

Information & Communication Technology A

General Certificate of Secondary Education **1994/1094**

Mark Scheme for the Components

June 2008

1994/1094/MS/R/08

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OCR Publications
PO Box 5050
Annesley
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NG15 0DL

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Facsimile: 01223 552610
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Mark Scheme 2357/01 Paper 1 (Foundation)

Question	Answer	Mark																		
1	<table border="1"> <thead> <tr> <th>Task</th> <th>Device</th> </tr> </thead> <tbody> <tr> <td>(Capturing original images)</td> <td>(Digital Camera)</td> </tr> <tr> <td>Importing an image from a printed magazine</td> <td>Scanner</td> </tr> <tr> <td>Moving an object in a game</td> <td>Joystick</td> </tr> <tr> <td>Capturing sounds</td> <td>Microphone</td> </tr> <tr> <td>Selecting an option from a menu</td> <td>Mouse</td> </tr> </tbody> </table>	Task	Device	(Capturing original images)	(Digital Camera)	Importing an image from a printed magazine	Scanner	Moving an object in a game	Joystick	Capturing sounds	Microphone	Selecting an option from a menu	Mouse	[4]						
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Question	Answer	Mark
5	<p>One from:</p> <ul style="list-style-type: none"> • look away from monitor at intervals / take regular breaks • use a large screen monitor • use a high resolution monitor • wear spectacles as appropriate • have regular eye tests • use an anti-glare screen • use correct/suitable lighting • have monitor correctly positioned <p>One from:</p> <ul style="list-style-type: none"> • use an adjustable/suitable chair • use an adjustable monitor • take regular breaks from the computer • ensure posture is correct / use supportive chair / sit correctly • use a foot rest • have monitor correctly positioned <p>One from:</p> <ul style="list-style-type: none"> • use a wrist rest • use an ergonomic mouse • use an ergonomic keyboard • take regular breaks from the computer • stretch hands / arms / fingers regularly 	<p>[1]</p> <p>[1]</p> <p>[1]</p>
6	<p>Layer:</p> <ul style="list-style-type: none"> • pictures / images / objects placed on top of one another • separate <p>Flip:</p> <ul style="list-style-type: none"> • object is turned over (L-R / vertical / top-bottom / horizontal) <p>Resize:</p> <ul style="list-style-type: none"> • size changed/ zoom / bigger / smaller • number of pixels changed <p>Fill:</p> <ul style="list-style-type: none"> • object is coloured-in/filled with a colour 	<p>[1]</p> <p>[4]</p>

Question	Answer	Mark
7 (a)	<p>Two from:</p> <ul style="list-style-type: none"> • quicker to process • quicker to enter / type • takes up less space (in the file/printout/memory/display) • simpler to validate • less chance/fewer typing/entry errors 	
(b) (i)	<p>Visual checking – including by data owner / 3rd party</p> <p>Do not accept: double entry</p>	[2]
(ii)	<p>to ensure that the data has been copied/entered/transferred/transcribed correctly</p>	[1]
(c)	Colette Jones	[1]
(d)	Three / 3	[1]
(e)	<p>Available = Tuesday AND Gender = F AND Year Group = 9</p> <p><i>1 mark for each of the following, the = sign MUST be included:</i></p> <p>Available = Tuesday Gender = F Year Group = 9</p> <p>BOTH 'AND's must be in correct place for 4th mark</p> <p>Any Condition AND any other Condition = 3 marks Max 3 for answer not completely correct</p>	[1]
(f)	<p>Points and expansions from:</p> <ul style="list-style-type: none"> • DTP: <ul style="list-style-type: none"> ○ write about the play ○ import photos of cast/rehearsals ○ produce flyers/posters • Presentation software: <ul style="list-style-type: none"> ○ create screensaver ○ create slideshow (for information point) ○ create slideshow (for foyer / large display) • use mail merge to send out letters • use WP to write letters to press • email: <ul style="list-style-type: none"> ○ send advertisements/leaflets to pupils/staff • digital camera <ul style="list-style-type: none"> ○ video ○ instant photos for posters etc • website / webpage / intranet <ul style="list-style-type: none"> ○ images/text/moving pictures/animation ○ show stages in production/development ○ show cast in rehearsals ○ chat rooms/social networking/instant messaging • podcast: <ul style="list-style-type: none"> ○ record sound file 	[4]
		[6]

Question	Answer	Mark
8	<p>Two from:</p> <ul style="list-style-type: none"> • composite pictures <ul style="list-style-type: none"> ○ misrepresent real events ○ misleading people • removal of image element (with appropriate example) • copyright issues – no permission to alter image • causes offence/distress/bullying to others • tampering with picture <ul style="list-style-type: none"> ○ may be needed as ID ○ will not be accepted if altered 	
9 (a)	<p>One from the range D2 to D5</p>	[2]
(b)	B2	[1]
(c)	D2	[1]
(d)	[=]SUM(D2:D5)	[1]
	<p><i>One mark for the function, one mark for the range</i> <i>One mark for a formula that works but is not the most suitable</i> <i>e.g.</i> <i>D2+D3+D4+D5</i></p> <p>If = is present then it must be prior to the function / formula.</p>	[2]

Question	Answer	Mark										
10	<table border="1"> <thead> <tr> <th data-bbox="322 297 804 333">Task</th> <th data-bbox="810 297 1189 333">Process</th> </tr> </thead> <tbody> <tr> <td data-bbox="322 342 804 472">Correcting typing errors in the text of letter</td> <td data-bbox="810 342 1189 472">SPELL CHECKING/EDITING</td> </tr> <tr> <td data-bbox="322 481 804 642">Reading through a document to look for errors and omissions</td> <td data-bbox="810 481 1189 642">PROOF READING</td> </tr> <tr> <td data-bbox="322 651 804 784">Stopping unreasonable data being entered into a database</td> <td data-bbox="810 651 1189 784">VALIDATION</td> </tr> <tr> <td data-bbox="322 792 804 920">Copying a formula from one cell of spreadsheet into many other cells</td> <td data-bbox="810 792 1189 920">REPLICATION/(AUTO) FILL/COPY & PASTE</td> </tr> </tbody> </table>	Task	Process	Correcting typing errors in the text of letter	SPELL CHECKING/EDITING	Reading through a document to look for errors and omissions	PROOF READING	Stopping unreasonable data being entered into a database	VALIDATION	Copying a formula from one cell of spreadsheet into many other cells	REPLICATION/(AUTO) FILL/COPY & PASTE	[4]
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Question	Answer	Mark
11 (a)	<p>Two from:</p> <ul style="list-style-type: none"> • safer than using real planes • cheaper than using real planes (or other example) • events can be pre-programmed • repeatable (events / scenarios / practice) • interruptible 	[2]
(b)	<p>One from:</p> <ul style="list-style-type: none"> • not all variables/aspects included • experience is not real • false sense of security 	[1]
12	<p>One from:</p> <ul style="list-style-type: none"> • to convert analogue (data) to digital (data) • to convert digital (data) to analogue (data) • converts digital (data) into a form that can be transmitted over telephone lines 	[1]
13	(Text/image which when clicked on) directs (the browser) to another website / page / point on a page	[1]
14 (a)	<p>Two from:</p> <ul style="list-style-type: none"> • email used to send work/files/notes • database/spreadsheet/word processing/DTP to produce reports/work/homework • web browsing for research for projects/homework • on-line testing/quizzes/exam practice • access to work from anywhere • software compatibility / same software as school • no need for file transfers / other storage 	[2]
(b)	<p>Two from:</p> <ul style="list-style-type: none"> • laptops lost/damaged/stolen/settings changed • view inappropriate sites/materials/on-line chat rooms • plagiarism/copying of work/authorship unknown • loss of work (if laptop stolen/damaged) • insurance costs • limited battery life/recharging issues/technical issues • transfer of viruses • file management issues 	[2]
TOTAL MARKS [60]		

Mark Scheme 2357/02 Paper 1 (Higher)

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1	<table border="1"> <thead> <tr> <th data-bbox="320 387 759 421">Task</th> <th data-bbox="759 387 1193 421">Process</th> </tr> </thead> <tbody> <tr> <td data-bbox="320 421 759 555">Correcting typing errors in the text of letter</td> <td data-bbox="759 421 1193 555">SPELL CHECKING/EDITING</td> </tr> <tr> <td data-bbox="320 555 759 725">Reading through a document to look for errors and omissions</td> <td data-bbox="759 555 1193 725">PROOF READING</td> </tr> <tr> <td data-bbox="320 725 759 860">Stopping unreasonable data being entered into a database</td> <td data-bbox="759 725 1193 860">VALIDATION</td> </tr> <tr> <td data-bbox="320 860 759 1032">Copying a formula from one cell of spreadsheet into many other cells</td> <td data-bbox="759 860 1193 1032">REPLICATION/(AUTO)FILL /COPY & PASTE</td> </tr> </tbody> </table>	Task	Process	Correcting typing errors in the text of letter	SPELL CHECKING/EDITING	Reading through a document to look for errors and omissions	PROOF READING	Stopping unreasonable data being entered into a database	VALIDATION	Copying a formula from one cell of spreadsheet into many other cells	REPLICATION/(AUTO)FILL /COPY & PASTE	[4]
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2 (a)	<p>Two from:</p> <ul style="list-style-type: none"> • quicker to process • quicker to enter / type • takes up less space (in the file/printout/memory/display) • simpler to validate <p>less chance/fewer typing/entry errors</p>	
(b) (i)	Visual checking – including by data owner / 3 rd party	[2]
	Do not accept: double entry	[1]
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	Available = Tuesday	
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	BOTH 'AND's must be in correct place for 4 th mark	
	Any Condition AND any other Condition = 3 marks	
	Max 3 for answer not completely correct	[4]
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	<ul style="list-style-type: none"> • DTP: <ul style="list-style-type: none"> ○ write about the play ○ import photos of cast/rehearsals ○ produce flyers/posters • Presentation software: <ul style="list-style-type: none"> ○ create screensaver ○ create slideshow (for information point) ○ create slideshow (for foyer / large display) • use mail merge to send out letters • use WP to write letters to press • email: <ul style="list-style-type: none"> ○ send advertisements/leaflets to pupils/staff 	
	digital camera	

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	<ul style="list-style-type: none"> ○ video ○ instant photos for posters etc • website / webpage / intranet <ul style="list-style-type: none"> ○ images/text/moving pictures/animation ○ show stages in production/development ○ show cast in rehearsals ○ chat rooms/social networking/instant messaging • podcast: <ul style="list-style-type: none"> record sound file 	[6]
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4 (a)	<p>Two from:</p> <ul style="list-style-type: none"> • safer than using real planes • cheaper than using real planes (or other example) • events can be pre-programmed • repeatable (events / scenarios / practice) interruptible 	[2]
(b)	<p>One from:</p> <ul style="list-style-type: none"> • not all variables/aspects included • experience is not real false sense of security 	[2]
5	<p>One from:</p> <ul style="list-style-type: none"> • to convert analogue (data) to digital (data) • to convert digital (data) to analogue (data) converts digital (data) into a form that can be transmitted over telephone lines 	[1]
6	(Text/image which when clicked on) directs (the browser) to another website / page / point on a page	[1]

Question	Answer	Mark
7 (a)	<p>Two from:</p> <ul style="list-style-type: none"> • email used to send work/files/notes • database/spreadsheet/word processing/DTP to produce reports/work/homework web browsing for research for projects/homework • on-line testing/quizzes/exam practice • access to work from anywhere • software compatibility / same software as school no need for file transfers / other storage 	[2]
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8	<p>Six From:</p> <p><i>Advantages:</i></p> <ul style="list-style-type: none"> • no need to travel/saves time in travelling • can work at any time/flexible working hours • can live anywhere where there is Internet access • can work for more than one employer/can do more work • more opportunities for housebound people to work <p><i>Disadvantages:</i></p> <ul style="list-style-type: none"> • need internet access • work more hours than is required • no social interaction • health related issues • need to arrange own backups • need to arrange own security/virus protection/hacking • easily distracted/harder to be supervised <p><i>Max 4 for ALL advantages/disadvantages.</i></p> <p><i>Up to 1 mark for a reasoned conclusion.</i></p>	[6]

Question	Answer	Mark
9	<p>Five from:</p> <ul style="list-style-type: none"> • programmable alarm system • use of appropriate sensor • data logged • alarms linked to security/police services • webcams used for surveillance/remote surveillance over internet • programmable lighting sequences • interlocks on e.g. microwave oven doors, washing machines <p>personal alarm systems/monitoring systems to alert carers/wardens</p>	[5]
10	<p>Advantages:</p> <ul style="list-style-type: none"> • simulate unobservable events • can support “what-if” scenarios • automatic recalculation • reduce the need for actual experiments • cheaper than real experiments • safer than real experiments • can be used for predictions • Data can be exported/graphed <p>Disadvantages:</p> <ul style="list-style-type: none"> • assumptions have to be made about the validity of the model/not completely accurate • often vital elements can be left out of a model • the effect of the omissions is only realised if and when it is tested against reality • large models are often chaotic – small changes in input make large changes in output • model can become so complex as to be impossible to understand fully <p><i>Max 4 for ALL advantages/disadvantages.</i></p> <p><i>Up to 1 mark for a reasoned conclusion.</i></p>	
11	<p>Advantages:</p> <ul style="list-style-type: none"> • quicker than queuing in shops/can shop anytime • no need to travel • can remain anonymous • buying things you cannot find in shops/greater range of goods • can buy/sell all over the world • reduced costs for premises • can be used by housebound persons • goods maybe cheaper • easier to compare prices 	[6]

Question	Answer	Mark
12	<p><i>Disadvantages:</i></p> <ul style="list-style-type: none"> • delivery/shipping costs/may increase cost of goods • security of transactions • security of personal details • buyer/seller may not be reliable • cannot trial goods/try out goods • have to wait for delivery • return of goods to other countries may be more difficult <p><i>Max 4 for ALL advantages/disadvantages. Up to 1 mark for a reasoned conclusion.</i></p> <p>Six from:</p> <ul style="list-style-type: none"> • (designs) of graphics/images • (design) of storage data/file structure/folder structure • (design) of input method e.g. radio buttons, text boxes, drop down lists/forums • (design) of content e.g. page titles, font styles, colour • (designs) of layout of pages/home page • (designs) of alternatives e.g. images, languages • (designs) of navigation/menus/links/hyperlinks • system requirements • specify filenames • time scale for implementation • testing procedures • site map • (design) inference engine/searches • file structure • validation routines <ul style="list-style-type: none"> security issues/passwords/user identity 	<p>[6]</p> <p>[6]</p> <p>TOTAL MARKS [60]</p>

Mark Scheme 2359/01 Paper 3 (Foundation)

Question	Mark Scheme	Marks																		
1	<ul style="list-style-type: none"> • backing up • encrypting 	[2]																		
2	<p>A is a menu B is a window C is an icon D is a pointer</p>	[4]																		
3	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;">Data can be changed (✓)</th> <th style="text-align: center;">Data cannot be changed (✓)</th> </tr> </thead> <tbody> <tr> <td>Hard disk</td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td>ROM</td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>RAM</td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td>CD-ROM</td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>CD-RW</td> <td style="text-align: center;">✓</td> <td></td> </tr> </tbody> </table>		Data can be changed (✓)	Data cannot be changed (✓)	Hard disk	✓		ROM		✓	RAM	✓		CD-ROM		✓	CD-RW	✓		[5]
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ROM		✓																		
RAM	✓																			
CD-ROM		✓																		
CD-RW	✓																			
4	<ul style="list-style-type: none"> • barcode reader • OCR 	[2]																		
5	<p>Two from:</p> <ul style="list-style-type: none"> • video/movies (clips) • animations/animated graphics • sound/music • graphs/charts • images/pictures/graphics/clipart. 	[2]																		

Question	Mark Scheme	Marks																								
6	<p>Four from:</p> <ul style="list-style-type: none"> • Font type is mixed/inconsistent/too many different fonts • Font size is inconsistent/sizes should be appropriate for text in question • Font style is inconsistent/bold, italic, underlining used indiscriminately • Capitalisation is inconsistent • Capitalisation is inappropriate • Poor spelling/no spell checks performed. • Alignment of bullet points/address 	[4]																								
7	<p>A is a workstation/node/terminal/computer B is a cable/wire C is a server/hub/switch/node</p>	[3]																								
8	<table border="1" data-bbox="352 831 1225 1402"> <thead> <tr> <th data-bbox="352 831 572 936">Task</th> <th data-bbox="572 831 790 936">Operating System (✓)</th> <th data-bbox="790 831 1007 936">Applications software (✓)</th> <th data-bbox="1007 831 1225 936">Utility (✓)</th> </tr> </thead> <tbody> <tr> <td data-bbox="352 936 572 1025">managing memory</td> <td data-bbox="572 936 790 1025">✓</td> <td data-bbox="790 936 1007 1025"></td> <td data-bbox="1007 936 1225 1025"></td> </tr> <tr> <td data-bbox="352 1025 572 1115">formatting disks</td> <td data-bbox="572 1025 790 1115"></td> <td data-bbox="790 1025 1007 1115"></td> <td data-bbox="1007 1025 1225 1115">✓</td> </tr> <tr> <td data-bbox="352 1115 572 1205">creating a 3D image of a car</td> <td data-bbox="572 1115 790 1205"></td> <td data-bbox="790 1115 1007 1205">✓</td> <td data-bbox="1007 1115 1225 1205"></td> </tr> <tr> <td data-bbox="352 1205 572 1294">creating a report from a database</td> <td data-bbox="572 1205 790 1294"></td> <td data-bbox="790 1205 1007 1294">✓</td> <td data-bbox="1007 1205 1225 1294"></td> </tr> <tr> <td data-bbox="352 1294 572 1402">scanning for viruses</td> <td data-bbox="572 1294 790 1402"></td> <td data-bbox="790 1294 1007 1402"></td> <td data-bbox="1007 1294 1225 1402">✓</td> </tr> </tbody> </table> <p data-bbox="352 1435 1206 1536">Ticks as shown. Allow only one tick per row – if two ticks shown then zero for that row.</p>	Task	Operating System (✓)	Applications software (✓)	Utility (✓)	managing memory	✓			formatting disks			✓	creating a 3D image of a car		✓		creating a report from a database		✓		scanning for viruses			✓	[5]
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Question	Mark Scheme	Marks								
9	<p>One from:</p> <ul style="list-style-type: none"> • microwave transmission/wireless connections/radio/wireless connections • (fibre-optic) cabling • satellite system • (copper) cabling • tele-communication links/phone lines/broadband. 	[1]								
10	<p>Max two marks for each device:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="341 577 691 609">Device</th> <th data-bbox="691 577 1249 609">Reason</th> </tr> </thead> <tbody> <tr> <td data-bbox="341 642 691 741">Bar code reader/scanner</td> <td data-bbox="691 642 1249 741">reads data quickly (from bar codes) reads data accurately speeds up customer throughput</td> </tr> <tr> <td data-bbox="341 880 691 978">Touch screen/mouse/concept keyboard</td> <td data-bbox="691 779 1249 878">select/choose goods/details from menus/options no need to type</td> </tr> <tr> <td data-bbox="341 1117 691 1149">Weighing scales</td> <td data-bbox="691 913 1249 1012">input weight of produce for labels input weight of produce to calculate price</td> </tr> </tbody> </table>	Device	Reason	Bar code reader/scanner	reads data quickly (from bar codes) reads data accurately speeds up customer throughput	Touch screen/mouse/concept keyboard	select/choose goods/details from menus/options no need to type	Weighing scales	input weight of produce for labels input weight of produce to calculate price	[4]
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Weighing scales	input weight of produce for labels input weight of produce to calculate price									
11	<p>(a) verification/verifying</p> <p>(b) Three from:</p> <ul style="list-style-type: none"> • personal data must be obtained and processed with the subject's permission • only processing that is necessary for the purpose for which it is held can be performed on the data • data cannot be processed for reasons incompatible with the purpose for which it was obtained • only data that is relevant can be held • data can only be held as long as it relevant • data must be accurate/kept up to date • data must be kept secure • data cannot be transferred out of the EU unless the receiving country has adequate data protection laws. • Data can be seen/corrected by subject <p>(c) (i)</p> <ul style="list-style-type: none"> • Age changes with time • Because age needs to be updated annually • database would not be updated constantly <p>(ii) Store/use the date of birth</p>	<p>[4]</p> <p>[1]</p> <p>[3]</p> <p>[1]</p> <p>[1]</p>								

Question	Mark Scheme	Marks
	(iii) <ul style="list-style-type: none"> • can sort on individual fields/parts of address • can search on individual fields/parts of address • allows different parts of addresses on different lines • allows export for mail merge. • Fewer errors as field details are shorter 	[2]
12 (a)	Two from: <ul style="list-style-type: none"> • hard disks store more data • hard disks are re-writable • hard disks are not so easily lost • hard disks allow for faster access • hard disks allow for faster data transfer. 	[2]
	(b) Two from: <ul style="list-style-type: none"> • data that is no longer in regular use./current use. • Is (safely) stored for future reference. • the storage of data for long periods of time (often saved in a compressed form). • may be needed to conform to legal requirements regarding retaining data for several years • to free up space on the hard disk drive • audit. 	[2]
	(c) Four from: <ul style="list-style-type: none"> • may be no need for shop premises/ reduced costs of premises/ • can supply customers from all over world • can trade continuously/not restricted to shop hours • can trade in any currency • fewer staff needed/ reduced salaries • customer records kept • sales trends analysis • email adverts to customers. • Less wastage/less need for constant restocking 	[4]
13 (a)	Two from: <ul style="list-style-type: none"> • training of operators/ operators have to learn how to use the system • testing/debugging of system • transfer/entry of data • production of user guides/help systems • set up user accounts/names/passwords. • 	[2]

Question	Mark Scheme	Marks
	<p>(b) One from:</p> <ul style="list-style-type: none"> • ensuring that the new system is working properly/meets requirements • errors in new system identified/corrected before old system is shut down • errors/faults have no effect on the business operations • if data is lost in new system it can be recovered/backup system is available. • 	[1]
14	<p>(a) Two from:</p> <ul style="list-style-type: none"> • errors in the programming/commands • failure of robot component/system breakdown/ hardware damage • faulty materials used / materials run out • power failure. 	[2]
	<p>(b) Two from:</p> <ul style="list-style-type: none"> • robots can work continuously/don't take breaks/ work 24/7 • robots produce more consistent product/ everything is the same • robots can easily be reprogrammed • production/assembly lines do not need to be made safe for humans • robots can use hazardous materials • cheaper running costs / don't need to pay robots. 	[2]
15	<p>(a) Two from:</p> <ul style="list-style-type: none"> • upper limit to required temperature • lower limit to required temperature • time to switch on • time to switch off/length of time • house/actual temperature from sensor • zone/room to be heated 	[2]
	<p>(b) One from:</p> <ul style="list-style-type: none"> • temperature display on monitor/LCD screen of control unit • time display on monitor/LCD screen of control unit • status of system eg heating on or off • heating system/pump/boiler/ switched on/off. 	[1]
	<p>(c) Two from (feedback is):</p> <ul style="list-style-type: none"> • The output is used • affects/as an input • (to) affect/alter the system (as a result). 	[2]

Mark Scheme 2359/02 Paper 3 (Higher)

Question	Mark Scheme	Marks								
1	<p>(i)</p> <ul style="list-style-type: none"> • Age changes with time • Because age needs to be updated annually • database would not be updated constantly <p>(ii) Store/use the date of birth</p> <p>(iii)</p> <ul style="list-style-type: none"> • can sort on individual fields/parts of address • can search on individual fields/parts of address • allows different parts of addresses on different lines • allows export for mail merge. • Fewer errors as field details are shorter 	<p>[1]</p> <p>[1]</p> <p>[2]</p>								
2	<p>One from:</p> <ul style="list-style-type: none"> • microwave transmission/wireless (connections)/radio • (fibre-optic) cabling • satellite system • (copper) cabling • tele-communication links/phone lines/broadband. 	<p>[1]</p>								
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Question	Mark Scheme	Marks
(b)	<p>Two from:</p> <ul style="list-style-type: none"> • data that is no longer in regular/current use. • is (safely) stored for <u>future reference</u>. • the storage of data for long periods of time (often saved in a compressed form). • may be needed to conform to legal requirements regarding retaining data for several years • to free up space on the hard disk drive • audit. 	[2]
(c)	<p>Four from:</p> <ul style="list-style-type: none"> • may be no need for shop premises /reduced costs of premises • can supply customers from all over world/ potentially larger customer base / more customers • can trade continuously/not restricted to shop hours • can trade in any currency • fewer staff needed/reduced salaries • customer records kept • sales trends analysis • email adverts to customers. • Less wastage/less need for constant restocking 	[4]
5	<p>(a) Two from:</p> <ul style="list-style-type: none"> • training of operators/ operators have to learn how to use the system • testing/debugging of system • transfer/entry of data • production of user guides/help systems • set up user accounts/names/passwords. • 	[2]
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	<p>(c) Two from (feedback is):</p> <ul style="list-style-type: none"> • the output is used • affects/as an input • (to) affect/alter the system (as a result). 	[2]

Question	Mark Scheme	Marks
8 (a) voice recognition speech synthesis zoom applications software that uses symbols text prediction Sticky keys Filter keys Mouse keys Mouse configuration software	Converts speech into text no need to type commands Converts text into speech no need to see text on screen Computer speaks back to confirm commands Enlarges text etc used for poor eyesight Shortcuts for operations/input for those who have difficulty communicating Inserts/completes sentences Allows simultaneous key depressions to be consecutive Ignore brief key presses Number pad configured as arrows Make pointer larger/leave pointer trail to assist partially sighted	[4]

Question	Mark Scheme	Marks
(b) Any three pairs from:		
Braille keyboard	Touch identification of keys visually impaired use	
concept keyboard/ overlay keyboard	Large keys/pads as shortcuts for those who have difficulty communicating/using mouse / keyboard	
joystick	Move pointer around screen for those who have difficulty using mouse	
trackball	Move pointer around screen for those who have difficulty using mouse	
puff/suck switches	Air/breath motion alters state of switch for those who have difficulty using limbs	
oversized/large monitors	Enlarges text etc visually impaired use	
touch screens	Inputs commands/selects items when touched	
Braille printer	Produces Braille output	
Head pointer	Camera positioned on top of monitor to convert head movement into mouse pointer movement	
Head wand	Stylus attached to head for use with touch screen or concept keyboard	
Purpose built large keyboard	Use for people with poor eyesight or poor motor control	
Ergonomic keyboard	People that lack manual dexterity	
		[6]

Question	Mark Scheme	Marks
9	<p>(a)</p> <ul style="list-style-type: none"> • User interacts directly/in communication with/connected to • With main computer <p>(b)</p> <p>Any valid example of on-line processing including real time systems</p> <ul style="list-style-type: none"> • eg theatre / flight / cinema bookings, ticket sales. 	<p>[2]</p> <p>[1]</p>
10	<p>Four from:</p> <ul style="list-style-type: none"> • doctor enters symptoms into system • system checks rules • inference engine searches... • the knowledge base is searched • system asks doctor questions • doctor answers questions • repeat of use of rules/knowledge base as result of doctor's input • possible diagnoses provided <u>via screen/printout</u>. • Doctor selects from list of possible diagnoses 	[4]
11	<p>Data Protection Act (1998)</p> <p>Three from:</p> <ul style="list-style-type: none"> • protects (living) individuals • from unreasonable use /use not for intended purpose/any principle max 1 mark • <u>protects personal</u> data • stored on computers • and on paper records • computer records more susceptible to abuse. <p>Computer Misuse Act (1990)</p> <p>Three from:</p> <ul style="list-style-type: none"> • to legally define unauthorised access • deter hacking/ unauthorised access to computer material / with intent to commit an offence / make hacking illegal • to deter theft of information • to deter electronic vandalism/damage to software/files/spreading of viruses • to define penalties for contravention. • deter unauthorised modification of computer material 	[6]

Question	Mark Scheme	Marks
12	<p data-bbox="247 291 406 324">Eight from</p> <ul data-bbox="319 324 1220 1041" style="list-style-type: none">• consistency of layout• user always finds similar features in the same place/area of screen• harmonious/pleasing colour scheme• avoiding bright colours• avoiding clashing colours• easy to follow/clear navigation pathways /hyperlinks• labels should be clear• simple /uncluttered/ uncomplicated/ well-organised screen layout• avoid confusion / loss of focus by user / logical order• limited content of each screen• allows ease of use / easy understanding of screen• adequate spacing of entry fields• fixed length/text boxes/ fixed length prompts/ individual character boxes• fonts <u>should be easy to read</u>• font size <u>should be easy to read</u>• buttons should be included / icons• instructions should be clearly set out• designs could include menus / drop down lists	[8]

Grade Thresholds

General Certificate of Secondary Education

ICT A (1094/1994)

June 2008 Assessment Session

Unit Threshold Marks

Unit		Maximum Mark	a*	a	b	c	d	e	f	g	u
2357F	Raw	60				39	34	30	26	22	0
	UMS	55				48	40	32	24	16	0
2357H	Raw	60	39	34	29	24	19	16			0
	UMS	80	72	64	56	48	40	32			0
2358	Raw	60	58	53	45	37	31	25	19	13	0
	UMS	120	108	96	84	72	60	48	36	24	0
2359F	Raw	60				29	25	21	18	15	0
	UMS	55				48	40	32	24	16	0
2359H	Raw	60	31	25	19	14	9	6			0
	UMS	80	72	64	56	48	40	32			0
2360	Raw	60	53	45	36	28	24	21	18	15	0
	UMS	120	108	96	84	72	60	48	36	24	0

Specification Aggregation Results

Overall threshold marks in UMS (i.e. after conversion of raw marks to uniform marks)

	Maximum Mark	A*	A	B	C	D	E	F	G	U
1094	200	180	160	140	120	100	80	60	40	0

	Maximum Mark	A*	A	B	C	D	E	F	G	U
1994	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
1094	1.9	9.9	27.7	48.8	65.3	77.9	88.3	95.6	100.0	26758
1994	3.0	15.4	39.2	63.4	77.8	87.3	93.9	98.0	100.0	16017

For a description of how UMS marks are calculated see;
http://www.ocr.org.uk/exam_system/understand_ums.html

Statistics are correct at the time of publication

OCR (Oxford Cambridge and RSA Examinations)
1 Hills Road
Cambridge
CB1 2EU

OCR Customer Contact Centre

14 – 19 Qualifications (General)

Telephone: 01223 553998

Facsimile: 01223 552627

Email: general.qualifications@ocr.org.uk

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Head office
Telephone: 01223 552552
Facsimile: 01223 552553

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