



# **2011 Computing Studies**

## **Standard Grade – Credit**

### **Finalised Marking Instructions**

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## Part One: General Marking Principles for Computing Studies Standard Grade – Foundation

*This information is provided to help you understand the general principles you must apply when marking candidate responses to questions in this Paper. These principles must be read in conjunction with the specific Marking Instructions for each question.*

- (a) Marks for each candidate response must always be assigned in line with these general marking principles and the specific Marking Instructions for the relevant question.
- (b) Marking should always be positive ie, marks should be awarded for what is correct and not deducted for errors or omissions.
- (c) If a specific candidate response does not seem to be covered by either the principles or detailed Marking Instructions, and you are uncertain how to assess it, you must seek guidance from your Team Leader/Principal Assessor. You can do this by posting a question on the Marking Team forum or by e-mailing/phoning the e-marker Helpline. Alternatively, you can refer the issue directly to your Team Leader by checking the 'PA Referral' box on the marking screen.
- (d) Award **one** mark for each 'bullet' point where stated in the marking instructions.
- (e) On the MFI system, if a candidate has not answered or attempted a question a dash '-' must be placed in the mark column instead of a zero '0'.
- (f) When converting from Gigabytes/Megabytes/Kilobytes to bytes, '1024' is the only unit acceptable, eg 1024 bytes = 1 Kilobyte, 1024 Kilobytes = 1 Megabyte, 1024 Megabytes = 1 Gigabyte.
- (g) No piece of work should be ignored without careful checking. Candidates may have scored out an answer then written the correct answer at the back of the question paper. Make sure that every page is checked.
- (h) If the first answer has been scored out, but still readable, *and not replaced by another answer*, the question should be marked in the normal way. If you feel that a candidate has been disadvantaged by this action, make it a 'PA Referral'.
- (i) On the MFI system, if you come across a paper which is blank, scroll down to the end of the paper in-case the answers have been written on a separate piece of paper which will be scanned and added to the end of the on-screen paper.
- (j) Any references to trade names or commercial products, eg "Microsoft", "MSN", etc should be ignored, and then the rest of the answer should be marked. For example, if you received an answer "Microsoft Spreadsheet" then "Microsoft" would be ignored and "Spreadsheet" accepted, but "Microsoft Excel" would be ignored.

## Part Two: Marking Instructions for each Question

Question			Expected Answer/s	Max Mark	Additional Guidance
1	a		120 (records)	1	No other answer
1	b	i	Location (grid reference)	1	No other answer
		ii	Unique to that bothy OR each bothy is in a different location OR no two bothies will have the same grid reference	1	Notion of 'uniqueness' needed for mark.
1	c		Range (check)	1	No other answer
1	d		Complex search (1) On 'Area' field for (=) "Lochaber" (1) (and) 'Sleeps (maximum)' field for >= 10 OR > 9(1) (and) 'Toilet' field for "yes" (1)	4	Each mark awarded for search criteria must include field AND condition.
1	e	i	Data Protection Act	1	No other answer
1	e	ii	info kept secure OR purpose of keeping info stated OR info not kept longer than necessary OR register with DPA registrar amend the data	2	
1	f		Contains a calculation/formula (involving the contents of other fields)	1	
1	g		Create/use the data source – database/data file/spreadsheet (1) Create the letter leaving spaces/placeholders/blanks/gaps for data (1) (Mail)merge (1)	3	One mark awarded for each step.
2	a	i	Give a more professional looking layout OR speed up production of presentation OR give a consistent layout (on each slide)	1	
2	a	ii	Footer/master slide	1	NOT copy/paste – 2 operations
2	b		Slides are viewed in order (one after the other) OR (where) no hyperlinks are used to alter order (of display)	1	
2	c		WORD WRAP – text automatically placed on next line when necessary/not enough space on current line TEXT WRAP – text positioned around a graphic	2	
2	d	i	Universal Serial Bus	1	No other answer

Question			Expected Answer/s	Max Mark	Additional Guidance
2	d	ii	(1) $512 \times 400 = 204800$ (2) $204800/8 = 25600$ (3) $25600/1024 = 25 \text{ Kb}$	3	1 mark for each step of calculation → x pixels, /8, /1024 25 (own) – 2 marks 25 Kb – 3 marks 25 Gb/Tb/Mb – 2 marks
2	d	iii	Scaling – Change the size of the photograph (but still keep it in proportion). Cropping – Cut away/hide the unwanted or unnecessary part of the photograph.	2	
2	e		Notion of capacity OR data transfer speed OR robustness OR portability ... compatibility	2	Any 2 – 1 mark each
3	a	i	Copy	1	duplicate
3	a	ii	(=) $B6 * \$B\$3$ OR $B\$3$	2	1 mark for absolute B3 and 1 mark for B6*
3	a	iii	Relative referencing was used for B6 so that it would change to B7, B8 and B9 as you move down the rows. (1) Absolute referencing was used for $\$B\$3$ so that cell B3 would be referred to constantly and not change as you move down the rows. (1)	2	Relative --- Price (row) changes as copied down Absolute --- VAT cell remains the same
3	b		= IF ( SUM(D6: <u>D9</u> ) > <u>10</u> , E11 * <u>15% or 0.15 or 15/100</u> , E11 * <u>5% or 0.05 or 5/100</u> )	4	1 mark for each of 4 underlined areas
3	c	i	A6:A9 OR A6 → A9 OR A6 to A9 OR A6-A9 – 1 mark D6:D9 OR D6 → D9 OR D6 to D9 OR D6-D9 – 1 mark	2	No other answer
3	c	ii	(Total) Number Sold/Snowboard Sales/sales/orders/sold	1	
3	c	iii	Dynamic	1	No other answer
4	a		contains (micro)chip/processor OR data easily updated OR difficult to forge ... hold(contain) data	2	
4	b		Real-time	1	No other answer
4	c	i	Multi User (database)	1	No other answer
4	c	ii	number of visitors to resort OR numbers using each ski-lift OR peak times for use OR popularity of runs OR daily visitor levels total number (aggregates)	2	1 mark for each valid example

Question			Expected Answer/s	Max Mark	Additional Guidance
4	d		web-hosting OR e-mail facilities OR browser OR upload/download capabilities (FTP)	2	1 mark for each valid facility
4	e		Calculation carried out on the number entered (1) If the answer matches the check digit, then it has been entered correctly (1)	2	1 mark for calculation 1 mark for notion of comparison
4	f	i	can be distributed/used on as many different computers as you wish OR used without time limit	1	
4	f	ii	Attract customers OR encourage games design OR build community ... advertising	1	
5	a		<u>Hardware</u> – Large memory/backing storage OR powerful processors OR (wide) variety of sensors OR verbal input of commands via microphones OR camera for vision system <u>Software</u> – Ability to communicate with other computers and robots OR voice recognition OR Some indication of learning (with reference to software) eg expert systems or databases ... adaptability	2	<b>DO NOT ACCEPT</b> just sensors or lots of sensors <b>NOT</b> Large processor
5	b	i	Converted/translated/changed (1) (from analogue) to digital (1)	2	1 mark for converted/changed 1 mark for digital Binary/1s & 0s okay Machine code NO
5	b	ii	Standard file format OR universally recognised OR opened in a range of packages/platforms OR portable Takes up less space	1	
5	b	iii	Distance outwith range of wireless transmission OR more chance of signal corruption Speed of transmission/security	1	
5	c		cheaper than a human expert OR always available (any time/place) OR permanent OR (more) consistent/reliable/no human error OR more unbiased than a human expert OR combines knowledge of many experts	2	1 mark for each valid advantage
6	a	i	enable communication (with server) connect to network	1	
6	a	ii	number of bits (1) processed at one time (1)	2	1 mark for bits, other mark for notion of simultaneous processing.

Question			Expected Answer/s	Max Mark	Additional Guidance
6	b		ability to function effectively on different types of computer system/operating system (portable software) can work on different platforms (without requiring too many changes)	1	1 mark for notion of multi-platform use 0 marks for 'carry it about'!
6	c		TYPE = compiler (1) Reason – no need for translator when running program OR results in program that runs faster OR ensures finished program is portable Requires less memory	2	TYPE – no other answer 1 mark for type 1 mark for valid reason. Type may be wrong while reason is correct so do not deduct 2nd mark.
6	d	i	(Concept of) addressability with unique code OR each location has a unique address	1	
6	d	ii	File management OR error reporting OR command interpretation OR Program scheduling OR input-output control (user interface/HCI)	1	
6	e		Immediate availability at switch-on OR provides protection from possible data corruption/virus attack OS cannot be deleted or edited	1	
6	f		DEVICE = VR(data) gloves OR VR (data) headset OR VR chair OR VR jacket/vest Motion sensor VR goggles	2	1 mark for suitable device  1 mark for description of use of that device.

[END OF MARKING INSTRUCTIONS]