



GCE AS MARKING SCHEME

SUMMER 2018

**AS (NEW)
INFORMATION AND COMMUNICATION
TECHNOLOGY - UNIT 1
2530U10-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2018 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.

GCE INFORMATION AND COMMUNICATION TECHNOLOGY

SUMMER 2018 MARK SCHEME

Q.	Marking Scheme	Mark																
1. (a)	<p>Award (1 mark for description of any <u>concrete use</u>, 1 mark for each of 2 advantages) x2 Needs to be clear that candidates are describing a use of a device. Advantage must be relevant to use.</p> <p>Command Line Interface Use: e.g.</p> <ul style="list-style-type: none"> Expert using it to find information on network/system configuration Writing small batch files in DOS <p>Advantage:</p> <ul style="list-style-type: none"> Fast to execute (run) NOT faster to process/find Don't have to go through menu system/faster to enter commands (not type) Needs very little overheads (memory/processor/hard drive) <p><u>Touch sensitive (any suitable device AND concrete use)</u> An information screen in a museum to allow children to gather information / in shops to enter info at POS / mobile phones to dial or display information / Input screen for buying tickets at railway stations</p> <p><u>Indicative Content</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th align="center" colspan="2"><u>Touch sensitive device</u></th> </tr> <tr> <th align="center">Device</th> <th align="center">Use</th> </tr> </thead> <tbody> <tr> <td>Tablets</td> <td>to select applications to type on keyboards</td> </tr> <tr> <td>Mobile phones/phones</td> <td>to dial or display information</td> </tr> <tr> <td>POS</td> <td>to enter info in shops</td> </tr> <tr> <td>TOUCH panels/screens /consoles</td> <td><u>buying tickets</u> at railway stations In museums to allow children to gather information Using in shops to pay for goods In shopping centres to get information about shops</td> </tr> <tr> <td>Lamps</td> <td>To turn lights on or off</td> </tr> <tr> <td>ATM/cashpoints</td> <td>Withdraw cash See balance etc</td> </tr> </tbody> </table> <p>Advantage:</p> <ul style="list-style-type: none"> Saves having to type, quicker to enter information/fixed list of options Empowering for disabled people to ..., no need for mouse and keyboard, Used in hostile environments because keyboards can get sticky. Frees staff to complete other jobs. Screens can be embedded in larger fixed devices so more secure/less likely to be stolen than laptop. No need for mouse or keyboard which can be more easily stolen or broken. Intuitive to use <p>Not user friendly, not easy to use</p>	<u>Touch sensitive device</u>		Device	Use	Tablets	to select applications to type on keyboards	Mobile phones/phones	to dial or display information	POS	to enter info in shops	TOUCH panels/screens /consoles	<u>buying tickets</u> at railway stations In museums to allow children to gather information Using in shops to pay for goods In shopping centres to get information about shops	Lamps	To turn lights on or off	ATM/cashpoints	Withdraw cash See balance etc	<p>1</p> <p>2</p> <p>1</p> <p>2</p>
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Q.	Marking Scheme	Mark
2. (a)	<p>Award up to 2 marks per advantage from:</p> <ul style="list-style-type: none"> • Faster to enter/type the data / speed of data entry • Processing is faster (because less RAM required) or faster to search/query (pattern matching) • Takes up less (storage) space on the RAM. <p>NOT More data can appear on the screen NOT less space NOT storage space NOT faster to spot trends NOT anything connected to security. NOT less chance of getting RSI. NOT easier to query a database NOT hard drive / database</p> <p>Encoding is not encryption.</p> <p>(Problem must match example to get two marks) The following, with an appropriate/sensible example. <i>Note - A well argued example could gain both marks.</i></p> <p>Problem</p> <ul style="list-style-type: none"> • Value judgements <p>Value judgements and subjectivity / Value judgements can lead to inconsistency, e.g. hair colour, opinion on politicians, etc.</p> <p>Examples of one mark answers</p> <ul style="list-style-type: none"> • Value judgements can lead to inconsistency <p>Examples of two mark answer</p> <ul style="list-style-type: none"> • Value judgements can lead to inconsistency for example if asked “Was the meal ‘excellent’, very good’, ‘good’, or ‘poor’?” One person’s excellent meal is only good for another. <p>NOT unable to understand the code or mixing up the code</p>	<p>1</p> <p>1</p> <p>2</p>

Q.	Marking Scheme	Mark
3.	<p>Award a maximum of six marks One mark for stating the method and one mark for an extension x3</p> <p>Encryption (1) The process of encrypting data/information so that only authorised people can read it. (1)/ To read an encrypted file, you must have access to a secret key or password that enables you to decrypt it.(1)/ There are two main types of encryption: asymmetric encryption (also called public-key encryption) and symmetric encryption.(1)</p> <p>WAP/WEP protocols (1) Wireless Encryption Protocol a security protocol for wireless local area networks (WLANs) (1)/ WEP is designed to provide the same level of security as that of a wired LAN.(1)/ WEP aims to provide security by encrypting data over radio waves so that it is protected as it is transmitted from one end point to another.(1)</p> <p>Firewalls (1) A firewall is a network security system designed to prevent unauthorized access to or from a private network. (1)/ Firewalls can be implemented in both hardware and software, or a combination of both. (1)/ All messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria.(1)</p> <p>Virus protection (1) Software designed to prevent viruses, worms and Trojan horses from getting onto a computer as well as remove any malicious software code that has already infected a computer. (1)</p> <p>Accepted not expected SSL – Secure Sockets Layer (1) SSL is used to encrypt web traffic e.g. HTTPS (1)</p>	3x2
4.	<p>Award up to 6 marks for 1 mark for stating factor and 1 for description x3</p> <p>Software - Does the software put a big demand on the system - does it work with other software.</p> <p>Suitability of the OS if there is a need for quick up to date information, there is no point running it on a batch processing system</p> <p>Communication - Do the different devices talk properly to each other, does the final system fit in what was requested</p> <p>Testing - Has the system been checked in all sorts of situations? Bug free?</p> <p>Maintenance / update procedures - Is there someone whose job is to ensure that the data and software is kept up to date. Proper backups.</p> <p>Other factors could involve description of: Change in circumstances during development Speed of implementation Compatibility - does it work with other software / hardware (but not twice)</p> <p>Poor communication with the user – system doesn't do what you expect it to do Abilities of the user – not an expert and doesn't know shortcuts Post-implementation procedures Cost – budgetary considerations Technical support / maintenance</p> <p>Not data, not hardware</p>	3x2

Q.	Marking Scheme	Mark
5.	<p>Award 2 marks for advantages of CAD and 1 mark for disadvantage of CAD</p> <p>Advantages</p> <ul style="list-style-type: none"> • Provides 3D representation of designs / help visualise the final product • Produces part lists • Costing • Saves money as you do not have to build models / prototypes • Higher output as time-consuming tasks are removed • Can create simulations to test product / can help spot flaws in the design before it is built • Zoom in for fine detail / greater accuracy • View from many angles • Hatching / rendering / can find the best finishes / materials • Tension / strain tests to look for weaknesses • Allows you to walk through a design • Gives you access to already designed elements • Allows collaborative working on designs <p>Disadvantages</p> <ul style="list-style-type: none"> • Commercial CAD systems need complex, powerful and expensive hardware • Need training <p>Award 2 marks for advantages of CAM and 1 mark for disadvantage of CAM</p> <p>Advantages</p> <ul style="list-style-type: none"> • Production of parts is faster and more reliable • Machines do not go on strike • Quality is more consistent / less wastage • Output 24/7 • Work in awkward/unsafe places • Use of 3D printers allows realistic models/prototypes to be developed <p>Disadvantage</p> <ul style="list-style-type: none"> • Machines are designed for particular functions (can be reprogrammed but not switched between tasks) • Setup costs (of hardware) • Error in programming can ruin a batch 	<p>2</p> <p>1</p> <p>2</p> <p>1</p>
6.	<p>Award 1 mark for description of function and award 1 mark for benefit x3</p> <p>Templates Are prewritten master slides/ layout with design and some basic information already included./pre-designed layout</p> <p>It saves you having to create from scratch./faster to create as layout already there This could be the corporate identity making it look more professional / giving a house style / On the master slide these could be a layout with school colours and logo.</p> <p>Animated transitions This is when you give an entry/exit effect when you move from one slide to another e.g. such as fading.</p> <p>This could be used to keep the parent/pupil interested / fun to watch / improves the flow of the presentation / makes it more visual</p> <p>Creating a show Making the slides run <u>automatically</u> in a particular order (on its own)</p> <p>Allows the teacher to use a series of slides to make customised presentations for different classes/ allows teacher to define timings and sequencing</p>	<p>2</p> <p>2</p> <p>2</p>

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	<p><i>Control of Environmental conditions</i></p> <p><i>Control of environmental conditions such as crops,</i></p> <p><i>transportation Smart Roads etc.(1)</i></p>	<p>River Floods Monitoring of water level variations in rivers, dams and reservoirs.</p> <p>Lighting manufacturers worked with greenhouse gardeners to build a Smart App that uses IoT sensors and predictive analytics to optimize greenhouse lighting and to collect sensor data on light, temperature, soil, weather, and more.</p> <p>Intelligent Highways with warning messages and diversions according to climate conditions and unexpected events like accidents or traffic jams.</p>	<p>Improved flood control and prediction</p> <p>Machine learning services and predictive analytics optimize lighting, power consumption and plant photosynthesis. could enable greenhouses to grow better plants, faster</p> <p>The app predicts the life expectancy of each bulb and notifies maintenance workers to replace it before any disruption occurs</p> <p>Saving on traffic congestion</p>	
	<p><i>Control of building access using smart phone apps.(1)</i></p>	<p>Access control to perimeter and restricted areas and detection of people in non-authorized areas.</p> <p>Control of access to garages and front gates using wireless</p>	<p>Increased security</p> <p>Don't have to carry keys or risk losing them</p>	
	<p><i>ICT to monitor and manage smart devices such as fridges etc/ Thinking Fridge (1)</i></p>	<p>Fridge automatically orders food when it notices that items are getting low.(1)</p>	<p>Less food wasted Don't run out of essential items.</p>	
	<p>Healthcare (1)</p>	<p>smart watches for fitness,</p> <p>internal body medical delivery systems and smart pills etc</p>	<p>Better monitoring of elderly in the home</p> <p>Better Monitoring and tracking of improved fitness in sportsmen</p> <p>Faster and targeted pain relief and treatment which does not affect other cells.</p>	
	<p>Disadvantages (any 2):</p> <ul style="list-style-type: none"> • Can be used for DDOS (dedicated denial of service attack) • People can control your nations power supply – security risk • Machine can send authorisation request to husband and wife and both order • Poor return on investment as equipment is expensive • Paedophiles can hack into baby monitors etc. • If signal problem cannot get heat etc 			2

Q.	Marking Scheme	Mark															
	<ul style="list-style-type: none"> Then we have the issue of privacy and hacking of shared data Over reliance on smart technology (explained) 																
8.	<p>Award (1 mark for name and/or description, 1 for advantage and 1 for disadvantage)x6</p> <p>Only allow use of each row once</p> <table border="1" data-bbox="231 510 1353 2027"> <thead> <tr> <th data-bbox="231 510 555 573">Method</th> <th data-bbox="555 510 1038 573">Advantages</th> <th data-bbox="1038 510 1353 573">Disadvantages</th> </tr> </thead> <tbody> <tr> <td data-bbox="231 573 555 712">Videoconferencing</td> <td data-bbox="555 573 1038 712">Don't have to be in the same location as teacher/pupils who are ill can keep up to date.</td> <td data-bbox="1038 573 1353 712">Cost implication of installation</td> </tr> <tr> <td data-bbox="231 712 555 1328"> VLE Candidates need to make separate points Chat rooms/forums for learning </td> <td data-bbox="555 712 1038 1328"> Classes can run with small number of pupils. Shared expertise. Potential cost saving to schools if well qualified. Can teach 2 classes at the same time Saves pupil travel costs Can work at their own pace </td> <td data-bbox="1038 712 1353 1328"> Diminish literacy – texting. . . Pupils must be motivated to achieve their goals. Broadband problems (<i>if qualified</i>) </td> </tr> <tr> <td data-bbox="231 1328 555 1653">Distance learning.</td> <td data-bbox="555 1328 1038 1653"> Students don't have to travel / can work at home/ empowers disabled Can access more courses / allows access to courses not taught in your school. Flexibility of time. </td> <td data-bbox="1038 1328 1353 1653"> Lack of personal support (close at hand) / immediacy / no peer interaction Need for equipment at home. </td> </tr> <tr> <td data-bbox="231 1653 555 2027"> Online learning/ e-learning Revision programs eg. GCSE byte size Revision websites </td> <td data-bbox="555 1653 1038 2027"> Special adaptations can be built in / Can target specific areas. Materials provided in different formats such as text, voice, video, animations. Have flexibility as to where and when they work, at home, in car, out walking/running. Variety of activities can motivate and maintain interest. Can access material using different </td> <td data-bbox="1038 1653 1353 2027"> Lack of personal support (close at hand) / no peer interaction. Cost of software/specialist hardware. No collaborative </td> </tr> </tbody> </table>	Method	Advantages	Disadvantages	Videoconferencing	Don't have to be in the same location as teacher/pupils who are ill can keep up to date.	Cost implication of installation	VLE Candidates need to make separate points Chat rooms/forums for learning	Classes can run with small number of pupils. Shared expertise. Potential cost saving to schools if well qualified. Can teach 2 classes at the same time Saves pupil travel costs Can work at their own pace	Diminish literacy – texting. . . Pupils must be motivated to achieve their goals. Broadband problems (<i>if qualified</i>)	Distance learning.	Students don't have to travel / can work at home/ empowers disabled Can access more courses / allows access to courses not taught in your school. Flexibility of time.	Lack of personal support (close at hand) / immediacy / no peer interaction Need for equipment at home.	Online learning/ e-learning Revision programs eg. GCSE byte size Revision websites	Special adaptations can be built in / Can target specific areas. Materials provided in different formats such as text, voice, video, animations. Have flexibility as to where and when they work, at home, in car, out walking/running. Variety of activities can motivate and maintain interest. Can access material using different	Lack of personal support (close at hand) / no peer interaction. Cost of software/specialist hardware. No collaborative	6x3
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	Online tests	hardware e.g. laptop, mobile phone, mp3 player, tablet. (No brand names) Available at any time. Revisit when you need to. Multilingual support.	learning.	
	CAL a computer package which allows a student to study using a computer system Maths programs Art and design programs Phonics software for early reading	Pupils work at own pace. Good for pupils with learning difficulties. (customisation) Pupils respond better to automated feedback. Can gauge their own progress / instant feedback / automatic marking. Engaging screens - colour/animation/sound/video. Automatic generation of progress reports. Specific advantage Through the use of ICT based phonics books, clear connections can be made between sounds and letters on a page	Lack of personal support (close at hand) / no peer interaction. Cost of software/specialist hardware. No collaborative learning. <i>Note: same answers cannot be credited twice</i> <i>Specific disadvantage</i> Digital voice may not be as clear as human sound	
	Virtual and augmented reality	By making the learning more engaging, studies have identified that virtual reality can also be used to engage those who have previously lacked confidence in education or struggled to become involved. This can be really beneficial as emotional rewards are a huge and invaluable incentive for students, which can encourage studying even more. Reduces bullying	Some studies suggest that mobile phones are negatively affecting the social skills of students – could the same be true for virtual reality? By reducing situations where students will be working alongside their peers, will this affect preparing them for further education, their careers and becoming business leaders?	

Q.	Marking Scheme			Mark
	<p>CBT (Computer Based Training) a sophisticated way of learning with help from ICT e.g electronics</p>	<p>Software dedicated to learning how to use software/device</p> <p>Can be safer than crashing a plane</p>	<p>Software can be very expensive to buy</p> <p>Can need a lot of processing power</p>	
	<p>Internet</p> <p>To research topics</p> <p>Email companies for information</p>	<p>Many varied resources not available in school</p> <p>To store information that saves the cost of printing</p> <p>Email can be sent anywhere in the world, <u>cheaper</u> than the normal post, once you have a network.</p> <p><u>Files can be attached</u> to an email which could be in the form of video, sound, reports or presentations.</p> <p>Document can be <u>sent to a group</u> of people at the same time.</p> <p><u>BCC (Blind Carbon Copy)</u>, one of the recipients can receive the documents without the others knowing, for security</p>	<p>If don't refine searches may have to search through many website links which is time consuming</p> <p>Not all information is correct</p> <p><u>Viruses can be spread</u> across networks;</p> <p>hacking and phishing.</p> <p>Broadband problems (<i>if qualified</i>)</p>	
	<p>Cameras/video/DVD</p> <p>Recording lessons</p>	<p>Media projects such as plays can be enacted and brought to life</p> <p>DVDs can be easily paused and reviewed to analyse.</p> <p>Discussion of the ways that film texts are put together, for example decisions made by the director about camera angles etc.</p> <p>Catching up missed lessons</p>	<p>Cost of software/specialist hardware.</p> <p>Some pupils may use them inappropriately and waste time.</p>	

Q.	Marking Scheme			Mark
		More suitable for visual learners		
	Voting systems	<p>Voting systems allow pupils to actively participate in lessons by sending responses to questions or discussion topics via an electronic keypad.</p> <p>Multiple choice answers can be carried out and results recorded instantly for assessment and monitoring purposes.</p>	<p>Cost of software/specialist hardware.</p> <p>Time consuming to set up.</p>	
	Educational Expert systems	<p>The computer can store far more information than a human.</p> <p>no loss of expertise</p> <p>Use of simulations</p> <p>The computer does not 'forget' or make mistakes.</p> <p>Data can be kept up-to-date</p> <p>The expert system is always available 24 hours a day</p> <p>The system can be used at a distance over a network.</p>	<p>Lack of personal contact</p> <p>Over reliance</p> <p>Dependent upon the correct rules and relationships being programmed in the first place. If rules wrong, the wrong advice could be given.</p> <p>GIGO :Incorrect data could be given leading to incorrect response</p> <p>Expert systems have no "common sense".</p>	
	<p>Hardware</p> <p>3D printers</p> <p>CAD/CAM machines e.g. sewing machines</p> <p>Use of small devices e.g. smartphones etc</p>	<p>Create 3D models and view results from all sides</p> <p>Can edit designs before sewing</p> <p>Makes pupils more confident and flexibility / builds pupil confidence</p>	<p>Cost of purchasing equipment</p> <p>Devices could be monitored</p>	

Q.	Marking Scheme			Mark
	<p>Authoring software</p> <p>Sound</p> <p>Word-processing</p> <p>There are many products available to help with sentence writing skills, such as Textease or Clicker</p>	<p>(Audacity) is a <u>free</u> piece of software, that allows the recording and editing of sound</p> <p>Some have speech facilities to help pupils check their work.</p> <p>Has tools such as spellcheckers and thesauruses to improve spelling</p> <p>Makes sequencing words easier.</p>	<p>Takes time to learn</p> <p>Cost of software/ Too general</p>	
	<p>Interactive whiteboards e.g. maths programs or teaching physical geography</p>	<p>IWB technology uses a variety of resources sound, video, animation to engage a pupils attention and</p> <p>Encourage responses and interaction</p> <p>Lessons and pupils work can be saved</p>	<p>Cost of purchasing equipment</p>	
<p>Do not allow duplicated advantages and disadvantages / registration systems / projectors / presentations (unless referencing animated games)</p>				

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9.	<p>Award 2 marks for benefits in context and award 2 for further explanation.</p> <p><u>Indicative Account</u></p> <table border="1" data-bbox="220 383 1382 1209"> <thead> <tr> <th data-bbox="220 383 801 434">Application</th> <th data-bbox="801 383 1382 434">Benefit (Only allow each once)</th> </tr> </thead> <tbody> <tr> <td data-bbox="220 434 801 557">Payroll/calculation of wages Profit and loss of sales</td> <td data-bbox="801 434 1382 557"><u>Automatic recalculation</u> if data such as rate of pay changes</td> </tr> <tr> <td data-bbox="220 557 801 813">Exploring options on staffing or different materials/suppliers/what if investigations on different design costs Simulation modelling financial forecasting Sales marketing</td> <td data-bbox="801 557 1382 813">what if investigations can increase <u>speed/accuracy</u></td> </tr> <tr> <td data-bbox="220 813 801 936">Quotes for different customisation options in a car</td> <td data-bbox="801 813 1382 936"><u>Accurate</u> calculation will increase efficiency/save time</td> </tr> <tr> <td data-bbox="220 936 801 1016">Setting up templates for conservatory quotes</td> <td data-bbox="801 936 1382 1016">to work quotes out more <u>quickly/ many report formatting features</u></td> </tr> <tr> <td data-bbox="220 1016 801 1209">Gas billing. VAT Accounting</td> <td data-bbox="801 1016 1382 1209">Import data from external sources/merge with databases</td> </tr> </tbody> </table>	Application	Benefit (Only allow each once)	Payroll/calculation of wages Profit and loss of sales	<u>Automatic recalculation</u> if data such as rate of pay changes	Exploring options on staffing or different materials/suppliers/what if investigations on different design costs Simulation modelling financial forecasting Sales marketing	what if investigations can increase <u>speed/accuracy</u>	Quotes for different customisation options in a car	<u>Accurate</u> calculation will increase efficiency/save time	Setting up templates for conservatory quotes	to work quotes out more <u>quickly/ many report formatting features</u>	Gas billing. VAT Accounting	Import data from external sources/merge with databases	2x2
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10. (a)	<p>Award 1 mark for What and award 1 mark for Why x2</p> <p>Two marks for each formula No mark for naming formula up to 2 marks for description of what it does. Purpose plus extension or purpose plus detailed description of data used gains both marks. (What and why)</p> <p>Indicative content</p> <p>I used SINGLE IF in cell E14 on page 5 to work out if the account holders were overdrawn =IF (D2 <0, "ACCOUNT OVERDRAWN", "Account in credit") the message "ACCOUNT OVERDRAWN" appears and if the amount is not negative then the message "Account in credit" appears. (Both branches of 'IF' for what and why)</p> <p>I used the DATE function in cell F3 on page 2 to work out the difference in days between when the payment should have been made and when it was actually made so that interest could be charged on the outstanding balance.</p> <p>I used the ROUND function in cell H15 to round up the attendance figures to the nearest thousand (1) to make it easier to compare the pattern for the season</p>	2x2												
10 (b)	<p>Award One mark for naming the validation technique and field and award second mark for further detailed description e.g. I put a range check on my hotel room number in cell A10 (1) of between 1 and 100 (1)</p> <p>I used a length check on the credit card number in cell G5 (1) to set the text length to 16 characters (1)</p> <p>NOT spinners, dropdown lists, presence check, length check on names, datatype, vlookup, link to list</p>	2x2												
10 (c)	<p>Award 1 mark for Type and Purpose and award 1 mark for Benefit x2</p> <table border="1" data-bbox="233 1424 1370 1830"> <thead> <tr> <th colspan="2" data-bbox="233 1424 1040 1458">Type and Purpose</th> <th data-bbox="1040 1424 1370 1458">Benefit</th> </tr> </thead> <tbody> <tr> <td data-bbox="233 1458 635 1581">Navigation macro</td> <td data-bbox="635 1458 1040 1581">To go from the stock page to the main menu page on page 11</td> <td data-bbox="1040 1458 1370 1581">Quickly/ more efficiently /more user friendly NOT EASY</td> </tr> <tr> <td data-bbox="233 1581 635 1675">Print macro</td> <td data-bbox="635 1581 1040 1675">To print out the invoice on page 15</td> <td data-bbox="1040 1581 1370 1675">Without having to select print settings/printer every time</td> </tr> <tr> <td data-bbox="233 1675 635 1830">Clear macro</td> <td data-bbox="635 1675 1040 1830">To clear the order form on page 13</td> <td data-bbox="1040 1675 1370 1830">Ready for the next order to be entered/ save time not having to delete each cell individually</td> </tr> </tbody> </table>	Type and Purpose		Benefit	Navigation macro	To go from the stock page to the main menu page on page 11	Quickly/ more efficiently /more user friendly NOT EASY	Print macro	To print out the invoice on page 15	Without having to select print settings/printer every time	Clear macro	To clear the order form on page 13	Ready for the next order to be entered/ save time not having to delete each cell individually	2x2
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Navigation macro	To go from the stock page to the main menu page on page 11	Quickly/ more efficiently /more user friendly NOT EASY												
Print macro	To print out the invoice on page 15	Without having to select print settings/printer every time												
Clear macro	To clear the order form on page 13	Ready for the next order to be entered/ save time not having to delete each cell individually												

Q.	Marking Scheme	Mark
10. (d)	<p>Award up to 2 marks per section, maximum of 4</p> <p><u>Graph</u> What and why I used a breakeven graph on page 12, in my profit loss graph,(1) this allowed me to find the number of items I had to sell before I was going to start making a profit and then target that product for promotion.(1) I used a bar chart of location of sales on page 14 (1), this allowed me to easily see the area in which we sold the least product and could target that area for promotion. NOTE 'A visual representation of the data' is insufficient for the mark</p> <p><u>Relative referencing</u> What and why I used relative referencing to allow me to drag down the total formula in column D on page 3 (1), this meant that I did not have to retype all the formula out for every row as the computer worked out their relationship for me (1) alternative why – I would use the total income to calculate the profit.</p>	<p>2</p> <p>2</p>