Mark Scheme Summer 2009

GCSE ICT (1185/3185)

A PEARSON COMPANY

Contents

General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.

- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.

- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.

- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.

- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.

- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.

- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.

- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

1185 and 3185/2F

Section A

Question Number	Answer	Mark
1	D	1

Question Number	Answer	Mark
2	A	1

Question Number	Answer	Mark
3	C	1

Question Number	Answer	Mark
4	B	1

Question Number	Answer	Mark
5	B	1

Question Number	Answer	Mark
6	A	1

Question Number	Answer	Mark
7	C	1

Question Number	Answer	Mark
8	B	1

Question Number	Answer	Mark
9	A	1

Question Number	Answer	Mark
10	B	1

Question Number	Answer	Mark
11	C	1

Question Number	Answer	Mark
12	A	1

Question Number	Answer	Mark
13	A	1

Question Number	Answer	Mark
14	C	1

Question Number	Answer	Mark
15	A	1

Question Number	Answer	Mark
16	C	1

Question Number	Answer	Mark
17	C	1

Question Number	Answer	Mark
18	A	1

Question Number	Answer	Mark
19	D	1

Question Number	Answer	Mark
20	C	1

Question Number		Answer	Poss. Mark	Max Mark
1	(a)			
	(i)	35	1	
	(ii)	A4	1	
		allow 4A	1	
	(iii)	F7	1	
		allow 7F	1	
				3

Question Number		Answer	Poss. Mark	Max Mark
1	(b)	Formatting/format	1	
				1

Question Number		Answer	Poss. Mark	Max Mark
1	(c)	= C6 – D6	1	
		Allow = SUM (C6 - D6)	1	
		Allow formula without =		
		Not =SUM C6-D6		
				1

Question Number		Answer	Poss. Mark	Max Mark
1	(d)			
	(i)	=F3/10	1	
		All of the following work no matter what the order.		
		=F3*0.1	1	
		=F3*10%	1	
		=(F3/100)*10 – works with or without the bracket	1	
		=(F3*10/100) – works with or without the bracket	1	
		=sum(F3/10)	1	
		Not =sumF3/10		
		Allow without =		
				1
	(ii)	= F3 + G3		
		= G3 + F3	1	
		= SUM(F3:G3)	1	
		Allow = SUM (F3 + G3)	1	
		Allow = SUM (G3 + F3)	1	

Question Number		Answer	Poss. Mark	Max Mark
		Allow formula without =		
		Allow calculations of 110% eg F3*110	1	1

Question Number		Answer	Poss. Mark	Max Mark
1	(e)			
	(i)	Highlight / select	1	
		Correct cells identified - A1:A7 and D1:D7 or A2:A7 and D2:D7 or B1:B7 and D1:D7 or B2:B7 and D2:D7	1	
		Insert Graph / Select Graph Icon / bar chart icon / menu / wizard / Open bar chart / graph	1	
		Select type of bar chart	1	
		Add / label / edit title	1	
		Add / label / edit axis / other details	1	
		Any other sensible editing eg add key NOT just colour	1	
				6
		Reasonable English (1) / good English (2) 1 mark for 2 technical terms, spelt correctly, from: - highlight - insert / select - icon / menu / wizard - column / cell	QoWC	3
			Total	16

Question Number		Answer	Poss. Mark	Max Mark
2	(a)	CAD, Computer aided design	1	
				1

Question Number		Answer	Poss. Mark	Max Mark
2	(b)	plotter	1	
				1

Question Number		Answer	Poss. Mark	Max Mark
2	(c)			
	(i)	word processor	1	
		Allow DTP (Desktop publishing)	1	
		Do not accept Word/Publisher or other named software		
				1
	(ii)	Homophones eg there their	1	
		UK US differences eg colour color	1	
		Incorrectly spelt place names (or other names) **Not** 'names' or 'customer names' **Allow any reference to names once only**	1	
		Mixed letters and numbers eg stock numbers / post code /email address	1	
		Mistakes in word art	1	
		Do not allow numbers	1	
		Correctly spelt words not in dictionary	1	
		Any other sensible response	1	
				2
	iii	grammar check	1	
				1
	(iv)	visual check	1	
		proof read	1	
		check by self	1	
		recheck	1	
				1

Question Number		Answer				Poss. Mark	Max Mark
2	(d)	1 mark for each correct entry					
			Input	Output	Storage		
		Monitor		✓			
		Mouse	✓				
		Floppy Disk Drive			✓		
		Scanner	✓				
		Keyboard	✓				
		Hard Drive			✓		
							6
						Total	12

Question Number		Answer	Poss. Mark	Max Mark
3				
	(a)			
	(i)	6	1	
	(ii)	Ref. No.	1	
				2

Question Number		Answer	Poss. Mark	Max Mark
3	(b)	Addition – New customer	1	
		Deletion – no longer customer / customer hasn't bought furniture for a long time	1	
		Customers details change – allow examples Last purchase date Correct errors	1	
				3

Question Number		Answer	Poss. Mark	Max Mark
3	(c)			
	(i)	Last Purchase Date	1	
	(ii)	Sort	1	
				2

Question Number		Answer	Poss. Mark	Max Mark
3	(d)			
		Type check	1	
		Length check	1	
		Range check	1	
		Format check / input mask	1	
		Look up check	1	
		(Accept well explained examples in context of Ref. No. without name)	1	
				2
			Total	9

Question Number		Answer	Poss. Mark	Max Mark
4	(a)			
		Share documents / files / folders / data	1	
		Share peripherals / printers	1	
		Security can be centrally managed	1	
		Backup can be centrally managed	1	
		Files (to share) can be uploaded centrally	1	
		Software can be installed easily / faster / centrally	1	
		Can use any workstation / hotdesking	1	
		Communicate with other workstations	1	
		Monitor / control users	1	
		Only 1 internet connection needed	1	
		Terminals cheaper than stand-alones	1	
		Not share software		
				3

Question Number		Answer	Poss. Mark	Max Mark
4	(b)	Expensive to install / increased cabling	1	
		Network manager / technician	1	
		Reliance on server / network failure	1	
		Performance eg lots of users / sharing peripherals	1	
		Users need to be trained	1	
		Viruses spread quickly **Allow** viruses will spread to all machines	1	
		Not just need for security **Must** show need for more / increased security required		2
			Total	5

QUESTION		ANSWER	POSS. MARK	MAX
1	(a)	Presentation / multi media	1	
		NOT PowerPoint or other named product		
				1

QUESTION		ANSWER	POSS. MARK	MAX
1	(b)	resize / enlarge /made bigger **Not** zoom	1	
		rotate	1	
		crop	1	
				3

QUESTION		ANSWER	POSS. MARK	MAX
1	c			
	(i)	movement of text / pictures / graphics on screen	1	
		ways in which slides / images / text appear on to and off screen	1	
		Way in which image moves eg spin	1	
		Sensible example	1	
				2
	(ii)	microphone	1	
				1
	(iii)	speaker / headphones	1	
				1

QUESTION		ANSWER	POSS. MARK	MAX
1	(d)	on timer	1	
		hyperlink	1	
		action button	1	
		space bar	1	
		enter key	1	
		right / left arrow keys	1	
		Not keyboard / any key	1	
		Click arrow on remote **Not** remote	1	
				2

QUESTION		ANSWER	POSS. MARK	MAX
1	(e)	projector **Allow** overhead projector **Not** OHP	1	
		screen / white board / interactive white board	1	
		speakers	1	
		Not monitor		
				2
			Total	12

QUESTION		ANSWER	POSS. MARK	MAX
2	(a)	keyboard	1	
		mouse	1	
		scanner	1	
		digital camera	1	
				1

QUESTION		ANSWER	POSS. MARK	MAX
2	(b)			
	(i)	2 correct lines = 1 mark		
		4 correct lines = 2 marks		
		6 correct lines = 3 marks		
		<table><tr><td>Speed</td><td>Printer Type</td><td>Method of printing</td></tr><tr><td>Slow</td><td>Laser</td><td>Inked ribbon</td></tr><tr><td>Fast</td><td>Dot matrix</td><td>Toner</td></tr><tr><td>Medium</td><td>Ink jet</td><td>Liquid ink</td></tr></table> Slow – dot matrix – inked ribbon Fast – laser – toner Medium – ink jet – liquid ink		
				3
	(ii)	monitor / screen / VDU / GDU	1	
				1

QUESTION			ANSWER	POSS. MARK	MAX
2	(c)				
		(i)	program	1	
					1
		(ii)			

Description	Feature
Small pictures representing commands	icons
Lists of options	menus
Rectangular displays on the screen	windows
Arrows that can be moved around the screen	pointers

| | | | | | 4 |

QUESTION		ANSWER	POSS. MARK	MAX
2	d	Change regularly	1	
		Keep it secret / don't tell anyone	1	
		Mix letters & numbers / punctuation marks	1	
		Mix upper and lower case	1	
		Don't choose anything obvious	1	
		Don't write down	1	
		Minimum 6 characters	1	
		Don't let people see you entering it	1	
		Make it something you will remember / memorable	1	
				4
			Total	14

QUESTION		ANSWER	POSS. MARK	MAX
3	(a)			
	(i)	Order 24/7	1	
		Don't have to leave home **to post a letter** NOT 'Don't have to leave home to go to shop'	1	
		Will know if in stock	1	
		Automatic confirmation of order / know order is received	1	
		More reliable / can't get lost in the post	1	
		On-line discounts	1	
		Latest offers / new arrivals / wider range / all stock	1	
		Save postage / telephone call for sending the order	1	
		Easy to compare prices with other sites	1	
		Faster turnaround	1	
		Order tracking	1	
		Secure payment systems	1	
				3
	(ii)	Can receive orders 24/7	1	
		Fewer errors	1	
		Orders go **directly** into the computer system/ no need to input data **Not** just 'orders processed by computer'	1	
		Fewer staff needed	1	
		Not cheaper / saves cost without justification eg cost of brochures	1	
		Wider customer base	1	
		Receive payment before despatch / better cash flow	1	
		Orders not lost in post	1	
				3
		** Stress is mail order v online, therefore no answers relating to shops		

QUESTION		ANSWER	POSS. MARK	MAX
3	(b)	(credit card) fraud / bogus web site	1	
		Identity theft	1	
		Hacking	1	
				2

QUESTION		ANSWER	POSS. MARK	MAX
3	(c)	Open search engine / use ISP search facility Allow 'google it' – **not** 'go to google'	1	
		Enter search criteria	1	
		Choose site from list	1	
		Narrow search to UK sites /refine search	1	
				3
		Reasonable English (1) / good English (2) 1 mark for 2 technical terms, spelt correctly, from: - criteria / key words - lInk / hyperlink - search engine - select /click		
			QWC	3

QUESTION		ANSWER	POSS. MARK	MAX
3	(d)	Processed fairly and lawfully	1	
		Obtained fairly and lawfully	1	
		Processed in accordance with rights of data subject	1	
		Data must be relevant	1	
		Data must be adequate / not excessive	1	
		Data must be kept only as long as necessary	1	
		Must be kept secure	1	
		Cannot be sent outside of the European Union (unless has same level of protection)	1	
		Data must be shown to subjects on request	1	
		Must specify the purpose for holding the data	1	
		ACCEPT Must register with DP registrar	1	
		Not Data may not be passed to others		
				2

QUESTION		ANSWER		POSS. MARK	MAX
3	(e)	Eye Strain	Anti-glare screens / screen filter	1	
			Suitable lighting	1	
			Avoid sunlight reflecting on screen/ blinds at windows	1	
			Swivelling screens	1	
			Focus on distant objects	1	
			Adjust brightness	1	
		Back	Adjustable chairs	1	
			Height of tables / chairs	1	
			Footrests / backrests	1	
			Tilting screens	1	
			Swivelling screens	1	
			Ergonomic furniture	1	
			Not comfortable chairs	1	
					2
				Total	18

QUESTION		ANSWER	POSS. MARK	MAX
4	(a)			
		24/7	1	
		Avoids human error	1	
		More accurate	1	
		Regular time intervals can be set (for checking values)	1	
		More frequent readings / shorter time intervals	1	
		Better response time	1	
				3

QUESTION		ANSWER	POSS. MARK	MAX
4	(b)			
	(i)	1 mark for each correct point

(Flow chart at end of mark scheme) | 5 | |
				5
	(ii)	Input device	1	
		Detects / takes a reading / measures
Not senses	1	
		Physical quantity – allow examples
Do not allow changes in physical quantities	1	
				2
			Total	10

QUESTION		ANSWER	POSS. MARK	MAX
5	(a)			
		Interview / ask staff (users)	1	
		Questionnaires / survey	1	
		Study documentation	1	
		Observation	1	
		Hold meeting / set up a focus group	1	
		Not try it herself		
				3

QUESTION		ANSWER	POSS. MARK	MAX
	(b)			

Stage 1	Investigation
Stage 2	Analysis
Stage 3	Design
Stage 4	Implement
Stage 5	Testing
Stage 6	Monitor

5 correct = 3 marks
3 correct = 2 marks
2 correct = 1 mark

MAX: 3

QUESTION		ANSWER	POSS. MARK	MAX
	(c)			
	(i)	Extreme – 6 or 36	1	1
	(ii)	Typical – 12, 17, 24, 13 ,19, 29	1	1
	(iii)	Invalid - 41, 37	1	1
			Total	9

Question C4 bi

```
                        ( Start )
                           |
                           v
         +------------------------------------+
    ->   |          Input                     |
    |     \         Temperature              /
    |      +------------------------------+
    |                  |
    |                  v
    |                 / \
    |                /   \          No
    |               / Is  \  ----------------+
    |              /temperature\             |
    |              \ < 22° C ? /             |
    |               \         /              |
    |                \   /                   |
    |                 | Yes                  |
    |                 v                      |
    |     +------------------------------+   |
    |     |   Turn on                    |   |
    |      \  Heater                    /    |
    |       +--------------------------+     |
    |                  |  <--------------------+
    |                  v
    |                 / \
    |                /   \          No
    |               / Is  \  ----------------+
    |              /temperature\             |
    |              \ > 28° C ? /             |
    |               \         /              |
    |                \   /                   |
    |                 | Yes                  |
    |                 v                      |
    |     +------------------------------+   |
    |     |   Turn off                   |   |
    |      \  Heater                    /    |
    |       +--------------------------+     |
    |                  |                     |
    +------------------+---------------------+
```
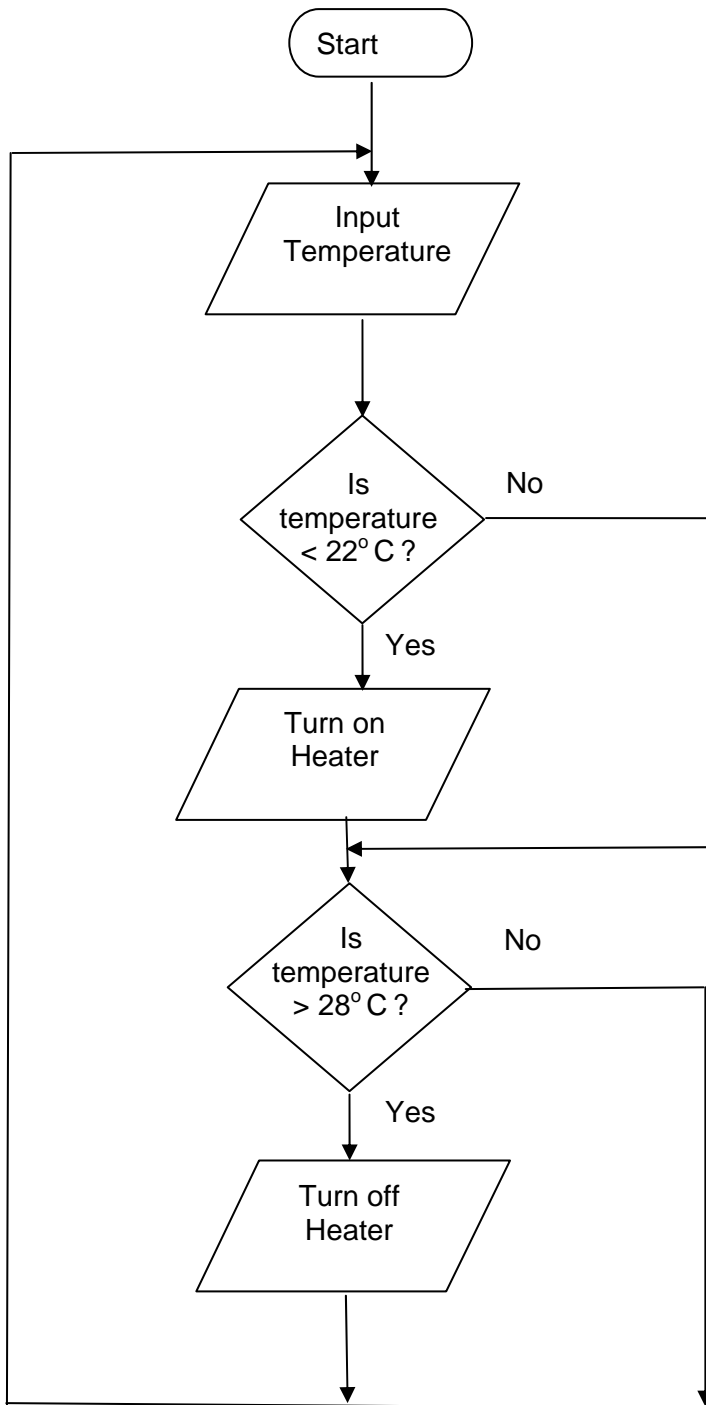
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Section A

Question Number	Answer	Mark
1	A	1

Question Number	Answer	Mark
2	C	1

Question Number	Answer	Mark
3	A	1

Question Number	Answer	Mark
4	C	1

Question Number	Answer	Mark
5	C	1

Question Number	Answer	Mark
6	A	1

Question Number	Answer	Mark
7	D	1

Question Number	Answer	Mark
8	C	1

Question Number	Answer	Mark
9	A	1

Question Number	Answer	Mark
10	C	1

Question Number	Answer	Mark
11	C	1

Question Number	Answer	Mark
12	C	1

Question Number	Answer	Mark
13	A	1

Question Number	Answer	Mark
14	D	1

Question Number	Answer	Mark
15	D	1

Question Number	Answer	Mark
16	B	1

Question Number	Answer	Mark
17	D	1

Question Number	Answer	Mark
18	A	1

Question Number	Answer	Mark
19	B	1

Question Number	Answer	Mark
20	A	1

QUESTION		ANSWER	Poss. Mark	Max Mark
1	(a)			
	(i)	=E3/10	1	
		All of the following work no matter what the order.		
		=E3*0.1	1	
		=E3*10%	1	
		=(E3/100)*10 – works with or without brackets	1	
		=(E3*10/)100 - works with or without brackets	1	
		=sum(E3/10)	1	
		Not =sumE3/10		
		Allow without =		
				1
	(ii)	= F3 + E3	1	
		= E3 + F3	1	
		=SUM(E3:F3)	1	
		Allow = SUM (F3 + E3)	1	
		Allow = SUM (E3 + F3)	1	
		Allow formula without =		
		Allow calculations of 110% eg E3*1.10 / E3*110%	1	
				1

QUESTION		ANSWER	Poss. Mark	Max Mark
1	(b)	=IF(D2<H2,"Y","N") =IF(H2>D2,"Y","N") Completely correct including () and ""	3	
		Correct tests and values & incorrect () or ""	2	
		=IF(22<35,"Y","N")	2	
		=IF	1	
		Allow formula without =		
				3

QUESTION		ANSWER	Poss. Mark	Max Mark
1	**(c)**	Select / Highlight	1	
		Correct cells identified - A1:A7 and D1:D7 or A2:A7 and D2:D7 or B1:B7 and D1:D7 or B2:B7 and D2:D7	1	
		Insert Graph / Select Graph Icon / bar chart icon / menu / wizard / Open bar chart / graph	1	
		Select type of bar chart	1	
		Add / label / edit title	1	
		Add / label / edit axis / other details	1	
		Any other sensible editing NOT just colour	1	
		Reasonable English (1) / good English (2) 1 mark for 2 technical terms, spelt correctly, from: - highlight - insert / select - icon / menu / wizard - column / cell	QoWC	3
			Total	14

QUESTION		ANSWER	Poss. Mark	Max Mark
2	(a)			
	(i)	CAD, Computer aided design	1	1
	(ii)	Accurate scale drawings	1	
		Can scale up and down /zoom in	1	
		Easily edited/manipulated	1	
		Can be viewed in 3D	1	
		Can be viewed from various angles	1	
		Build components library	1	
		Can be linked with a CAM program	1	
		Saves time when re-drawing of plans is required. (Must be justified)	1	
		Can view designs in different finishes/wood	1	
		Measurements on designs	1	
				3

QUESTION		ANSWER	Poss. Mark	Max Mark
2	(b)			
		Graphics card	1	
		Graphics tablet / sketch pad / graphics pad	1	
		High resolution monitor or GDU **NOT** monitor	1	
		Plotter	1	
		A3 printer or larger printer	1	
		Extra / large amount RAM	1	
		CAM machine	**1**	
				3
			Total	7

QUESTION			ANSWER	Poss. Mark	Max Mark
3					
	(a)				
		(i)	A check by computer (software)	1	
			On data entry	1	
			To ensure data is acceptable, sensible, reasonable, of the right type / follows set rules	1	
			Not accurate / valid / correct		2
		(ii)	Length, 5 digits	1,1	
			Range, 00001 – 99999 / 000000 - 99999	1,1	
			Type, Numerical, numbers only **Allow** Type, Text **only** if there is a clear description of the need to retain leading zeros	1,1	
			Format, nnnnn /input mask, nnnnn	1,1	
			Look up check, to make sure the customer exists in the database	1,1	
			MUST relate examples to Ref No		
			No mark if no named check or incorrect check		
					6

QUESTION			ANSWER		Poss. Mark	Max Mark
3	(b)					
			Logical	Verbal		
			Filter / query / search	Filter / query / search	1	
			Last Purchase Date	Last Purchase Date	1	
			>31/12/07 or >= 01/01/08 and < 01/01/09 or <= 31/12/08	After 31/12/07 And Before 01/01/09	1	
			Allow is the same as / like / = (or equivalent)			
			Allow valid wild card examples eg ??/??/08 ##/##/08 **/**/08 **Do Not Allow** --/--/08			3
					Total	11

QUESTION		ANSWER	Poss. Mark	Max Mark
4	(a)			
		Share documents / files / folders / data	1	
		Share peripherals / printers	1	
		Security can be centrally managed	1	
		Backup can be centrally managed	1	
		Files (to share) can be uploaded centrally	1	
		Software can be installed easily / faster / centrally	1	
		Can use any workstation / hotdesking	1	
		Communicate with other workstations	1	
		Monitor / control users	1	
		Only 1 internet connection needed	1	
		Terminals cheaper than stand-alones	1	
		Not share software	1	
				3

QUESTION		ANSWER	Poss. Mark	Max Mark
4	(b)	Expensive to install / increased cabling	1	
		Network manager / technician	1	
		Reliance on server / network failure	1	
		Performance eg lots of users / sharing peripherals	1	
		Users need to be trained	1	
		Viruses spread quickly	1	
		Not just need for security **Must** show need for more / increased security required		
				2
			Total	5

QUESTION			ANSWER	Poss. Mark	Max Mark
5					
			Back button	1	
			Movement back to already visited pages	1	
			Forward button	1	
			Movement to next page	1	
			Home button	1	
			Allow to go directly back to home from different parts of site	1	
			Drop-down menus	1	
			Limit selection choices	1	
			Not drop down lists		
			Hyperlinks	1	
			Movement to other pages	1	
			Hotspots	1	
			movement to other pages	1	
			Site map / menu / contents page / side bar	1	
			movement to other pages	1	
			Search options	1	
			Movement to particular page	1	
			Bookmarks	1	
			Allow to move to a position on a page	1	
			NOT Browser navigator bar		
			Allow buttons / action buttons **only** if have no other eg home button		
				Total	6

QUESTION		ANSWER	Poss. Mark	Max Mark
1	(a)			
	(i)	Order 24/7	1	
		Don't have to leave home **to post a letter** **NOT** Don't have <u>to leave home to go to shop</u>	1	
		Will know if in stock	1	
		Automatic confirmation of order / know order is received	1	
		More reliable / can't get lost in the post	1	
		On-line discounts	1	
		Latest offers / new arrivals /wider range / all stock	1	
		Save postage / telephone call for sending the order	1	
		Easy to compare prices with other sites	1	
		Faster turnaround	1	
		Order tracking	1	
		Secure payment systems	1	
				3
	(ii)	Can receive orders 24/7	1	
		Fewer errors	1	
		Orders go **directly** into the computer system / no need to input data **Not** just 'orders processed by computer'	1	
		Fewer staff needed	1	
		Not cheaper / saves cost without justification eg cost of brochures	1	
		Wider customer base	1	
		Receive payment before despatch / better cash flow	1	
		Orders not lost in post		
		** Is mail order v online, therefore no answers relating to shops		
				3

QUESTION		ANSWER	Poss. Mark	Max Mark
1	(b)	Misuse of credit card, encryption	1,1	
		Fraud, secure sites / encryption bogus website, register with approved eg verisign	1,1	
		Identity theft, spyware	1,1	
		Hacking, firewalls / encryption	1,1	
				4

QUESTION		ANSWER	Poss. Mark	Max Mark
1	(c)	Open search engine / use ISP search facility Allow 'google it' – **not** 'go to google'	1	
		Enter search criteria	1	
		Choose site from list	1	
		Narrow search to UK sites / refine search	1	
				3
		Reasonable English (1) / good English (2) 1 mark for 2 technical terms, spelt correctly, from: - criteria / key words - llnk / hyperlink - search engine - select / click		
			QWC	3

QUESTION		ANSWER	Poss. Mark	Max Mark
1	(d)	Processed fairly and lawfully	1	
		Obtained fairly and lawfully	1	
		Processed in accordance with rights of data subject	1	
		Data must be relevant	1	
		Data must be adequate / not excessive	1	
		Data must be kept only as long as necessary	1	
		Must be kept secure	1	
		Cannot be sent outside of the European Union (unless has same level of protection)	1	
		Data must be shown to subjects on request	1	
		Must specify the purpose for holding the data	1	
		ACCEPT Must register with DP registrar	1	
		Not Data may not be passed to others	1	
				2
			Total	18

QUESTION		ANSWER	Poss. Mark	Max Mark
2				
	(a)	24/7	1	
		Avoids human error	1	
		More / very accurate	1	
		Regular time intervals can be set (for checking values)	1	
		More frequent readings /shorter time intervals	1	
		Better response time	1	
				3

QUESTION		ANSWER	Poss. Mark	Max Mark
2	(b)	Input device	1	
		Detects / takes a reading / measures **Not** senses	1	
		Physical quantity – allow examples Do not allow changes in physical quantities	1	
				2

QUESTION		ANSWER	Poss. Mark	Max Mark
2	(c)	Thermistor	1	
				1

QUESTION		ANSWER	Poss. Mark	Max Mark
2	(d)			
	(i)	Measure any values / every value / range / exact value **ALLOW** a comparison to digital if shows clear understanding eg graphs drawn	1	
		Continuously / constantly	1	2
	(ii)	So that the computer understands the data	1	
		Because digital data is ON/OFF / 1s & 0s	1	
		Computers **only** use digital / cannot read analogue	1	
				2
	(iii)	Interface	1	1

QUESTION		ANSWER	Poss. Mark	Max Mark

QUESTION		ANSWER	Poss. Mark	Max Mark
	(e)	Real-time		1

QUESTION		ANSWER	Poss. Mark	Max Mark
2	(f)	See final page of MS		
		Reading the temperature	1	
		Decision, action for turning on	1,1	
		Decision, action for turning off	1,1	
		For a totally logical correct answer	1	
		Process Input / Output Decision Start / Stop Data Flow		
				6
			Total	18

QUESTION		ANSWER	Poss. Mark	Max Mark
3	(a)	User communication with computer	1	
		Enable software to run	1	
		Controls I/O, peripherals	1	
		Resource allocation	1	
		Command interpretation	1	
		Memory management	1	
		Schedule tasks, multi tasking	1	
		Manages security	1	
		Data transfer	1	
		File management	1	
		Sending error messages	1	
		Monitor system performance	1	
				3

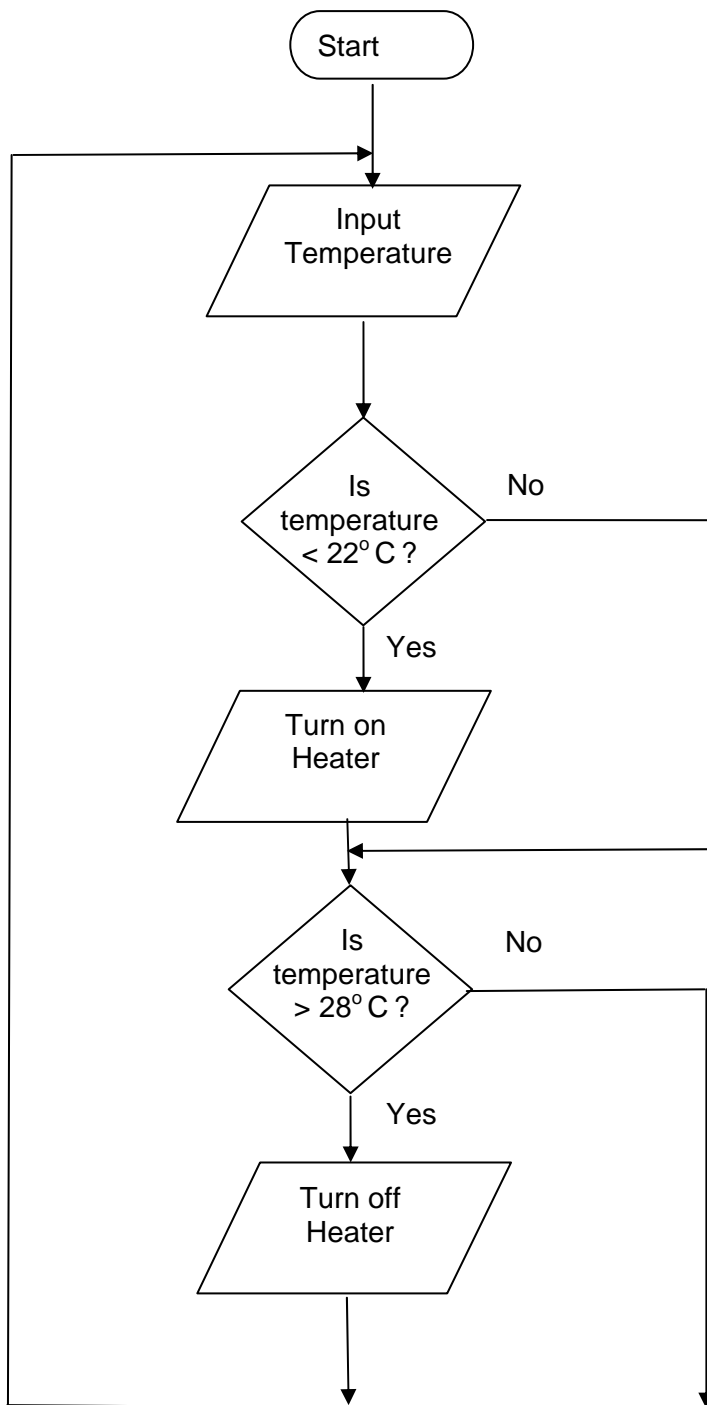| QUESTION			ANSWER	Poss. Mark	Max Mark
3	(b)				
	(i)	Window	Allows to have more than one program running	1,1	
		Menu	Reduces choices Logical organisation Takes user quickly to …	1,1	
		Pointer	Allows movement around screen Highlight areas (Easy to) select from menus / icons	1,1	
					4
	(ii)	Menu driven	Can take a long time to get to destination Difficult to find an item Need to have some idea of headings / terminology used	1,1	
		Command line	Need to understand precise commands Takes a long time / difficult to learn commands Different software uses different commands	1,1	
					4
				Total	11

QUESTION		ANSWER	Poss. Mark	Max Mark
4	(a)			
		Interview / ask staff (users)	1	
		Questionnaires / survey	1	
		Study documentation	1	
		Observation	1	
		Hold meeting / set up a focus group	1	
		Not try it herself		
				3

QUESTION		ANSWER		Poss. Mark	Max Mark
4	(b)	Analysis	1 & 5	1,1	
		Design	3 & 4	1,1	
		Implementation	2 & 6	1,1	
					6

QUESTION		ANSWER	Poss. Mark	Max Mark
4	(c)			
	(i)	Extreme – 6 or 36	1	1
	(ii)	Typical – 12, 17, 24, 13 ,19, 29	1	1
	(iii)	Invalid - 41, 37	1	1

QUESTION		ANSWER		Poss. Mark	Max Mark
4	(d)	Parallel	Old system and new system run together.	1,1	
		Direct	Old system stopped and replaced by new system	1,1	
		Phased	Different parts of the system introduced at different times.	1,1	
		Pilot	The new system is run in part of the organisation	1,1	
					4
				Total	16

Question C2(f)

Start

↓

Input
Temperature

↓

Is
temperature
< 22° C ? —— No ——→

Yes ↓

Turn on
Heater

↓

Is
temperature
> 28° C ? —— No ——→

Yes ↓

Turn off
Heater