[1] of images, pictures or documents are
 scanned saved on the computer [1] [3]
- (iv) Name: Microphone [1] **accept** mic [1]
 Explanation: Captures sound and saves onto the computer [1] **or** sound is
 converted from analog to digital [1] [3] 10
- 8 (a) Any **two** from:
 He requires a fast printer because he has a lot of printouts to do [1]
 Most of his printed material is text based [1]
 Little/No colour required therefore cheaper [1]
Not one word answers [2]
- (b) (i) Any **one** from:
 CD-R [1] CD-RW [1] DVD [1] CD [1] [1]
- (ii) Any correct and matching capacity with (i) above
 600–800 with CD DVD – 4.7 Gb
or 4–5 Gb or value
 in the range 4–5 Gb
or 17 Gb [1]
- (iii) Portable, high storage capacity,
 not easily damaged in transit
 [1] for suitable reason [1]
- (c) Word processor for typing letters [1] Excel [1] Word [1]
 Database to manage records [1] Access [1]
 Any of the office productivity tools [1] [2]
- (d) John’s business will be seen globally [1] details and information are
 available 24 × 7 [1]
 Potentially greater customer base [1]
 Online ordering for customers [1] [2] 9

- 9 (a) Digital pictures are transmitted using digital signals [1] and these signals must be decoded so as a normal TV can display the images and sound [1] [2]
- (b) Any **two** from:
 Digital TV signals can be compressed easier than analog signals therefore the amount of data which can be sent on a digital signal is much greater [1]
 Digital communications lines can transmit and receive data [1]
 Analogue television can suffer interference. Digital television is less affected by interference, so the digital channel will provide a sharper, clearer picture [1]/sound [1]
 Interactive [1], Internet access [1] More channels [1] [2]
- (c) Any **one** from:
 No decoding of signals is required [1]
 No specialist equipment is required to watch analog TV [1]
 Digital TV equipment is expensive [1] [1]
- 10 (a) LAN Local Area Network [1]
- (b) The intranet is owned by the health centre and is accessible only on the LAN or via a secure login from home [1]. The Internet can be accessed from within or outside the organisation by anyone [1] [2]
- (c) Any **two** from:
 Expensive peripherals can be shared [1] software can be shared [1]
 users can logon from any computer on the network [1]
or any acceptable advantage
 Better security [1] Virus protection [1]
 Files can be backed up centrally [1]
 Communication between workstations [1] [2]
- (d) Any **two** from:
 Could use the Internet to **communicate with** specialists/patients/hospitals [1]
 Access to medical information [1] Assistance with patient diagnosis [1] [2]
- (e) Any **one** from:
 Unauthorised access of patients records [1] **or** hackers via Internet connection [1]
 Viruses [1] [1]
- 11 (a) (i) Technical or Internet failure [1]
 When images are to be sent to another location [1]
 When signed documents are to be sent [1]
 When handwritten notes are to be sent [1]
 When not everyone has an email address [1]
 Fax does not transfer viruses [1]
 Fax is less likely to be subject to hacking [1] [2]

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<p>(ii) By creating one single e-mail [1] and placing the addresses of all of those to receive the e-mail in the TO box [1] Mailing list [1] CC box [1]</p>	<p>[2]</p>	
<p>(b) (i) Using the Internet to communicate using sound and images Video</p>	<p>[1]</p>	
<p>(ii) Any three from: Video camera/web cam [1] High speed Internet connection [1] or ISDN line [1] or Broadband line [1] Microphone [1] Speakers [1] Screen [1] Computer [1]</p>	<p>[3]</p>	
<p>(iii) Pupils will be able to see each other while they speak [1] they may be able to work better together once they have seen each other [1] improved communication [1] Reduces the need to travel to meet [1]</p>	<p>[2]</p>	<p>10</p>
<p>12 SENSOR [1] EFT [1] BITMAP [1] MAILMERGE [1] MIDI [1] VIRUS [1] ROM [1] WIZARD [1] HARD DRIVE [1] DOT MATRIX [1] Exact words</p>	<p>[10]</p>	<p>10</p>
<p>13 (a) Any two from: Barcode is part of product label [1] is scanned at the till [1] to get price [1] or to produce an itemised receipt [1]</p>	<p>[2]</p>	
<p>(b) Any three from: Country of origin or Country of origin Code [1] Manufacturer's code [1] Product code [1] Check digit [1]</p>	<p>[3]</p>	

- (c) Any **two** from:
 Shelves are always well stocked as stock levels are accurately monitored [1]
 Customers can be dealt with more quickly at the checkout [1]
 Customers receive a fully itemised bill [1]
 Goods can be paid for by EFT [1]
 Customer buying patterns can be analysed and used to target customers with offers of goods and services that they might be interested in later [1]
or any other relevant advantage
 less human error/higher level of accuracy [1] [2] 7
- 14 (a) There is a magnetic strip on the back of the card [1]
- (b) Magnetic strip reader [1]
- (c) Any **two** from:
 Account number [1] cardholder's name [1] cardholder's signature [1]
 issuing bank or organisation [1] date of issue [1] date of expiry [1]
 PIN [1] Card number [1] [2]
- (d) Any **one** from:
 Easy and quick to use [1] not as much need to carry money [1]
 can purchase on-line or over telephone [1] cheap to produce [1]
 fast and accurate exchange of information [1] security against fraud [1]
 credit limit can be restrictive [1]
or any other relevant answer [1]
- (e) Any **one** from:
 Strip cannot hold much information [1] strip can get damaged [1]
 data can get lost [1] fraud [1] lost cards can be used [1] information from cards can be copied [1] tendency to overspend [1] interest charged on purchase of goods if credit card bill not paid in full [1]
or any other relevant answer [1] 6
- 15 (a) Heat [1] sensor [1] **or** Temperature [1] sensor [1] **or** Thermometer [1] **or** Thermistor [2]
- (b) Any **two** from:
 This converts analogue data, e.g. temperatures, to digital information [1] which the computer can recognise [1]
 (Link analog with sensor [1] ; link digital with computer [1]) [2]
- (c) Any **two** from:
 Read temperature and compare with upper or lower limit [1]
 Send message to take suitable action [1]
 (note: comparison [1] action [1]) [2] 6

		AVAILABLE MARKS
16 (a)	Shopping via the Internet	[1]
(b)	Any one from: Wider range of customers [1] lower costs [1] fewer outlets [1] 24 hour access to customers [1] competition with rivals [1] Lower overheads [1] wider range of goods [1]	[1]
(c)	Any two from: Greater choice of goods [1] 24 hour access [1] best buys [1] saves time [1] shop from home [1] goods delivered to home [1]	[2]
(d)	Any one from Hacking for details [1] hacking and using line [1] Possibility of fraud from credit card details [1]	[1]
(e)	Any one from: Padlock symbol [1] encryption [1] HTTPS:// [1] Paypal [1] Verisign [1]	[1]
(f)	Any three from: Personal data must be processed fairly [1] processed for purpose [1] adequate/relevant/not excessive [1] accurate up-to-date [1] not kept longer than necessary [1] processed in accordance with owner's rights [1] kept secure [1] not transferred without protection [1] or permission [1] Not transferred outside EU. Can view data [1]	[3]
	QWC	9
		7
	Total	140

The assessment of quality of written communication.

Marks are to be allocated to QWC in accordance with the following criteria.

Performance Level	Criteria	Marks
Threshold	Candidates spell, punctuate and use the rules of grammar with reasonable accuracy; they use a limited range of specialist terms appropriately.	0, 1, 2
Intermediate	Candidates spell, punctuate and use the rules of grammar with considerable accuracy; they use a good range of specialist terms with facility.	3, 4, 5
High	Candidates spell, punctuate and use the rules of grammar with almost faultless accuracy; deploying a range of grammatical constructions; they use a wide range of specialist terms adeptly and with precision.	6, 7