

Information & Communication Technology B

General Certificate of Secondary Education **GCSE 1995**

General Certificate of Secondary Education (Short Course) **GCSE 1095**

Mark Scheme for the Components

June 2008

1995/1095/MS/R/08J

OCR (Oxford, Cambridge and RSA Examinations) is a unitary awarding body, established by the University of Cambridge Local Examinations Syndicate and the RSA Examinations Board in January 1998. OCR provides a full range of GCSE, A level, GNVQ, Key Skills and other qualifications for schools and colleges in the United Kingdom, including those previously provided by MEG and OCEAC. It is also responsible for developing new syllabuses to meet national requirements and the needs of students and teachers.

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

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 should be read in conjunction with the published question papers and the Report on the Examination.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

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Any enquiries about publications should be addressed to:

OCR Publications
PO Box 5050
Annesley
NOTTINGHAM
NG15 0DL

Telephone: 0870 770 6622
Facsimile: 01223 552610
E-mail: publications@ocr.org.uk

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General Certificate of Secondary Education Information and Communication Technology B (1995/1095)

MARK SCHEMES FOR THE COMPONENTS

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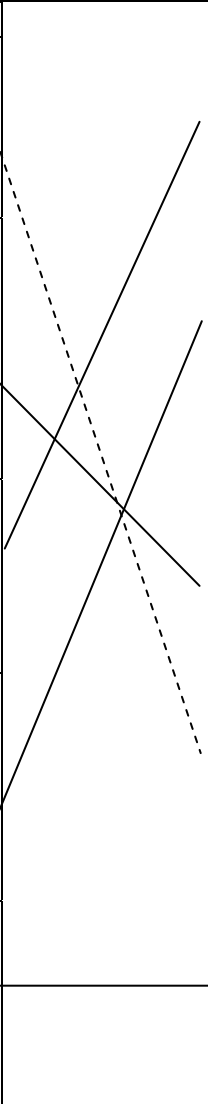
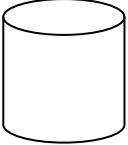
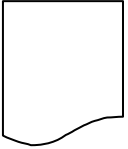

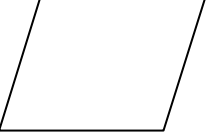

2380/01 Paper 3 (Foundation)

Question		Syllabus Ref	Expected Answer	Mark																												
1			<p>One mark for each correct tick:</p> <p>Deduct one mark for each additional tick if more than 6 ticks.</p> <table border="1"> <thead> <tr> <th>Device</th> <th>Input</th> <th>Output</th> <th>Storage</th> </tr> </thead> <tbody> <tr> <td>Mouse</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>Printer</td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>Hard disk drive</td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>Monitor</td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>Digital camera</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>Keyboard</td> <td>✓</td> <td></td> <td></td> </tr> </tbody> </table>	Device	Input	Output	Storage	Mouse	✓			Printer		✓		Hard disk drive			✓	Monitor		✓		Digital camera	✓			Keyboard	✓			[6]
Device	Input	Output	Storage																													
Mouse	✓																															
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Hard disk drive			✓																													
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Keyboard	✓																															
2	(a)		<p>One mark for each correct point:</p> <ul style="list-style-type: none"> • Quicker than post • Cheaper than post • Can integrate into database • Easy to track communications • Stores communications/record of communication. 	[2]																												
	(b)		<p>One mark for each correct point:</p> <ul style="list-style-type: none"> • Hard to get email addresses correct • The customer needs a computer/internet access • The company has to have access to a computer • Emails can be filtered. 	[2]																												

Question		Syllabus Ref	Expected Answer	Mark
3	(a)		<p>One mark for each correct point:</p> <ul style="list-style-type: none"> • (Home) computer (connected to the Internet)/family PC/laptop • TV • Mobile phone/smart phone • Internet café/library/hotel/friend • PDA • Blackberry • Blue tooth • WiFi • Router • Modem • Cable • Broadband • Dial-up • Satellite • Games console (no brand names). 	[3]
	(b)		<p>One mark for each correct point:</p> <p>Advantages:</p> <ul style="list-style-type: none"> • More up-to-date • Can check availability • Can have moving holiday images • Quicker than posting/going into a shop for a catalogue/24/7 access/convenience • Easy to share (send someone else the link) • Can be personalised • Searchable • Comparison of holidays online • Accessible from home or elsewhere • More information available • Make bigger(in terms of text/images) • Links to other useful information eg maps, weather • May include customer reviews/comments. <p>Disadvantage:</p> <ul style="list-style-type: none"> • No hard copy • Have to be by the computer/PC isn't portable • Have to have a computer and access to the Internet • May need help from agent – confusing • Images / info may be manipulated. 	[3]

Question		Syllabus Ref	Expected Answer	Mark
	(c)		<p>One mark for each correct point up to four maximum two for each:</p> <p>Screen:</p> <ul style="list-style-type: none"> • To see what you are booking • To see information about the holiday (any appropriate information) i.e. images, cost, flight details, images of holiday • To get help completing the form • To see what you have filled in on the form • To explore the location visited • To read the terms and conditions • A screen is only a temporary record. <p>Printer:</p> <ul style="list-style-type: none"> • You would need a hard copy (for your records)/copy to keep • You would need to carry a copy of your e-ticket to prove you have booked • As a receipt for payment of your money/invoice. 	[4]

Question		Syllabus Ref	Expected Answer	Mark
4	(a)		One mark for each correct point up to four: <ul style="list-style-type: none"> • Computer program • Replicates itself • Spreads itself • From downloads • From email attachments. 	[4]
	(b)		One mark for each correct point up to two: <ul style="list-style-type: none"> • Use virus checking software • Scan for viruses • Do not download files/check source • Do not open email attachments from unknown sources. 	[2]
5			One mark for including a title One mark for including more than 5 of the fields One extra mark for including all the fields specified One mark for including sufficient space for answers One mark for closed questions with selection from key-words One mark for sufficient space for health issues One mark for use of space on form One mark for adding at least one appropriate field. Example extra fields <ul style="list-style-type: none"> • Age/dob • Max cost • Type of travel. 	[8]

Question		Syllabus Ref	Expected Answer	Mark
6			One mark for each correct line up to 4	[4]
	Symbol		Appropriate Use	
			Check holiday availability	
			Input details of new hotel	
			Print a copy of the holiday booking form	
			Save Customer details to hard disk	
	View holiday catalogue			

Question		Syllabus Ref	Expected Answer	Mark																				
7			<p>One mark for each valid point, up to three. Can use digital camera or scanner.</p> <p>1 for capture, using camera/scanner 1 for method of transfer, using cable/memory card 1 for fact it is transferred.</p>	[3]																				
8			<p>One mark for each valid point, deduct one mark for each additional incorrect choice over 5. Minimum mark 0.</p>	[5]																				
<table border="1"> <thead> <tr> <th></th> <th>Multi-card reader</th> <th>Hard Disk Drive</th> <th>DVD rewriter</th> <th>DVD player</th> </tr> </thead> <tbody> <tr> <td>Can only read data</td> <td></td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>Reads cards that can be inserted into digital cameras</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Can change data</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> </tr> </tbody> </table>						Multi-card reader	Hard Disk Drive	DVD rewriter	DVD player	Can only read data				✓	Reads cards that can be inserted into digital cameras	✓				Can change data	✓	✓	✓	
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Can only read data				✓																				
Reads cards that can be inserted into digital cameras	✓																							
Can change data	✓	✓	✓																					

Question		Syllabus Ref	Expected Answer	Mark
9	(a)		3	[1]
	(b)		d2	[1]
	(c)		Answer one mark for both correct reference one mark for a multiplication = $b^6 \cdot c^6$ or $b^6 * c^6$	[2]
	(d)		c5	[1]

Question		Syllabus Ref	Expected Answer	Mark
10			<p>One mark for each valid way and one mark each reason that matches the way.</p> <p>On-line catalogue/e-communication</p> <p>Reason No paper needed/reduce litter</p> <p>Virtual company</p> <p>Reason No need for staff journeys to work/customers to travel to shop/fewer emissions</p> <p>Computer journey planning</p> <p>Reason Use of databases to reduce travel distances and costs</p> <p>Computer controlled mixed fuel transport</p> <p>Reason Save on emissions and fuel</p> <p>Group travel</p> <p>Reason Shared transport thus saves on emissions and fuel.</p>	[4]
			Total	[55]

2380/02 Paper 3 (Higher)

Question		Syllabus Ref	Expected Answer	Mark												
1			<p>One mark for each correct answer. No marks for brand names. Mark first answer given in each box.</p> <table border="1"> <thead> <tr> <th>Task</th> <th>Type of software</th> </tr> </thead> <tbody> <tr> <td>To access Exotic Holidays website</td> <td>Web browser</td> </tr> <tr> <td>To write a report</td> <td>Word processor</td> </tr> <tr> <td>To calculate the exchange rates</td> <td>Spreadsheet</td> </tr> <tr> <td>To modify a web page graphic</td> <td>Graphics package, drawing package HTML (editor)</td> </tr> <tr> <td>To analyse numeric holiday data</td> <td>Spreadsheet</td> </tr> </tbody> </table>	Task	Type of software	To access Exotic Holidays website	Web browser	To write a report	Word processor	To calculate the exchange rates	Spreadsheet	To modify a web page graphic	Graphics package, drawing package HTML (editor)	To analyse numeric holiday data	Spreadsheet	[5]
Task	Type of software															
To access Exotic Holidays website	Web browser															
To write a report	Word processor															
To calculate the exchange rates	Spreadsheet															
To modify a web page graphic	Graphics package, drawing package HTML (editor)															
To analyse numeric holiday data	Spreadsheet															
2	(a)		<p>One mark for each point up to two for each method.</p> <p>Example points:</p>													
		(i)	<p>Email:</p> <ul style="list-style-type: none"> • Is asynchronous • Discussion participants do not have to be on-line at the same time e.g. you can email the company to ask for more information and will receive a response in the next few days • "Email" is short for electronic mail • Email is like a letter but in electronic format sent from one computer to another • Can have multiple recipients, CCs and BCCs, and attachments • The email recipient does not have to be at their computer for an email to successfully send or be received • Recipients retrieve their email in their own time • Because of this lag between sending and receiving, email is called non-real time or asynchronous time messaging. 													
		(ii)	<p>Instant Messaging (IM):</p> <ul style="list-style-type: none"> • Real-time messaging format • IM is really a specialised form of 'chat' between people who know each other • Both IM users must be on-line at the same time for IM to fully work • IM is not as popular as email, but it is popular amongst teenagers and people in office places that allow instant messaging. 													

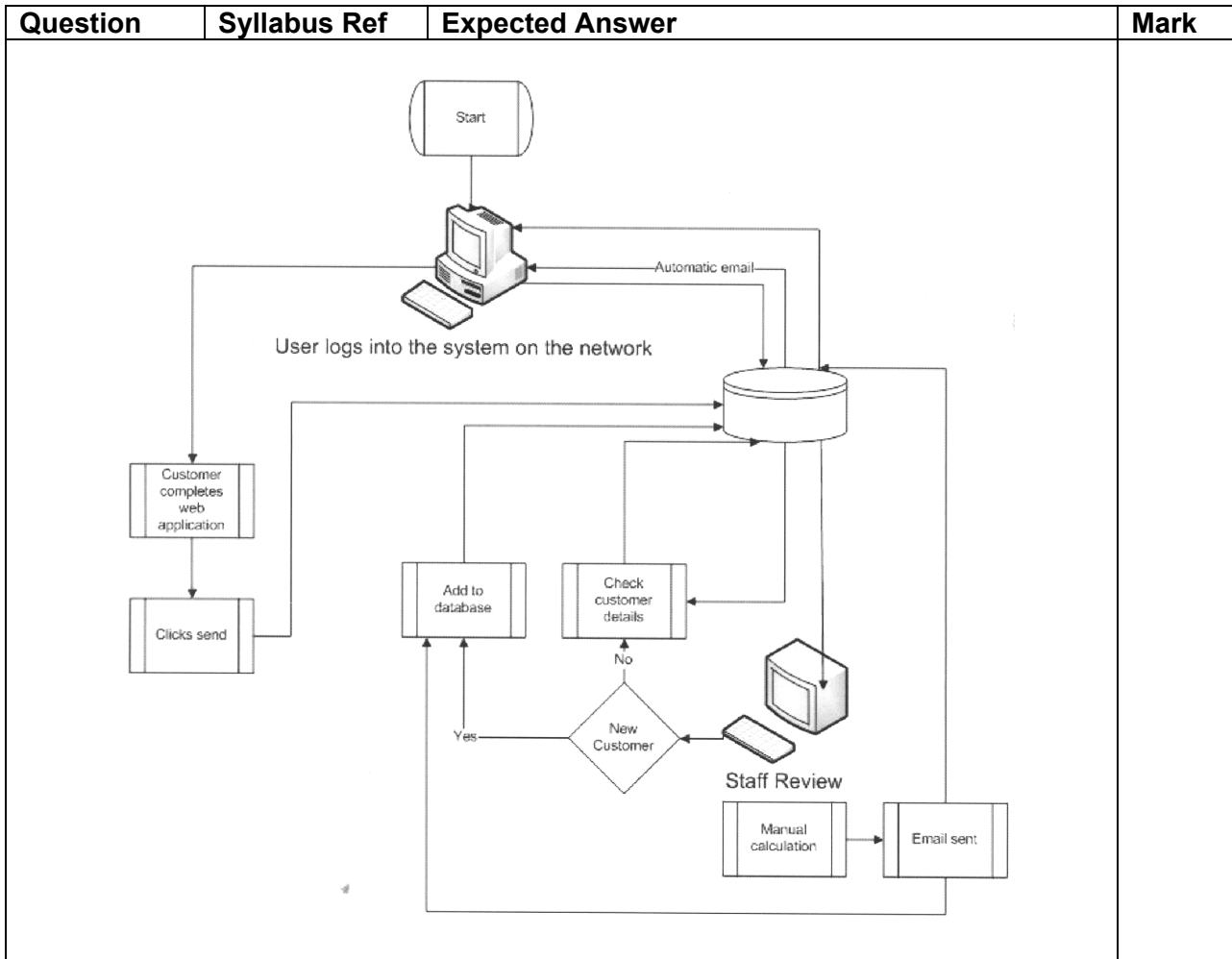
Question			Syllabus Ref	Expected Answer	Mark
		(iii)		<p>Chats:</p> <ul style="list-style-type: none"> • A chat is a real time on-line conversation between many computer users • All participants must be in front of their computer at the same time • The chat takes place in a "chat room", a virtual on-line room also called a channel • Users type their messages, and their messages appear on the monitor as text entries that scroll many screens deep • Anywhere from 2 to 200 people can be in a chat room • Exchange of individual views. • They can freely send, receive and reply to messages from many chat users simultaneously. It is like instant messaging, but with more than two people, fast typing, fast scrolling screens, • Most of the people are strangers to each other. 	
		(iv)		<p>On-line discussion forms:</p> <ul style="list-style-type: none"> • Discussion forums are really a slow-motion form of chat • Forums are designed to build on-line communities of people with similar interests • Also known as a "discussion group", "board" or "newsgroup", a forum is an asynchronous service where you can trade non-instant messages with other members • The other members reply on their own schedule, and do not need to be present while you are sending • Every forum is also dedicated to some specific community or subject, such as travel, gardening, motorcycles, vintage cars, cooking, social issues, music artists, and more • Forums are very popular, and are renowned for being quite addictive because they put you in touch with many similar-minded people • Discussion groups are synchronous – people are on-line at the same time, usually to participate in a chat people often use nicknames • When you type in your message it will appear on the screen of other on-line users. 	[8]

Question		Syllabus Ref	Expected Answer	Mark
2	(b)		<p>One mark for each correct point up to two.</p> <p>Example answers:</p> <ul style="list-style-type: none"> • There is a potential threat to personal safety and privacy • Don't always know who you are communicating with. • Everyone has to be on-line at the same time (time zones may be an issue). • People can log on and send abusive/rude messages • Chats forums can include irrelevant information • Chat gives less time to think about reply. 	[2]
	(c)		<p>One mark for each correct point up to two.</p> <p>A blog is a:</p> <ul style="list-style-type: none"> • Frequent • Chronological publication of: • Personal thoughts and, • Web links • A little like a web diary • May include videos, images, sound. 	[2]
	(d)		<p>One mark for each correct point up to three.</p> <p>Example points:</p> <ul style="list-style-type: none"> • A blog could be used by Exotic Holiday customers to record their holiday thoughts • A blog could provide customers with a permanent record of their holiday • A blog would help track the best features of holidays to share with other travellers • A blog could help record websites with images of places visited/to be visited • Can include comments from readers. 	[3]

Question		Syllabus Ref	Expected Answer	Mark
3	(a)		<p>One mark for including a title</p> <p>One mark for including more than 5 of the fields</p> <p>One extra mark for including all the fields specified</p> <p>One mark for including sufficient space for answers</p> <p>One mark for closed questions with selection from key-words</p> <p>One mark for sufficient space for health issues</p> <p>One mark for use of space on form</p> <p>One mark for adding at least one appropriate field.</p> <p>Example extra fields</p> <ul style="list-style-type: none"> • Age/dob • Max cost • Type of travel. 	[8]
	(b)		<p>One mark for each correct point up to two for each method.</p> <p>Full backup:</p> <ul style="list-style-type: none"> • Copies all files • Complete snapshot of data at a particular point in time • Takes longer than incremental • Used to restore entire system. <p>Incremental backup:</p> <ul style="list-style-type: none"> • Incremental only data files that are changes since last backup • Which could be either full or incremental • Quicker than full backup. <p>An additional mark can be given providing candidate does not have more than three marks for an explanation of a backup system eg Three backup copies are kept, son, father and grandfather; the most recent is called the son. When the next copy is made the son becomes the father copy and the new copy becomes the son. When the next copy is made the father becomes the grandfather, son the father, new copy the son. When the next copy is made the grandfather is erased and the father becomes the new grandfather etc. Backup copies are stored in a different location.</p>	[4]

Question		Syllabus Ref	Expected Answer	Mark
4	(a)		<p>One mark for each correct point made eg:</p> <ul style="list-style-type: none"> • Need to know who it is so need last name • Need address postcode to ensure delivery or find areas of customers e.g. demography • Need an email address to contact someone if error on form. 	[3]
	(b)		<p>Two marks for each way, one for technique one for description.</p> <ul style="list-style-type: none"> • Use radio buttons, (1 mark) as this will restrict the choices (1 mark) • Dropdowns, (1 mark) to reduce typing errors (1 mark), • Use clear language (1 mark) so you know exactly what is wanted (1 mark), • Automatically validate entry (1 mark) e.g. check number of digits (1 mark) • Double entry / verification to reduce typing errors. 	[4]
	(c)		<p>One mark each point up to two, eg:</p> <ul style="list-style-type: none"> • Wrong holiday ordered • No return contact • Not be able to travel as tickets in wrong name • Payments refused. 	[2]
	(d)		<p>One mark for each correct point up to four maximum two for each:</p> <p>Screen:</p> <ul style="list-style-type: none"> • To see what you are booking • To see information about the holiday (any appropriate information) i.e. images, cost, flight details, images of holiday • To get help completing the form • To see what you have filled in on the form • To explore the location visited • To read the terms and conditions • A screen is only a temporary record. <p>Printer:</p> <ul style="list-style-type: none"> • You would need a hard copy (for your records)/copy to keep • You would need to carry a copy of your e-ticket to prove you have booked <p>As a receipt for payment of your money/invoice.</p>	[4]

Question	Syllabus Ref	Expected Answer	Mark
5		One mark for each correct point: <ul style="list-style-type: none"> • Religious or other beliefs • Ethnic origin • Health conditions • Political opinions • Trade Union membership • Criminal proceedings or convictions. 	[3]
6		Each step MUST relate to the system (see chart). No marks are awarded for simply copying the steps from the question. The points shown below in <i>italics</i> MUST be clear to gain a mark. <ul style="list-style-type: none"> • 1 mark for decision box • 2 marks max for appropriate symbols • 1 mark for arrows on flow lines • 2 marks max for two processes in correct order <ul style="list-style-type: none"> ○ customer logs on to the web ○ customer completes form (<i>on own computer and/or this is sent to the server/database</i>) ○ emails sent from system / either type shown (auto or manual) ○ staff review shown ○ existing customer check ○ manual calculation shown ○ log of email sent on system • 1 mark for “saving to system” • 1 mark for clarity/readability of layout. <p>Only 4 marks can be awarded if the candidate has not shown a central storage system.</p>	[8]



Question			Syllabus Ref	Expected Answer	Mark
7				<p>One mark for each correct point:</p> <p>Advantages:</p> <ul style="list-style-type: none"> • More up-to-date • Can check availability • Can have moving holiday images • Quicker than posting/going into a shop for a catalogue/24/7 access/convenience • Easy to share (send someone else the link) • Can be personalised • Searchable • Comparison of holidays online • Accessible from home or elsewhere • More information available • Make bigger(in terms of text/images) • Links to other useful information eg maps, weather • May include customer reviews/comments. <p>Disadvantage:</p> <ul style="list-style-type: none"> • No hard copy • Have to be by the computer/PC isn't portable • Have to have a computer and access to the Internet • May need help from agent – confusing • Images / info may be manipulated 	[3]

Question		Syllabus Ref	Expected Answer	Mark																														
8	(a)		<ul style="list-style-type: none"> One mark for inserting table of currencies One mark for each correct column heading (max four) may not be the ones shown One mark for any correct formula (total one) correct cell (total one) <p>Where candidates have created a solution, using look-ups, full marks can be awarded, providing a workable solution has been produced.</p>	[7]																														
<table border="1"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Amount in £</td> <td>Currency</td> <td>Exchange rate</td> <td>Amount in currency</td> </tr> <tr> <td>2</td> <td></td> <td>Turkish Lira</td> <td>2.63</td> <td>=a2*c2</td> </tr> <tr> <td>3</td> <td></td> <td>Chinese Yuan</td> <td>13.56</td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>Icelandic Krona</td> <td>121.37</td> <td></td> </tr> <tr> <td>5</td> <td></td> <td>Jamaican Dollar</td> <td>113.93</td> <td></td> </tr> </tbody> </table>						A	B	C	D	1	Amount in £	Currency	Exchange rate	Amount in currency	2		Turkish Lira	2.63	=a2*c2	3		Chinese Yuan	13.56		4		Icelandic Krona	121.37		5		Jamaican Dollar	113.93	
	A	B	C	D																														
1	Amount in £	Currency	Exchange rate	Amount in currency																														
2		Turkish Lira	2.63	=a2*c2																														
3		Chinese Yuan	13.56																															
4		Icelandic Krona	121.37																															
5		Jamaican Dollar	113.93																															
	(b)		<p>One mark for each valid point up to two</p> <p>Example answer:</p> <ul style="list-style-type: none"> Computer model Based upon trends Using variables Estimate the value of currency 	[2]																														

Question	(c)	Syllabus Ref	Expected Answer	Mark
			<p>One mark for each valid point made</p> <p>Example answer:</p> <ul style="list-style-type: none"> • Computers can never run a perfect model as; • it will always be just a subset of reality • Computer models are nothing more than computer programs; • accompanied by numerical data; • to simulate a system or a part of it • A computer model is only as good as the variables put into it • Computer models can produce wrong results, for many different reasons • "Bugs", ie small errors in the computer codes in the system can produce wrong results • Sometimes errors stem from transcribing the equation into its software form, or "algorithm" • Sometimes the program is perfect but still the results are wrong as the model does not reflect all that happens in reality (in most cases it is just oversimplified) • Another major drawback is that a good model of a complex system may well be too demanding on the computer hardware, requesting far too much time to run and expensive to commission. • Would not be possible in normal spreadsheet software. • And far too much memory to carry out what is required 	[6]

Question	Syllabus Ref	Expected Answer	Mark
9		<p>One mark for each valid point, one mark for each reason.</p> <p>On-line catalogue Reason No paper needed.</p> <p>Virtual company Reason No need for staff journeys to work</p> <p>Computer journey planning Reason Use of databases to reduce travel distances and costs.</p> <p>Computer controlled mixed fuel transport Reason Save on emissions and fuel</p> <p>Group travel Reason Shared transport thus saves on emissions and fuel</p> <p>Office environmental control Reason Saving energy</p> <p>Paperless office Reason Compact storage of records/ no consumables</p> <p>E-mail Reason Reduces paper and storage, etc OR less travel for post/delivery driver.</p> <p>Reduce waste/litter Reason Fewer catalogues/brochures/flyers being disposed of.</p> <p>Carbon-offset calculation Reason CO₂ emission calculated by web site or other algorithm and surcharge added voluntarily</p> <p>Recycle old computers Reasons Re-use in 3rd world countries through schemes</p> <p>Replace older systems Reason Newer hardware is more energy-efficient</p>	[6]

Question			Syllabus Ref	Expected Answer	Mark
				Web conferencing Reason Reduce need for flying to conferences/meetings	
				Total	[80]

Grade Thresholds

General Certificate of Secondary Education
ICT Syllabus B (Specification Code 1095/1995)
June 2008 Examination Series

Unit Threshold Marks

Unit		Maximum Mark	A*	A	B	C	D	E	F	G	U
2377F	Raw	40	N/A	N/A	N/A	37	33	29	26	23	0
	UMS	55	N/A	N/A	N/A	48	40	32	24	16	0
2377H	Raw	40	39	36	32	29	27	26	N/A	N/A	N/A
	UMS	80	72	64	56	48	40	36	N/A	N/A	N/A
2378	Raw	64	63	55	47	39	33	28	23	18	0
	UMS	120	108	96	84	72	60	48	36	24	0
2379	Raw	64	63	55	47	39	33	28	23	18	0
	UMS	120	108	96	84	72	60	48	36	24	0
2380F	Raw	55	N/A	N/A	N/A	35	29	23	17	11	0
	UMS	55	N/A	N/A	N/A	48	40	32	24	16	0
2380H	Raw	80	57	50	43	37	30	26	N/A	N/A	N/A
	UMS	80	72	64	56	48	40	36	N/A	N/A	N/A

Specification Aggregation Results

Overall threshold marks in UMS (ie after conversion of raw marks to uniform marks)

	Maximum Mark	A*	A	B	C	D	E	F	G	U
1095	200	180	160	140	120	100	80	60	40	0

	Maximum Mark	A*	A	B	C	D	E	F	G	U
1995	400	360	320	280	240	200	160	120	80	0

The cumulative percentage of candidates awarded each grade was as follows:

	A*	A	B	C	D	E	F	G	U	Total No. of Cands
1095	2.64	15.28	36.00	56.00	68.95	78.99	87.63	94.75	100.00	14,041
1995	3.34	15.86	39.21	64.88	79.49	88.13	94.34	98.13	100.00	8,469

22,510 candidates were entered for aggregation this series

For a description of how UMS marks are calculated see:

http://www.ocr.org.uk/learners/ums_results.html

Statistics are correct at the time of publication.

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