



GCSE MARKING SCHEME

JANUARY 2016

**INFORMATION AND COMMUNICATION
TECHNOLOGY- UNIT 1
4331/01**

INTRODUCTION

This marking scheme was used by WJEC for the 2016 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

Mark Scheme

ICT - Unit 1

January 2016

Quest.	Answer	Max mark
1(a)	<p>One mark for each correct answer</p> <p>Bold Font / Bold text NOT bold or font Italic Font/ Italic text/ Italics / NOT text by itself Font size / text size Different font styles NOT different fonts Centre text Border art/enhanced border/ (NOT just 'border') Bullet points Table Colour (must be qualified – coloured font/background etc) Autoshapes Underline Accept any reasonable DTP feature Images – <u>must be qualified by source</u> e.g. Insert scanned photograph, photograph from the Internet</p> <p>NOT Clip Art NOT Word Art 3D must be qualified</p>	3
1(b)	Thesaurus / online thesaurus	1

1(c)	<p>NO BRAND NAMES NOTE parts must match but do not penalise second if first part wrong The example of use must be distinctly different Any two of the following</p> <table border="1"> <thead> <tr> <th>Software</th> <th>Example of use</th> </tr> </thead> <tbody> <tr> <td>Word Processing software</td> <td>To create letters to parents informing them of the dates of the book club</td> </tr> <tr> <td>Presentation software/ slideshow / multimedia software</td> <td> Make a presentation to advertise the book of the month To create movies / animations about new books to put in presentation on website / TV NOT just 'to advertise and promote the book club' – this is repeating the question. NOT just 'to show advertising' NOT just 'to create a presentation' NOT 'create presentation' needs qualification </td> </tr> <tr> <td>Web authoring/ Website creation</td> <td> Create / maintain website to update the book club information NOT just 'to advertise and promote the book club' – this is repeating the question. NOT just 'to show advertising' NOT just 'to create a website' NOT 'create website' needs qualification </td> </tr> <tr> <td>Photo editing software/ graphics software</td> <td> Edit photos of book club members for school newsletter / Touch up pictures to improve them Create logos / images </td> </tr> <tr> <td>Audio/music software</td> <td>Create a podcast to give a review of a new book</td> </tr> <tr> <td>Control software</td> <td>Control lighting in a launch book club event</td> </tr> <tr> <td>Video editing software</td> <td>Create a video of the book club activities</td> </tr> <tr> <td>Spreadsheet software</td> <td> To create a table of opening and closing times Display an activity schedule </td> </tr> <tr> <td>Social media/networking software/application/app</td> <td> Chat groups about a book Follow the author </td> </tr> </tbody> </table>	Software	Example of use	Word Processing software	To create letters to parents informing them of the dates of the book club	Presentation software/ slideshow / multimedia software	Make a presentation to advertise the book of the month To create movies / animations about new books to put in presentation on website / TV NOT just 'to advertise and promote the book club' – this is repeating the question. NOT just 'to show advertising' NOT just 'to create a presentation' NOT 'create presentation' needs qualification	Web authoring/ Website creation	Create / maintain website to update the book club information NOT just 'to advertise and promote the book club' – this is repeating the question. NOT just 'to show advertising' NOT just 'to create a website' NOT 'create website' needs qualification	Photo editing software/ graphics software	Edit photos of book club members for school newsletter / Touch up pictures to improve them Create logos / images	Audio/music software	Create a podcast to give a review of a new book	Control software	Control lighting in a launch book club event	Video editing software	Create a video of the book club activities	Spreadsheet software	To create a table of opening and closing times Display an activity schedule	Social media/networking software/application/app	Chat groups about a book Follow the author	2x2
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1(d)	<p>Carbon copy: Email sent to more than one person / group at the same time Or Every recipient in the group can see who received the email.</p> <p>Blind carbon copy: Send a copy of an email to more than one person / group without other recipients knowing who else has received it</p>	2																				
2(a)	<table border="1"> <thead> <tr> <th>True</th> <th>False</th> </tr> </thead> <tbody> <tr> <td>1 ✓</td> <td>2</td> </tr> <tr> <td>3 ✓</td> <td>4</td> </tr> <tr> <td>5</td> <td>6 ✓</td> </tr> <tr> <td>7</td> <td>8 ✓</td> </tr> </tbody> </table> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>If tick all boxes no marks If tick more than one box in a row then no mark for that row</i></p> </div>	True	False	1 ✓	2	3 ✓	4	5	6 ✓	7	8 ✓	4										
True	False																					
1 ✓	2																					
3 ✓	4																					
5	6 ✓																					
7	8 ✓																					

2(b)	<p>One mark for advantage from: Instant download Can select which tracks to download so cheaper than downloading whole album Can access / get files 24/7 Can read online reviews before purchasing Use price comparison websites to save money Saves travel time/money as do not have to go to shops to buy / Goods are delivered to the home Increased access to a wider range e.g. the number of websites or variety of music styles Can be used on multiple devices Allows customised design features in products (album artwork etc...) Can listen to samples before you buy</p> <p>One mark for a disadvantage from: Viruses can be introduced Illegal downloads (harm the music and film industries) Breaking the Copyright Act <u>Large files / files with a poor compression format</u> can take a long time to download May lead to shop closure Security issues due to fake website e.g. Lose money/ phishing scams on a fake website Credit card details are shared/ hacked</p> <p>No marks for hardware problems</p>	2									
3	<table border="1" style="display: inline-table; margin-right: 20px;"> <tr><td>1</td></tr><tr><td>✓</td></tr><tr><td>4</td></tr></table> <table border="1" style="display: inline-table; margin-right: 20px;"> <tr><td>2</td></tr><tr><td>5</td></tr><tr><td>✓</td></tr></table> <table border="1" style="display: inline-table; margin-right: 20px;"> <tr><td>3</td></tr><tr><td>6</td></tr></table> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><i>If tick all boxes no marks If tick more than one box in a row then no mark for that row</i></p> </div>	1	✓	4	2	5	✓	3	6	2	
1											
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4											
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1											
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✓											
5											
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4(b)(i)	<p>Any three of the following looking for a specific <u>use</u>:</p> <p>Teachers can upload resources (worksheets / revision guides / videos / etc) Teachers can set assignments (homework / research) Students can submit work electronically to be marked Students can view feedback / marks given by teachers Peer assessment to evaluate each other's work Check timetable A blog could be used by a pupil to record a diary A forum could be used to ask for help with work Instant message / chat function to arrange a meeting Customise own web page Students can access distance learning sites via links Respond to surveys / questionnaires set by teachers Use educational software e.g. Learning games/ Maths quiz etc... NOT games, simulations, videos etc... unless qualified with topic NOT general answers e.g. Can work from home, work at any time, catch up with missing work etc...</p> <p>Any reasonable <u>use</u></p>	3
4(b)(ii)	<p>Any three disadvantages from:</p> <p>(Initial) setup of resources can take a long time / keeping it up to date is time consuming The <u>software</u> can be expensive Staff training Cannot automatically mark essay style questions Hackers altering test results / accessing data Less face to face peer/teacher interaction Need to self-motivate to use effectively Reliant on communications network / internet access needed to access (remotely) NOT 'expensive to set up'</p>	3
4(c)	<p>Any three advantages of:</p> <p>Students can work at own pace Can access from any device with Internet anywhere Learning can take place at any time learn 24/7 Can be done away from school/distance learning Teacher does not have to be there/ Frees up teacher's time They provide extra support when the teacher is not available Wide variety of online resources can be used to illustrate topic Promotes independent learning Keep students interested/ More interactive than pen and paper/variety of multimedia formats can be used(sound/video/animation) Self-assessment / Immediate results/ feedback/ Analyse/view where you went wrong Don't have to incur extra costs of extra tuition outside school Not as embarrassing if they get it wrong/improves confidence</p>	3
5(a)	May	1
5(b)	B	1
5(c)	=B3-J3 Any correct answer	1
5(d)	<p>(=) IF(K12>0,"Profit","Loss") (=) IF(K12<0," Loss "," Profit ")</p> <p>(=) IF(K12>=0,"Profit","Loss") (=) IF(K12<=0," Loss "," Profit ")</p> <p>Any correct answer</p>	1

5(e)	<p>What the user changes Change of data/formula (1) What the software automatically changes Knock on effect of change (1)</p> <p>E.g. Save money on telephone bill (1) total cost goes down /balance goes up (1) Change cost of electricity to £310 in November (1) and Break even (1) If income goes up (1) then the balance will go up/increase amount of money in balance (1)</p>	2
6(a)	7	1
6(b)	2	1
6(c)	Text	1
6(d)	<p>Error: (1) Year 100/100 Validation Technique: (1) Range check / Dropdown list Parameters: (1) Year 7 – 13 (or similar)</p>	3
6(e)	1371	1
6(f)	<p>One mark each for giving two different benefits More secure if qualified (<u>Encryption</u> of data / can set a <u>password</u> on db to prevent unauthorised access/ <u>physical security</u> measures) Can mail merge letters to members of new books Can backup data more easily in case of accident / fire / theft Variety of output reports Faster/easier to update e.g. adding a record / deleting a record / editing a record / Saves on <u>storage</u> space Data calculation / analysis functions available (e.g. calculated field) More environmentally friendly as uses less paper</p> <p>Accept advantages of relational database e.g. Data is only stored once</p> <p>NO answer relating to searching, sorting or validation</p>	2
7(a)	<p>Examples must be distinctly different scenarios</p> <p>What sensor and why/where</p> <p>Sensor= <u>Heat/Temperature</u> To measure that the air temperature is within an acceptable range</p> <p>Sensor = Light – to measure light intensity is correct for plants/ brightness of day light</p> <p>Sensor = Humidity– to measure the moisture content of the air</p> <p>Sensor = pH in soil to measure acidity/alkalinity</p> <p>Sensor = Moisture to measure soil water content</p> <p>Sensor = Carbon dioxide to measure carbon dioxide levels in the air inside the greenhouse.</p> <p>Any reasonable answer No marks for simply naming sensor</p> <p>Question refers to data logging only but condone answers which include control e.g.</p> <p>Sensor= <u>Heat</u> Turns a heater on or off if greenhouse gets too cold or too hot Sensor = Moisture turns on a water pump for the watering system if too dry</p>	3

7(b)	<p>Any two advantages from: Readings taken at exact time Readings can be taken 24/7 Readings can be taken in dangerous places No human error Automatic readings</p> <p>Any one disadvantage from: Equipment can malfunction / needs (regular) calibration Cost of data logging equipment can be expensive</p>	3												
8(a)	<table border="1" style="border-collapse: collapse; width: 100%;"> <tr> <td style="width: 80%;">Transitions</td> <td style="width: 20%; text-align: center;">1</td> </tr> <tr> <td>A menu system that uses categories</td> <td style="text-align: center;">2✓</td> </tr> <tr> <td>Hyperlinks</td> <td style="text-align: center;">3✓</td> </tr> <tr> <td>Animation</td> <td style="text-align: center;">4</td> </tr> <tr> <td>Hotspots</td> <td style="text-align: center;">5✓</td> </tr> <tr> <td>Comments</td> <td style="text-align: center;">6</td> </tr> </table>	Transitions	1	A menu system that uses categories	2✓	Hyperlinks	3✓	Animation	4	Hotspots	5✓	Comments	6	3
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8(b)	<p>Any three disadvantages from: Network downtime can be expensive due to loss of sales. Extra costs to maintain and update the website. Competitors can see your prices/ global competition. Delays/lost goods due to reliance on delivery companies. Customers' personal data can be hacked (not just hacking on its own). Not everyone has access to the Internet Loss of reputation due to fraudulent sites. Loss of reputation through bad reviews. Cyber attacks</p> <p>Do not accept shop closures/loss of staff jobs.</p>	3												
8(c)	<p>Any two of: Secure websites Encrypt customer databases Firewall Password protected customer accounts Virus protection software Physical protection of data on server / back up the data Limits on login attempts Call back procedures</p>	2												

9(a)	<p>1 mark for each use max 3 Must be a use not an advantage</p> <p>Uses Social Networking: Upload digital media e.g. photos/videos/sound Share digital media e.g. photos/videos/sound Comment on photos Write posts Join groups Create events Follow celebrities Check friends' status/news feed Locate friends via GPS Search to find friends Suggest friends Tag videos/photos Geotagging of photos Update profile pictures Play games Video calls Update status Chat / send instant messages</p> <p>Accept any reasonable answer Do not accept brand names such as 'Skype, Face Time'</p>	3
9(b)	<p>7 marks for any suitable advantages and disadvantages For maximum marks – must have at least one advantage and one disadvantage Do NOT give repeated or opposite advantages or disadvantages</p> <p>Social Networking Advantages: Can use anywhere there's a signal e.g. can keep in touch with friends <u>all over the world</u> Can use 24/7 Can use on many different devices Can let <u>large groups</u> know about events quickly (e.g. birth of a child) which takes less time than contacting each one individually Can catch up with world news, events and trending topics Can make new friends based on interest groups Can vote on products/services to let others know your opinion and influence choices Can see others opinions on products/services to help with choice Can save money on phone calls by using chat</p> <p>Disadvantages Paedophiles can stalk/ groom people - they may gain access to personal data /gain access to individual's location(s) Employers can view your comments and could lead to a dismissal Burglars can see Holiday status updates and track empty houses Identity theft /Hacking to copy passport details Exercising undue influence Cyberbullying e.g. to cause upset by posting inappropriate comments and photos Trolling to incite upset/argument Employer checking profile can affect job prospects Sharing of inappropriate content e.g. violent images Unwanted tagging without permission Addiction to social media – school work can suffer</p> <p>NOT one word answers – needs an extension or explanation of why it is an advantage or disadvantage to the user If all one word answers and no further explanation given, award one mark for a list.</p>	7
10	<p>8-11 marks Candidates give a clear, coherent answer listing three important items of data, state a suitable verification method and give an example and also include a full discussion</p>	11

	<p>including four advantages and two disadvantages. They use appropriate terminology and accurate spelling, punctuation and grammar.</p> <p>5-7 marks Candidates list some important items of data, state a verification method and discuss several advantages or disadvantages but responses lack clarity. There are a few errors in spelling, punctuation and grammar.</p> <p>1-4marks Candidates list one item of data and make brief points. The response lacks clarity and there are significant errors in spelling, punctuation and grammar.</p> <p>0 marks No valid response.</p> <p>Indicative content</p> <p>Data items - Any three of: (3) Seat type / premier seat / golden circle Number of tickets Artist Location of stadium / venue Cost Method of payment Special Offer deals (promo code / voucher code) Special access requirements Login details for returning customer</p> <p>NOT personal details or date and time of concert</p> <p>Verification (2) Proofreading – to ensure all details have been entered correctly Double entry / double keying – to enter your password / email twice. Parity check e.g. check bits sent to ensure message not corrupted</p> <p>Discussion of any four advantages from: (4) Can book 24/7 Check availability Check / compare prices Read review prior to booking Less chance of double booking Loyalty scheme Online discounts Can select alternative performances Etickets/print tickets/tickets arrive instantly/tickets on mobile phone No postage costs for etickets Can purchase before general release Can use one click purchase Select particular seats <u>from seating plan</u> Easier for disabled who don't have to leave home to book Save on travel costs (must be qualified) e.g. of going to the venue to book Save travel time (must be qualified) e.g. rather than going to the venue to book Don't have to turn up as early to queue up as tickets already purchased Pre-order tickets</p> <p>Discussion of any two disadvantages from: (2) Hidden costs e.g. Pay booking fee/ Pay credit card fee Site overloads for popular events Not everyone has internet access Online fraud/fake websites/credit card details can be stolen Lack of customer support services NOT increased job losses</p>	
	Total	80