## MARK SCHEME for the May/June 2008 question paper

## 9713 APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

9713/03 Paper 3 (Written B), maximum raw mark 80

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

• CIE will not enter into discussions or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the May/June 2008 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



UNIVERSITY of CAMBRIDGE International Examinations

Pa	ge 2		k Scheme	Syllabus	Paper
		GCE A/AS LEV	/EL – May/June 2008	9713	03
l (a)	It is a con Sensors Analogue Compute If data is Comp	er files contain acceptabl outside acceptable rang	eeds to be converted by AD le data ranges		[4
(b)	Gives 24 costs usi Humans Can be p Rapid re Can mor Need for Can be li More acc	ng microprocessor rathe	nicroprocessor can detect s specific areas at once ff ration of drugs an a human		ers/lower [3
(c)	Doctor e Knowled using info and ru Output p	points from: nters answers to a series ge base/fact base comp erence engine iles/rule base roduced giving % probal aken through a series of	bility of diagnosis		[4
(d)	(Max of 2 Reduces Need for More acc Reduced Portable	time taken to diagnose fewer skilled staff qualif curate than a consultant	ied … the doctor make a diagnosi nywhere		
	Extensive Needs to Requires	ve to set up e.g. collect d e training for doctor on h b be kept up to date at al work station in all office	now to use system needed Il times es		13

... therefore potential security risks

[3]

	Ра	ge 3	Mark Scheme	Syllabus	Paper
			GCE A/AS LEVEL – May/June 2008	9713	03
2	(a)	Previous can X Results f Avoids n Can pred Compute Storage Do statis A descrip Requirer Administ	points from: a results of research work stored f-match results and save time and money from tests on certain drugs stored eed to repeat expensive tests dict likely outcome of doing certain tests on drugs ers can automatically control and monitor mixing of ingr of analysis results/can check analysis results against s stical analysis of results ption of collaborative research ment for super computer due to amount of processing tering drug trials – feedback and monitoring g human system and testing drugs in this way		[6]
	(b)	Use of e	preadsheets to do … xpert systems to do … o account company costs (price based on % profit leve	I)	[2]
	(c)	Gannt ch Gannt ch Gannt ch Gannt ch num prog prog how Allows e Can use Allows u Allows u Allows u	r points from: hart shows all stages/tasks to be done hart shows the critical path(s) hart shows key project milestones hart also shows: ber of days to do tasks gress on tasks as % complete gress vs expected time to do work tasks are all linked together mailing of tasks/project info to others automatically www/intranet to post or download project information se of PERT charts to be sent if target not met se of resource graphs		[4]
3	(a)	Can wor Can wor Can re-re Can com Get imm Immedia Can inclu No need Easy to I	points from: k at own speed k when you want un sections ne back any time they want/pause training at any point ediate performance feedback te assessment made ude multimedia elements for teacher/classroom ∴ cost saving keep up to date/amend ailored to exact requirements		[5]
	(b)	Difficult t Little stur Very spe Can be e	e points from: to monitor any malpractice/work rates dent/student or student/teacher interaction ecific training/doesn't allow discussions of novel situation expensive to produce CAL initially can be distracted by e.g. browsing emails/games © UCLES 2008	ins	[3]

Pa	ige 4	Mark Scheme	Syllabus	Paper
		GCE A/AS LEVEL – May/June 2008	9713	03
(a)	(Max of 3 Much wid If live in s No need Less exp Operates Use of se Some per Safer to No need Larger be Increase Can latel Better dis Can selle Larger c	h on to customer trends (promos etc.) scounts for larger orders er cheaper due to lower overheads increasing profits ustomer base leads to bulk purchasing – lowers costs		[4]
	Enables	"just in time", qualified e.g. no build up in stock		[4]
(b)	Shopping Link to se A descrip Login lea Additiona Order his Hyperlinl Feature f "When cl Search fa Drop dow Help faci Currency Data/sale Saved cu Ability to Ability to Animatio	y conversion es confirmation by email ustomer details/customised pages/email registration track status of orders listen to tracks/see video clips of artists se customer as soon as they log onto web site		[5]
(c)	The bar Stock file Record f Number If number autom When ne Stock lev	points from: code is read e holds details of item sold ound on stock file using key fields/bar code number if items in stock reduced by 1 for each item sold er in stock ≤ re-order level natic order sent out ew stock arrives vels of that item increased accordingly ic print out of stock levels		[5]

	Pa	ge 5 Mark Scheme Syllabus		Paper	
			GCE A/AS LEVEL – May/June 2008	9713	03
	(d)	Custome Compute Supplies To arrive As requir Could be Avoids n	e points from: er orders trigger a need to restock er sends order to supplier are ordered e at the warehouse as required e.g. within 48 hours red for selling/distribution e sent direct to customer eed for large stores a cost by not having a lot of unsold items on shelves		[3]
5	(a)	Send out Research Descripti Custome Descripti Monitor s Store all and la	points from: t questionnaires/surveys to target groups h what competitors are doing on of personal interview on of telephone surveys er uses a web site to complete questionnaire on of how customer using web site is prompted to fill in sales of items from the shops the information on databases iter analyse the information report showing results of the surveys	n questionnaire	[5]
	(b)	Ability to Plug and Music do Reduced Increase Improved Reduced Increase Descripti Improver Broadba Most mo Solid sta Use of ha	r points from: download music straight to a computer l play devices/ease of USB port ownloaded to MP3 players l size of hard discs leading to smaller players d capacity of storage media (flash memory or HD) hold d compression techniques reducing size of files l size of batteries leading to smaller devices d battery capacity leading to longer play time on of CODEC ments to user interaction with hardware via HMI nd enables much more downloading of music files dern music is already held in a digital format te memory leads to more robust players ard drives to store music rather than CDs netertainment system that combines TV, etc. ons of all digital music	ding more tracks	[4]

GCE A/AS LEVEL – May/June 2008         9713           6         (a) Any five points from each item: Computer telephony integration (CTI) software used to combine the data and voice input to the system Third party call control software allows any computer in network to control any phone in the system Inbound calling bandling software routing engine to ensure customers routed to correct "expert" Script system control on screen information for operators Predictive dialling auto dials next number on client list           (b) Any four points from: Computer software provides the script Prompts operator to ask appropriate questions Leads onto suitable advice provided Can give access to technical help Can provide access to technical help Can provide access to product stock file (to tell customer if item in stock) Can provide access to product stock file (to tell customer file information           (c) Any three points – covering what device and who benefits from it – from: Touch screen with menus operated by head wands by Foot operated devices for physically handicapped to navigate Speciel synthesis for dumb operators Microphones for physically handicapped to communicate Large tracker ball devices for physically handicapped to aselect Software magnifier for visually impaired           7         Any eight points from: Expansion of the provision of broadband Price of computers has fallen dramatically over the last few years Improved search engines Faster operating system/software allow multimedia Large memory capacities (hard drives, DVD,) allow large files to be downloaded and stored Wireless connections to share Internet service Other devices (e.g. mobiles, digital boxes, portable music players) Introduction of online services expanded its use e.g. remote photo storage Social networking such as chat/personal web space Greater capacitis of Internet		Syllabus	Mark Scheme	Page 6	
<ul> <li>Computer telephony integration (CTI) software         used to combine the data and voice input to the system         Third party call control software         allows any computer in network to control any phone in the system         inbound calling handling software         control on screen information for operators         Predictive dialling         auto dials next number on client list         (b) Any four points from:         Computer software provides the script         Prompts operator to ask appropriate questions         Leads onto suitable advice provided         Can growide access to technical help         Can provide access to product stock file (to tell customer if item in stock)         Can provide operator with (email) link to higher technical level/moving off s         Stores customer file information/can display customer file information         (c) Any three points – covering what device and who benefits from it – from:         Touch screen with menus operators         Microphones for physically handicapped to navigate         Species synthesis for dumb operators         Microphones for physically handicapped to communicate         Large tracker ball devices for physically handicapped to avigate         Special keyboards/concept keyboards for physically handicapped to select         Software magnifier for visually impaired     </li> <li>Any eight points from:         Expansion of the provision of broadband         Price of computers has fallen dramatically over the last few years         Improved search engines         Faster operating system/software allow multimedia         Large memory capacities (hard drives, DVD,)         Julow large files to be downloaded and stored         Wireless connections to share Internet service         Other devices (e.g. mobiles, digital boxes, portable music players)         Introduction of online services expanded its use e.g. remote photo storage         Social networking such as chat/personal web space         Greater capacity of</li></ul>	13 03	9713	GCE A/AS LEVEL – May/June 2008		
<ul> <li>Computer software provides the script Prompts operator to ask appropriate questions Leads onto suitable advice provided Can give access to technical help Can provide operator with (email) link to higher technical level/moving off s Stores customer file information/can display customer file information</li> <li>(c) Any three points – covering what device and who benefits from it – from: Touch screen with menus operated by head wands by Foot operated devices for pointing by Speech synthesis for dumb operators Microphones for physically handicapped to communicate Large tracker ball devices for physically handicapped to navigate Special keyboards/concept keyboards for physically handicapped to select Software magnifier for visually impaired</li> <li>7 Any eight points from: Expansion of the provision of broadband Price of computers has fallen dramatically over the last few years Improved search engines Faster operating systems/software allow multimedia Large memory capacities (hard drives, DVD,)  allow large files to be downloaded and stored Wireless connections to share Internet service Other devices (e.g. mobiles, digital boxes, portable music players) Introduction of online services expanded its use e.g. remote photo storage Social networking such as chaft/personal web space Greater capacity of Internet backbone Increase in: Operating system development – faster data processing More multimedia content posted on WWW Web authoring software improved making its easier to create own web Online banking Online abnking Online auctions</li> </ul>	۱ [٤	-	telephony integration (CTI) software to combine the data and voice input to the system y call control software s any computer in network to control any phone in the alling handling software g engine to ensure customers routed to correct "exp term of on screen information for operators dialling	Compute used Third par allow Inbound routi Script sys conti Predictive	6
<ul> <li>Touch screen with menus operated by head wands by Foot operated devices for pointing by Speech synthesis for dumb operators Microphones for physically handicapped to communicate Large tracker ball devices for physically handicapped to navigate Special keyboards/concept keyboards for physically handicapped to select Software magnifier for visually impaired</li> <li>7 Any eight points from: Expansion of the provision of broadband Price of computers has fallen dramatically over the last few years Improved search engines Faster operating systems/software allow multimedia Large memory capacities (hard drives, DVD,)  allow large files to be downloaded and stored Wireless connections to share Internet service Other devices (e.g. mobiles, digital boxes, portable music players) Introduction of online services expanded its use e.g. remote photo storage Social networking such as chat/personal web space Greater capacity of Internet backbone Increase in: Operating system development – faster data processing More multimedia content posted on WWW Web authoring software improved making its easier to create own web Online banking Online shopping Online shopping Online auctions</li> </ul>		noving off scrip	software provides the script perator to ask appropriate questions o suitable advice provided access to technical help de access to product stock file (to tell customer if ite de operator with (email) link to higher technical level	Compute Prompts Leads on Can give Can prov Can prov	
<ul> <li>Expansion of the provision of broadband</li> <li>Price of computers has fallen dramatically over the last few years</li> <li>Improved search engines</li> <li>Faster operating systems/software allow multimedia</li> <li>Large memory capacities (hard drives, DVD,)</li> <li> allow large files to be downloaded and stored</li> <li>Wireless connections to share Internet service</li> <li>Other devices (e.g. mobiles, digital boxes, portable music players)</li> <li>Introduction of online services expanded its use e.g. remote photo storage</li> <li>Social networking such as chat/personal web space</li> <li>Greater capacity of Internet backbone</li> <li>Increase in:</li> <li>Operating system development – faster data processing</li> <li>More multimedia content posted on WWW</li> <li>Web authoring software improved making its easier to create own web</li> <li>Online banking</li> <li>Online shopping</li> <li>Online auctions</li> </ul>		te	een with menus operated by head wands by ated devices for pointing by ynthesis for dumb operators nes for physically handicapped to communicate ker ball devices for physically handicapped to navig syboards/concept keyboards for physically handicap	Touch so Foot ope Speech s Micropho Large tra Special k	
Movie/TV programme downloads Video conferencing using Internet VoIP Businesses using WANs	-	ers) oto storage	n of the provision of broadband omputers has fallen dramatically over the last few ye search engines erating systems/software allow multimedia mory capacities (hard drives, DVD,) arge files to be downloaded and stored connections to share Internet service ices (e.g. mobiles, digital boxes, portable music play on of online services expanded its use e.g. remote p working such as chat/personal web space apacity of Internet backbone n: ating system development – faster data processing multimedia content posted on WWW authoring software improved making its easier to cre e banking e shopping e auctions conferencing using Internet	Expansic Price of c Improved Faster op Large me allow I Wireless Other de Introduct Social ne Greater o Increase Oper More Web Onlir Onlir Onlir Musi Movi Vide VolP	7