

Mark Scheme for June 2010

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by Examiners. It does not indicate the details of the discussions which took place at an Examiners' meeting before marking commenced.

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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Question	Expected Answer	Mark	Additional Guidance
1		[7]	Deduct one mark for each line over 7

Question		Expected Answer	Mark	Additional Guidance
2	(a)	<p>One mark for any three from</p> <ul style="list-style-type: none"> • e-mail (1) • selling products/services (1) • ordering / purchasing (1) • marketing/advertising products/services (1) • training / support (1) • recruitment (1) • banking (1) • information publication (1) • VLE (1) • information acquisition/searching (1) • video conferencing (1) • voice over IP (1) • remote backup (1) 	[3]	<p>Accept one word answers</p> <p>DNA entertainment, making/updating website</p> <p>Contacting suppliers (1)</p> <p>Backup websites(1)</p> <p>Checking competitors(1)</p> <p>Discussion forums/chat lines/blogs (1)</p>
2	(b)	<p>One mark for each valid example up to three</p> <p>Manual input</p> <p>Keyboards, concept keyboard, touch screens, mouse, keypad, microphone, joystick.</p>	[3]	<p>Accept one word answers</p> <p>Touchpad(1)</p> <p>Tracker ball(1)</p> <p>Graphics tablet(1)</p>
2	(c)	<p>Automated input</p> <p>Bar code reader, OMR (Optical Mark Recognition), OCR (Optical Character Recognition), Scanners, Infrared detectors, Pressure sensors, Light sensors, Card readers, MICR (Magnetic Ink Character Recognition]</p>	[3]	<p>Webcam(1)</p> <p><u>Digital</u> camera(1)</p>
2	(d)	<p>Output devices</p> <p>Speakers, Printers (Inkjet, Dot matrix, Thermal, Laser), VDU / Monitor, Plotters, Motors</p>	[2]	<p>One mark max for printer</p> <p>Computer screen(1)</p> <p>Projector(1)</p>

Question		Expected Answer	Mark	Additional Guidance
3	(a)	<p>One mark for each valid point</p> <ul style="list-style-type: none"> • The information is more likely to be up to date. (allow updated) • Research could include sound or video clips • Could be many more (sources of) information. • May be more fun/motivating to do the research. • Could use search engines to find specific information (quicker to find/faster to search/more efficient to search) • Use chat lines to ask questions • Several languages • Books can be lost or damaged • Get printouts • Export to other documents 	[3]	<p>NOT faster to look for or faster to find/load/quicker/cheaper (or equivalent) DNA No need to travel</p> <p>More information(1)</p> <p>Can find answers to questions using chatlines/discussion boards/forums to ask questions(1)</p>
3	(b)	<p>One mark for a (suitable) search engine another for expansion e.g. Type in suitable search criteria/words/what you are looking for Review finds for the most likely/suitable hits Refine search as needed</p>	[2]	<p>Allow brand names for search engines e.g google/yahoo/ greenpeace Use search engine(1)</p>
3	(c)	<p>One mark for each valid point:</p> <ul style="list-style-type: none"> • Can take the book anywhere • Much more likely to be sure of the source of the information/correct. • Access to the internet may be interrupted • Access to the internet costs money • Computer might breakdown/not available/not enough computers • Know exactly which book the info is in! specific book • Habit/like books/known the system 	[2]	<p>NOT just easier to use NOT certain information may not be on the Internet</p>
3	(d)	<p>One mark for: Teletext (or similar) CD-ROM. Allow other text eg magazine</p>	[1]	<p>Allow CD/ video/newspapers/brochures/leaflets NOT using/consulting specialists</p>

Question		Expected Answer	Mark	Additional Guidance
4	(a)	<ul style="list-style-type: none"> • A program (1) Plus two additional marks for a valid point. <ul style="list-style-type: none"> • replicates itself • destroys data • corrupts data • can be transferred by email • can be transferred by network • can be transferred by disk/storage medium 	[3]	Do not give marks for brand names Must have 'program' to award further marks
4	(b)	One mark for each correct way up to 3 <ul style="list-style-type: none"> • use/install a virus checker • make sure your virus checker is up to date • set to scan every disk when inserted • don't let staff use media from outside company 	[3]	Do not give marks for brand names Do not give marks for open email from unknown sources Anti virus/ virus protection program (1) Don't open attachments/programs/files from unknown sources (1) Firewalls(1) Block websites(1)
5		Recycling One mark for each correct point e.g. Upgrade only what is absolutely necessary Recycle as much as you can e.g. mice etc Don't use landfill	[2]	Recycle/send abroad/give away/give to charity(1)

Question	Expected Answer	Mark	Additional Guidance
6	<p>Term</p> <div style="display: flex; flex-direction: column; gap: 10px;"> <div style="border: 1px solid black; padding: 5px; width: 150px;">Calibrate</div> <div style="border: 1px solid black; padding: 5px; width: 150px;">Data logging</div> <div style="border: 1px solid black; padding: 5px; width: 150px;">Feedback</div> <div style="border: 1px solid black; padding: 5px; width: 150px;">Logging period</div> <div style="border: 1px solid black; padding: 5px; width: 150px;">Sensor</div> </div>	<p>Definition</p> <div style="display: flex; flex-direction: column; gap: 10px;"> <div style="border: 1px solid black; padding: 5px;">The time taken between the first reading being taken and the last reading being taken.</div> <div style="border: 1px solid black; padding: 5px;">An input device used to measure environmental conditions.</div> <div style="border: 1px solid black; padding: 5px;">Collecting and storing of data at regular fixed intervals over a period of time.</div> <div style="border: 1px solid black; padding: 5px;">The modification or control of a process or system by its results or effects.</div> <div style="border: 1px solid black; padding: 5px;">To match the readings of a sensor against those of a known standard.</div> </div>	<p>Deduct one mark for each line over 5</p> <p style="text-align: right;">[5]</p>

Question			Expected Answer	Mark	Additional Guidance
7	(a)		Desktops can consume up to 10 times more energy than laptops Can accept any description like this e.g. more energy use.		Only accept energy statement Accept power in place of energy. DNA Does not need to be plugged in Run off battery(1) Solar powered laptops(1)
7	(b)	(i)	One mark for each valid statement up to two but MUST relate to the company Benefits to the company saves time of travel/saves cost of travel (1) meetings can be organised with less notice (1) can span countries (1)	[2]	Candidates will use their own words here look for key points
7	(b)	(ii)	One mark for valid statement up to two Limitations lack of face to face interaction (1) technical problems e.g. system may fail/slow response time (1)	[2]	DNA set up/running costs Unable to interpret body language (1)

Question		Expected Answer		Mark	Additional Guidance	
8			Description	Tick three boxes only		Deduct one mark for each tick over three
			Data validation is the checking of data during output			
			Validation checks that data is correctly spelt			
			Data validation is the checking of data during input	✓		
			During validation the data is checked by software	✓		
			Validation checks that data is reasonable	✓		
			During validation the data is checked by hardware			
			Validation checks that data is totally correct			
			Data validation is the checking of data during processing			
			During validation the data is checked by people			
9			Marks awarded for including the elements listed <ul style="list-style-type: none"> • all elements 3 marks, 4 elements 2 marks, 3 elements 1 mark, 0-2 elements zero marks • Use of space for replies to questions one mark • Use of elements such as drop down lists up to two marks one for use one for appropriateness • Two valid additional questions one mark for each 	[3]	No marks for colour No marks for lines for replies to questions	
				[8]		

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