

Mark Scheme on the Unit

January 2009

1494/MS/R/09J

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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.

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MARK SCHEME FOR THE UNIT

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4872 ICT Knowledge and Understanding

Question		Max Mk	Notes
1 (a)	<ul style="list-style-type: none"> • B: the title Special Offer • C: the telephone symbol (only) • D: any or all of the text to the left of the graphic • E: any or all of (<i>January bookings, normal price £275</i>) • F: at least two of the bulleted items (needs to be a <i>list</i>). <i>Accept just the text but not just the bullets.</i> 	[5]	Accept answers if the target is clear, with or without a circle. (this does not apply to F). Although not strictly part of the advert accept copyright symbol (only)for C
(b)	<p>One mark each feature, one for a matched reason from:</p> <ul style="list-style-type: none"> • Text in columns/table <ul style="list-style-type: none"> – Helps fit short items into the space – Separates the text from the description above • Right aligned/justified text <ul style="list-style-type: none"> – Separates text from the price – Fills the space/spreads text out more/avoids too much white space • Different/increased sized text/fonts <ul style="list-style-type: none"> – More important text is bigger – Draws the eye to the most important text/price/summary • Add graphic/picture/photograph <ul style="list-style-type: none"> – Adds interest/to catch the eye/to make people want to go – Shows one of the sights • Centre text <ul style="list-style-type: none"> – To make the title stand out – Titles are usually centred. • Text wrap/Text boxes <ul style="list-style-type: none"> – To allow the text to go beside the image. • Footer <ul style="list-style-type: none"> – To allow text to be placed at the bottom of the page/same text to go on every page. 	[4]	<p>Must be a feature. These are definitely the only answers that can be accepted, as these are the only features that have been used, apart from those already listed in (a)</p> <p>Do NOT accept: ‘graphic’ ‘photo’ etc – the absolute minimum here is ‘add photo’ or ‘clip art images’.</p> <p>If no mark for feature then no mark for reason.</p>

Question		Max Mk	Notes
2 (a)(i)	Up to two marks for each description from: <ul style="list-style-type: none"> • Copied and pasted/downloaded (1) from the internet/website(s) (1) • Taken using a digital camera/digital video camera/mobile phone (1) and uploaded/transferred to the computer (1) • Scanned using a scanner (1) from existing photographs/brochures (1) • Use a graphics package (1) to create a new design/image (1) 	[4]	<p>Mention of a search engine is sufficient to imply the use of websites on the internet.</p> <p>The 'digital' part of 'digital camera' can be implied if the candidate writes about connecting it to a computer and/or uploading photos.</p> <p>Do not penalise candidates for using 'download' instead of 'upload'.</p> <p>Accept take photos, get them developed and then scan them for 2 marks, as this is possible, though not a good answer. However, if they are going to scan them there must be something about getting them developed for the full 2 marks.</p> <p>The second mark for scanning must be more than 'scan images'. The minimum would be 'scan images from paper'.</p>

Question		Max Mk	Notes
(ii)	<p>Five valid points, eg:</p> <ul style="list-style-type: none"> • Copying from the internet is quickest/takes longer to scan/input from camera. • There is a vast range/number of images on the internet • Might take a long time to search for an image you want from the internet. • Can choose exactly the image you want if you take the photo yourself (either by digital camera or to scan)/might not find the exact image you want on the internet. • Taking your own photos avoids copyright issues/internet images might be copyright/printed images might be copyright. • To take your own photos you need to be there/you can download photographs of places all over the world from the internet (1) travelling to the different places might be inconvenient/costly as they may be a long way away (1) • Professional photographs from the internet/printed materials might be better (composition) than those taken by non-professionals using digital camera. • If you already have a good picture, scanning is the best method. • Graphics package allows you to draw your own image/ be creative • Graphics package unsuitable for photos. • A valid conclusion, not already awarded, eg: 'If you already have suitable photographs on paper then scanning is the best option'. <p>Answers must relate to a (i)</p>	[5]	<p>You may have to click on fit height button so you can see (i) before marking this response.</p> <p>It is possible to have answers in a(i) that are not clear enough for a mark, but which are clarified in (ii) sufficiently to allow you to give marks here. This does not allow marks to be given retrospectively in (i) but does allow marks here even if (i) is not awarded.</p> <p>This is not an exhaustive list, although the vast majority of acceptable answers should be able to be mapped against one of the listed points.</p> <p>Nothing to do with image resolution</p> <p>Nothing to do with cost</p> <p>Nothing to do with equipment required, unless as a valid conclusion, eg 'if the company does not already have a scanner or digital camera then using the internet would be good enough as photographs of most places will be available'.</p> <p>Do not accept comparisons of time between scanner and camera, as this is debatable. It takes longer to scan an image (usually) than to transfer one from a camera, but unless the image you want is right where you are (unlikely in this scenario) it will take considerably longer to take the photo. The fact that you have to travel to take the photo is already covered.</p>
(b)	<p>Desktop publisher/desktop publishing/ DTP/publication(s) (software) <i>No other answer accepted.</i></p>	[1]	<p>Spelling errors should not be penalised, otherwise this is an absolutely definitive list. In particular 'publishing' and 'publisher' software are NOT to be credited.</p>

Question							Max Mk	Notes
3 (a)	Item	Input	Out	Intrnl Stor	Back Stor	SW	[8]	Beware of marking the first line, which was done for the candidate! Whilst adding ticks helps count there is no need to cross incorrect responses.
Kybd	✓							
Db					✓			
DVD				✓				
HDD				✓				
Mon		✓						
Mse	✓							
OS					✓			
Ptr		✓						
RAM			✓					
(b)(i)	To attach other devices/example – printer/memory stick/ scanner/camera (to the computer)						[1]	Must be a purpose. Not descriptions/purposes of memory sticks. To transfer data from one computer to another = no marks
(ii)	One from: <ul style="list-style-type: none"> • Because it is likely you will want to attach more than one device/example – you might need both a printer and a scanner • To give a choice of positions (front/back) 						[1]	
(c)(i)	Two from: <ul style="list-style-type: none"> • Computers are connected/linked • Within a small (geographical) area/office/building/site. <i>Need more than 'in a local area'.</i>						[2]	Many candidates get networks mixed up with the internet. Although they might still get a mark if they talk about computers being connected, do NOT give a mark for anything to do with connecting to the internet.
(ii)	Two from: <ul style="list-style-type: none"> • They can share printer/peripherals • They can share files/have an intranet • They can access their files on any machine • Backing up can be done centrally • Managers can monitor work done • They can share internet access • Can send INTERNAL messages/email <i>Nothing to do with security or maintenance – must be advantages to the office staff.</i>						[2]	Take care not to give credit to any answer that is also true of a room of standalone machines. Eg, simply talking about logging on etc is not a feature of a network. To credit messages/email candidate MUST specify internal.

Question		Max Mk	Notes
(d)(i)	Because hands in unnatural/same position/fingers moving in similar positions for long periods of time.	[1]	To be awarded a mark the response must say something more than 'using a computer for too long without a break' – some understanding must be shown of what it is about using a computer that makes a user at risk of RSI. The minimum would be something about repeated movements with reference to hands/fingers/arms/keyboards/mice.
(ii)	One from: <ul style="list-style-type: none"> • Back/neck strain/ache • Eye strain/problems • Deterioration of eyesight • Headaches • Epileptic fits (<i>NOT 'epilepsy'</i>) 	[1]	Must be <i>health</i> risks and not <i>safety</i> .
4 (a)	<ul style="list-style-type: none"> • There are different entities, eg 'because the data is not all about the same thing – some is about holidays, some is about drivers' • There are 1:many/many:many relationships involved/not all relationships are 1:1 • Example of a 1:many or many:many relationship, eg holiday:customer, holiday:driver, coach:holiday, hotel :holiday, resort:hotel <i>this will be most likely expressed in words</i> • A single table would create a lot of repetition/duplication 	[3]	This is a high level question aimed at finding those candidates who actually understand the basic principles of relational databases. Nothing to do with making it 'more professional', 'more organised' or just in order to make the tables less 'complicated' or 'large'. The first bullet might be matched by an answer suggesting tables needed, eg you would need separate tables for customers and holidays.
(b)	<ul style="list-style-type: none"> • Text/alphanumeric/string • Because numeric won't allow leading zeros/spaces/telephone numbers include spaces, which can only be used in text fields • Because there is no need to sort/ask for 'less than'/ask for 'more than'/treat telephone numbers as numeric 	[3]	If the data type is incorrect then there can be no marks for the reasons.
(c)(i)	<ul style="list-style-type: none"> • Because the number of years will change/because this won't change 	[1]	Nothing to do with privacy – the question clearly states that this information is required.
(ii)	One from: <ul style="list-style-type: none"> • Store date of birth • Number of years can be added as a calculated field 	[1]	This can be marked regardless of the answer to (i).

Question		Max Mk	Notes
(d)	Four from: <ul style="list-style-type: none"> • Holiday types/itineraries (suggesting a table of holidays/tours that can be chosen) • Holidays/holiday details (suggesting a table of specific holidays, eg holiday type, date and price) • Destinations/resorts • Hotels • Coaches • Customers/passengers/holiday makers • Appropriate link tables <i>1 mark for each</i> • <i>NOT Drivers</i> <p><i>Accept tables identified by an appropriate name, or by examples of fields. One mark can be awarded for any 'holiday' table, but two marks are available if the candidate identifies the two different holiday tables suggested above.</i></p>	[4]	<p>Although it is possible that there are other possible tables, please refer to TL before awarding anything else.</p> <p>It is likely that many candidates will suggest additional fields or lists or reports rather than tables and examiners need to be alert for this before awarding marks.</p> <p>Where candidates are suggesting lists about a single holiday this is often identified by the use of singular rather than plural eg hotel, destination, coach.</p> <p>Where the MS suggests that the table might be identified by examples of fields this is accounting for candidates who say something like 'a table with holiday type, date and price in it' – ie clearly talking about a table and giving examples of fields that this might contain.</p>
(e)	Five from: <ul style="list-style-type: none"> • Set up a query/filter/search • (Departure) date between 1/4/09 and 30/4/09 • Country = France (1) • OR Spain/add another row showing country = Spain (1) • Add holiday code, price, resort and hotel name, (and date, and country) • Don't display date 	[5]	<p>The marks require search criteria, not just rewrites of the question.</p> <p>Country = Spain would also be OK for a single mark. Then followed by OR France would give a second mark.</p> <p>Accept different field names, if understandable, eg 'destination' for 'country'.</p>
(f)	Four from: <ul style="list-style-type: none"> • Set up a query/filter/search • Choose fields required on the sheet/suitable examples • Set criteria/search for (holiday) code = P0905 • Create a report (using data from the query) • Arrange the report/give a title/resize pictures/any other formatting of report 	[4]	<p>The marks for formatting and arranging the report are only available if the candidate is already clearly writing about a database report.</p> <p>Nothing for WP/DTP answers.</p>
5 (a)	B4 or R4C2 <i>These are the only two acceptable answers. Do not accept 4B or anything else.</i>	[1]	

Question		Max Mk	Notes
(b)(i)	B2 OR R2C2 <i>These are the only two acceptable answers. Do not accept 2B or anything else.</i>	[1]	
(ii)	Three from: C7, C8, C10, C13, C17, B19, B20 OR R7C3, R8C3, R10C3, R13C3, R17C3, R19C2, R20C2 <i>No other format for cell references is acceptable and the two reference types must not be mixed.</i>	[3]	
(c)	Two marks for a correct formula, that would work, eg: <ul style="list-style-type: none"> • $= (B2-1) * B13$ • $= B13 * (B2-1)$ • $= B13 * B2 - B13$ <i>= sign not necessary</i> One mark for a formula with <i>one</i> error, or a working formula with an unnecessary SUM function, eg: <ul style="list-style-type: none"> • $= \text{SUM}((B2-1) * B13)$ <i>unnecessary SUM</i> • $= B2-1 * B13$ <i>missing brackets.</i> • $= B2 * B13$ <i>not deducted one from number of days</i> • $= (C2-1) * B13$ <i>one incorrect reference</i> • $= (B2-1) \times B13$ <i>wrong operator</i> <i>More than one error: 0 marks.</i>	[2]	Do not penalise unnecessary brackets, eg $(B13 * B2) - B13$ is fine for 2 marks.

Question		Max Mk	Notes
(d)	<p>One mark for each formatting type, one for specific reason:</p> <ul style="list-style-type: none"> • Bold text/emboldening (labels/headings) (1) so that the different parts of the sheet can be clearly seen/so that the headings/subsections stand out (1) • Currency/£ signs/2dp (1) so that you can clearly see which values are amounts of money/because the values are amounts of money (1) • Merged cells (1) because there is nothing in the second column/to show that the label goes with the value (in the third column) (1) • Shading/colouring/fill/pattern (1) to show that nothing needs to be entered/there are no values for these cells (1) • Borders (1) to show the different parts of the sheet/make the different parts stand out from each other (1) <p><i>No marks for defaults, eg ODP, left/right justification.</i> <i>No marks for hiding gridlines.</i></p>	[6]	<p>Must be formatting.</p> <p>NB: The question is about formatting that Heidi has used so don't be tempted by other suggestions.</p> <p>If the formatting suggestion does not gain a mark you cannot mark the reason.</p> <p>Reason for currency – accept '£ signs are added'.</p>
(e)	<p>Three from:</p> <ul style="list-style-type: none"> • The same sheet can be used to cost many different holidays/once the formulas are entered they don't have to be typed in every time • It is easy to change values/options/edit/model costs (1) and see the results/the results will change/don't have to start again to see different options (1) • Sheets can be printed/no need to write down figures • Sheets can be saved • Can see subtotals (as well as final total) • Can see all the numbers you have entered / easier to check/spot/correct mistakes • Formatting/text/labels can make the calculations/data clear to see/understand. <p><i>No marks for answers referring solely to accuracy or speed. Must be able to match against one of the above.</i></p>	[3]	<p>Nothing for just mentioning formulas - this is not enough.</p> <p>It is possible that there will be additional acceptable answers, but they must be clear advantages of a spreadsheet over a calculator. Check with your TL before awarding.</p>

Question		Max Mk	Notes
6 (a)(i)	Two from: <ul style="list-style-type: none">• Mobile phone• Laptop computer/pda with mobile broadband access• Laptop computer with mobile phone connection• internet/Cyber café (allow suitable description of hiring time in, for example, a hotel or coach station)• Laptop computer and internet access/wifi in hotels/service stations etc	[2]	Need a complete solution. 'laptop computer' or 'mobile dongle' are not enough. Acceptable descriptions for mobile broadband access: <ul style="list-style-type: none">• dongle• mobile usb stick• mobile modem (stick)• broadband card Although 'Blackberry' is a tradename it is sufficiently common to allow in this case

Question		Max Mk	Notes
(ii)	<p>Four points eg:</p> <ul style="list-style-type: none"> • Mobile phone access is limited to a small screen • Mobile phone access has reduced content • Mobile phone access available wherever you are (if there is a signal) (1) but remote areas may not have a signal (1) • Access from hotel room more convenient than going out to an internet café/other area • There may be queues for access at an internet café • Wifi may not be secure • internet café might have restrictions on services that can be accessed • internet café allows printouts to be made (at a cost) • Internet café may not allow data to be stored 	[4]	<p>You may have to click on fit height button so you can see (i) before marking this response.</p> <p>This can only be marked if there are two valid methods to compare. This is most likely because (i) gained two marks but if there is sufficient expansion in (ii) to make up for any deficiencies in (i) it can still be marked. Eg PDA and Cyber café - It is not known whether the PDA device has a mobile phone facility. However if this is mentioned in (ii) then mark accordingly.</p> <p>This is not a definitive list. Points must relate to answers in (i).</p> <p>Nothing to do with cost.</p> <p>Allow marks for benefits/disadvantages as the opposite of the points listed, but do not give two marks for the same point.</p> <p>Eg. 'using an internet café gives you a full size screen' is worth 1 mark in a comparison with mobile phone access, but 'mobile phone access limits you to a small screen whereas using an internet café you can use a full size screen' is not worth 2 marks.</p> <p>Whilst there might be some valid comparisons between internet access via PDA and laptop to be credited they need to relate to internet access rather than general differences between PDA and laptops.</p>

Question		Max Mk	Notes
(b)	<p>Up to two marks for each valid point, eg:</p> <ul style="list-style-type: none"> • Email to keep in touch with family/friends/office (1) more quickly/cheaply/easily than other methods (1) • Can access weather information (1) to tell passengers what to expect (1) • Can access traffic information (1) to help make decisions about routes/avoid congestion/delays (1) • Can access/print maps/routes (1) to help plan/navigate (new) trips/holidays (1) • Can access/search for (1) information/photos/reviews of places (1) to make trips more interesting/give more information to passengers (1) • Instant messaging to keep in touch with family/friends (1) allows two-way communication (1) • Social networking sites (1) allow information to be shared with family/friends/office (1) • Blogs/Web logs (1) allow him to share photos/experiences with others (1) • Watch English TV/listen to English radio (1) to keep up to date with news/favourite programmes/because local might be in different language (1) • Use VOIP/telephone calls over the internet (1) for cheap/free phone calls (1) • He can shop online (1) so that he can make sure what he wants/food is delivered when he gets home (1) 	[8]	<p>This is not a definitive list, but it is unlikely that there will be many valid answers that cannot be matched against one of these points. If in doubt consult your TL.</p> <p>It is quite likely however, that the expansion points might be different from the ones given here.</p> <p>Marks can be awarded for a reasonable specific use of the worldwide web.</p>
7 (a)	<p>Three from:</p> <ul style="list-style-type: none"> • A virus (1) might corrupt/delete file(s) (1) • Hackers (1) might alter/corrupt/delete file(s) (1) • File(s) can be deleted/overwritten (1) by accident (1) • Hardware failure (1)/specific example, eg fire/flood (1) might corrupt file(s)/ make them inaccessible (1) • Theft (1) of server/network drive(s) (1) 	[6]	<p>This is about losing saved data so nothing about computers crashing, 'not saving properly' etc.</p> <p>Destroyed is OK for deleted.</p> <p>Nothing for stealing information – must be lost.</p>

Question		Max Mk	Notes
(b)	Three from: <ul style="list-style-type: none"> • Install/use anti-virus/virus protection software (1) <i>software must be at least implied, so 0 marks for 'use an anti-virus'. 'Install' is sufficient to imply software.</i> • (Install/use a) firewall • Password protect files • Make files read only • Backup the data • Upgrade/replace hardware regularly • Physical security/suitable example <i>There is no requirement to match these responses with those in part (a).</i>	[3]	For backup there must be at least a clear implication of a copy. Simply 'save onto a memory stick' is not enough, but 'copy files onto a memory stick' would be fine. Any advice about password use can be credited against the 'password protect files' mark point, but only 1 mark in total. Not encryption – this is about prevention of loss.

Question		Max Mk	Notes
(c)	<p>Purpose (up to 2 marks):</p> <ul style="list-style-type: none"> • To protect people from the misuse of their personal information • Specific example of a problem/people were concerned about the amount of data stored about them. <p>Reasons: Up to four marks from, eg:</p> <p><i>Relevance:</i></p> <ul style="list-style-type: none"> • Because computers make it easy to store large amounts of data (1) so organisations/people no longer have to be careful how much they store/were keeping unnecessary personal details (1) <p><i>Sharing of data:</i></p> <ul style="list-style-type: none"> • Because it is very easy to transfer/copy data on computers (1) so people were finding their details passed on /sold to other companies (without their permission) (1) and didn't know who had access to their data/were receiving junk mail from unknown companies (1) <p><i>Accuracy</i></p> <ul style="list-style-type: none"> • Because data entry errors more likely (than hand writing) (1) and not so easily spotted (because not processed by humans) (1). Data entry errors can have serious consequences/example (1) <p><i>Security/privacy</i></p> <ul style="list-style-type: none"> • Because data can be easy to obtain from an (unprotected) computer (1) and some personal details need to be kept private/suitable example, eg medical/financial data (1). Suitable example of a problem caused by lack of security/privacy of data. <p><i>Security</i></p> <ul style="list-style-type: none"> • Because data can be easily lost from a computer without adequate safeguards (1) and this can have serious consequences for some systems (1) eg banks/employers (1) <p><i>Answers must relate to the use of computers. Vague answers hinting at part of an answer should not be credited.</i></p>	[5]	<p>This is aimed at the very highest level and should be marked accordingly, apart from the first point where anything such as 'to protect people's personal information' can be awarded a mark. 'Personal' information/data MUST be at least implied.</p> <p>Simply quoting the requirements of the act does not answer the question.</p>

Grade Thresholds

General Certificate of Secondary Education
Applied ICT (Specification Code 1494)
January 2009 Examination Series

Unit Threshold Marks

Unit		Maximum Mark	A*	A	B	C	D	E	F	G	U
4872	Raw	100	69	60	51	43	36	29	23	17	0
	UMS	100	90	80	70	60	50	40	30	20	0
4873	Raw	50	47	42	37	32	27	22	17	12	0
	UMS	100	90	80	70	60	50	40	30	20	0
4874	Raw	50	47	42	37	32	27	22	17	12	0
	UMS	100	90	80	70	60	50	40	30	20	0

Specification Aggregation Results

	A* A*	AA	BB	CC	DD	EE	FF	GG	UU	Total No. of Cands
UMS	270	240	210	180	150	120	90	60	0	
Cum %	0.0	0.0	18.5	44.4	66.7	81.5	96.3	100.0	100.0	27

27 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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