Oxford Cambridge and RSA Examinations

OCR

GCSE IN APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY: DOUBLE AWARD   **1494**

ADDITIONAL SPECIMEN ASSESSMENT MATERIALS

This document contains specimen assessment materials for the GCSE Applied Information and Communication Technology. These further specimen questions reflect those found in the original specimen paper (available with the specifications) and are to be used as further practice questions by candidates. They must only be used in conjunction with the original specimen assessment materials which give a guide to the general shape and character of the operational examination paper.

Questions 1-7 refer to Wayne Bagnatt, who is a painter/decorator. He uses a desktop computer to help him with administrative tasks.

1 The table below shows some of the items in Wayne's computer system.

Place a tick in the correct column to show whether each is an input device, output device, main memory or backing storage.

item	input device (✓)	output device (✓)	main memory (✓)	backing storage (✓)
DVD rewriter				
hard disk drive				
inkjet printer				
keyboard				
mouse				
RAM				
screen				
speakers				

[8]

2 Wayne uses a word processor to type letters for customers. One of his letters is shown in Fig.1 opposite.

(a) Ring the following features on the letter in Fig.1 and label them as shown in the table below. You need only label **one** example for each feature.

The first has been done for you as an example.

A	Text with a border
B	Centred text
C	Footer
D	Header
E	Right aligned text
F	Superscript text

[5]

(b) Wayne wanted the list of jobs to stand out, so he put a border around it (labelled A in Fig.1).

Give **two** other methods he could have used to make this list stand out.

Method 1_____

Method 2_____**[2]**

Wayne Bagnatt
Painter and Decorator
General Maintenance • Interior & Exterior • Private & Commercial
Carpentry • Partitioning • Plastering

3rd January 2005

Mrs G Smith
21 New Grove
Anytown
AN5 6YH

Dear Mrs Smith

Quotation to decorate staircase and landing

Following my recent visit I am pleased to offer you the following quotation:

Strip walls
Strip stair rail
Apply two coats of emulsion to ceiling
Undercoat and gloss all woodwork
Paper walls
Remove and paint one radiator, then replace it on completion of job.

A

Price includes all materials and labour

Total £750.00

Should you require any further information or wish to discuss the quotation with me, please do not hesitate to contact me direct on 07731 222111

Yours sincerely

Wayne Bagnatt

Unit 5, Princes Business Estate, Anytown, AN3 2PH Tel:07731
Fax: 01855 438741

Fig.1

3 Wayne uses a spreadsheet to calculate the cost of jobs. Part of his spreadsheet is shown in Fig.2 below.

	A	B	C	D
1	Item	No needed	Price for 1	Cost of items needed
2	Gloss paint			
3	Undercoat			
4	Emulsion paint			
5	Paper, type 1	3	£12.50	
6	Paper, type 2			
7	Labour (hours)			
8	Extras			£23.65
9				
10	Total for items			
11	VAT at 17.5%			
12	Final total			
13				
14				
15				

Fig.2

Wayne has a job that needs:
- 2 cans of gloss paint costing £4.95 each
- 2 cans of undercoat costing £3.50 each
- 1 can of emulsion costing £6.99
- 3 rolls of wallpaper costing £12.50 per roll
- 6 rolls of wallpaper costing £10.99 per roll
- 40 hours labour charged at £9.50 per hour
- Extra items totalling £23.65

Some of these details have been entered into the spreadsheet in Fig.2.

(a) When Wayne enters the price of paper into cell C5 he only has to type **12.5**.

Give **three** reasons explaining how the spreadsheet has been set up to show this price correctly as **£12.50**.

_____

_____

[3]

(b) Fill the rest of the details for this job into the spreadsheet in Fig.2. **[5]**

(c) Write down **three** cells that will contain a formula.

1 _____

2 _____

3 _____ **[3]**

(d) Fill in all the formulas that will be needed in the spreadsheet. Write your answers in the correct cells in Fig.2.

[5]

(e) Wayne offers a discount of 5% for jobs where the Final Total is more than £2000.

Show how the spreadsheet in Fig.2 could be extended to calculate this discount and the reduced total for these jobs. You can use the lines below if there is not enough room in Fig.2 for your whole answer.

_____

_____

_____

_____

_____

_____ **[4]**

4 Wayne needs to keep the data on his computer system safe from loss and damage.

(a) Give **two** possible causes of damage to data on a computer system.

Cause 1 _____

_____

Cause 2 _____

_____ **[2]**

(b) Wayne keeps backups of his important files.

(i) Explain what a backup is and how it helps Wayne keep his data safe.

[2]

(ii) Give **one** important piece of advice Wayne should follow when deciding where to keep his backups.

[1]

5 Wayne keeps records of his customers in a database. Part of his customer database is shown in Fig.3 below.

Title	Surname	Address1	Address2	Telephone number	Last quote (£)	Date of last quote	Quote accepted? (Y/N)
Mrs	Smith	21 New Grove	Anytown	01855 232194	750.00	03/01/05	N
Mr	Uddin	32 Spinney Bank	Anytown	01855 226987	1025.00	22/11/04	Y
Mr	Wood	205 Main Road	Anytown	01855 269455	497.00	11/01/03	Y

Fig.3

(a) Wayne's database software offers the following field types:
- Boolean
- Date
- Numeric
- Text

Give the most suitable field type for each of the fields shown in Fig.3.

Title _____

Surname _____

Address1 _____

Address2 _____

Telephone number _____

Last quote (£) _____

Date of last quote _____

Quote accepted? _____ **[8]**

(b) Wayne would like to telephone all customers who have received a quote in the last 28 days and have not yet accepted it. He needs a printed list of names and telephone numbers for this purpose.

Describe **seven** ways how Wayne can use his database software to create this list.

_____

_____

_____

_____

_____

_____

_____

_____ **[7]**

(c) (i) Name **one** Act of Parliament that Wayne needs to be aware of if he is storing details about people on his computer system.

_____

(ii) Give **three** ways in which this Act attempts to protect those whose data is stored.

Way 1 _____

_____

Way 2 _____

_____

Way 3 _____

_____**[4]**

(d) Wayne's current database only allows him to store details of a customer's most recent quotes.

Explain how the use of more than one database table would allow him to efficiently store and process data about every quote a customer has had. Give **three** examples.

_____

_____

_____

_____

_____

_____ **[3]**

6 Wayne uses a desktop publishing package to produce advertising flyers for his business.

(a) Give **three** features of desktop publishing software that make it particularly suitable for this purpose.

Feature 1 _____

Feature 2 _____

Feature 3 _____ **[3]**

(b) Wayne wants to add pictures to his advertising flyers. He has access to a digital camera, a scanner and clip art.

Compare the advantages and disadvantages of these methods of obtaining pictures for this purpose.

Digital camera _____

_____

_____

_____

Scanner _____

_____

_____

_____

Clip art _____

_____

_____

_____ **[8]**

7 Wayne is considering buying a Personal Digital Assistant (PDA) for use in his work.

(a) What is a PDA? Give **two** explanations

_____

_____

_____ **[2]**

(b) Discuss the benefits and drawbacks to Wayne of buying a PDA.

_____

_____

_____

_____

_____

_____ **[5]**

Questions 8-11 refer to **Fine'n'Fresh**, which is a chain of supermarkets operating throughout the UK.

8 Underline **one** device that **Fine'n'Fresh** can use to input data about goods sold at the checkout.

Bar-code reader   **Graphics tablet**   **Mouse**   **Plotter**   **Processor**   **Sensor**

9 The supermarket uses computer control to keep the shop freezers at a constant temperature.

(a) Identify **one** input device and **one** output device that will be needed in the freezers.

Input device _____

Output device _____ **[2]**

(b) Describe how the computer system will use these devices to maintain a constant temperature in the freezers.

_____

_____

_____

_____

_____

_____

_____ **[4]**

10 *Fine'n'Fresh* have an Internet website. Customers can use this website to order goods to be delivered to their home.

(a) Describe the advantages and disadvantages to *Fine'n'Fresh* of having an Internet shopping facility rather than just traditional shops.

Advantages

Disadvantages

[8]

(b) When a customer buys goods online they must enter details of a bank card. This data is encrypted by the website.

What is encryption and why is it used for the bank card data?

[3]

11 Rajesh is the manager of one of *Fine'n'Fresh*'s supermarkets. He wants to show how *Fine'n'Fresh* prices compare with other local supermarkets.

Rajesh collects prices of a number of goods from different supermarkets and enters them into a spreadsheet, shown in Fig.4.

	A	B	C	D	E	F
1	Item	Fine'n'Fresh	Linsters	Lots2Save		
2	Apples	1.25	1.37	1.27		
3	Bread	0.44	0.52	0.42		
4	Flour	0.46	0.51	0.39		
5	Milk	0.58	0.6	0.57		
6	Sugar	0.68	0.69	0.68		
7	Teabags	1.38	1.46	1.4		
8						
9						

fig.4

(a) The amounts shown in the table are correct but they are not displayed well.

Describe **four** ways how Rajesh can use his spreadsheet software to display the numbers as amounts of money.

[4]

(b) Rajesh wants to use this spreadsheet to create a graphical chart comparing the prices of the different items in the three supermarkets.

Describe how Rajesh can use his spreadsheet software to create the graph he wants. Give **four** examples.

[4]

Rajesh extends the spreadsheet to row 200 by adding prices for more items.

(c) Explain why it would not be sensible to display this data in a graphical chart. Give **two** reasons

[2]

(d) Rajesh could use formulas to summarise this data and help him to see how well *Fine'n'Fresh*'s prices compare with the other local supermarkets.

Suggest some formulas that would be useful for this purpose. Explain how they would help Rajesh compare the prices.

[5]

Questions 12-16 refer to **Topgrade Promotions**, an advertising company that creates a wide range of advertising material for other businesses.

Topgrade Promotions has 59 staff, all using computers for their work.

12 Alison works for **Topgrade Promotions**. She designs advertising leaflets for companies. These usually include text about the companies, arranged with suitable graphics.

(a) Give **two** input devices that will meet Alison's needs. Give **one** use for each device.

Input device 1 _____

Use _____

_____

Input device 2 _____

Use _____

_____ **[4]**

(b) Give **two** output devices that will meet Alison's needs. Give **one** use for each device.

Output device 1 _____

Use _____

_____

Output device 2 _____

Use _____

_____ **[4]**

(c) (i) State the **type** of software that would be **most** suitable for Alison's needs.

_____ **[1]**

(ii) Give **three** features of this software that make it suitable for creating leaflets.

Feature 1 _____

Feature 2 _____

Feature 3 _____ **[3]**

13 Alison uses email to send a draft of a leaflet to a client for approval.

(a) Give **three** reasons why it is appropriate to use email for this purpose.

Reason 1 _____

_____

Reason 2 _____

_____

Reason 3 _____

_____ **[3]**

(b) Describe what Alison will need to do to send the leaflet using email.

_____

_____

_____

_____

_____

_____ **[4]**

(c) Describe what happens to the email after Alison has sent it.

_____

_____

_____

_____

_____

_____ **[4]**

(d) Alison complains that she receives a large number of unwanted emails from people she does not know. These are often advertising products or websites.

(i) What is the name given to unwanted emails such as these?

_____ **[1]**

(ii) Identify **two** problems that these unwanted emails cause to Alison.

Problem 1 _____

_____

Problem 2 _____

_____**[2]**

14 Irfan creates advertisements as **interactive multimedia** displays.

(a) Identify the four different types of media that can be included in a **multimedia** presentation.

1 _____

2 _____

3 _____

4_____**[4]**

(b) Describe how Irfan will use his software to make his multimedia presentations **interactive**.

_____

_____

_____

_____

_____

_____

_____**[3]**

15 The staff of *Topgrade Promotions* use a computer network.

    (a) What is a computer network?

        _____

        _____**[1]**

    (b) Give **three** advantages to *Topgrade Promotions* of using a computer network.

        Advantage 1 _____

        _____

        Advantage 2 _____

        _____

        Advantage 3 _____

        _____**[3]**

    (c) It is important that *Topgrade Promotions* keeps its computer network free from viruses.

        (i) What is a computer virus?

            _____

            _____

            _____**[3]**

        (ii) Describe what *Topgrade Promotions* should do to protect the network from viruses.

            _____

            _____

            _____

            _____**[2]**

The **Topgrade Promotions** network is permanently connected to the Internet.

(d) What type of connection is needed for a permanent connection with fast access?

<u>   </u>**[1]**

(e) (i) Identify **one** security problem that can be caused by having a permanent connection to the Internet.

<u>   </u>

<u>   </u>

(ii) State **one** type of software **Topgrade Promotions** should install to protect the network from this problem.

<u>   </u>**[2]**

16 Many of the staff of **Topgrade Promotions** spend most of their working day sitting at their computer.

(a) Repetitive strain injury (RSI) is a problem that can be caused by the use of computers.

(i) Identify **one** ICT device that is associated with RSI.

<u>   </u>

(ii) State **two** items that **Topgrade Promotions** should provide for staff to help prevent RSI.

Item 1 <u>   </u>

Item 2 <u>   </u>**[3]**

(b) Give **two** other possible health problems that can be caused by the use of computers. For each state **one** item that **Topgrade Promotions** should provide for staff to help prevent the problem.

Health problem 1 <u>   </u>

Item <u>   </u>

Health problem 2 <u>   </u>

Item <u>   </u>**[4]**

(c) Give **one** thing that all staff should do to help prevent **all** computer-related health problems.

<u>   </u>**[1]**

(d) Below are four statements about health and safety at work. Only one statement is true. Underline the correct statement.

Staff, not employers, are responsible for making sure they work safely

Companies can subscribe to a voluntary code of practice to protect their staff

There are health and safety laws that set minimum standards for all companies

Health and safety laws only apply to companies with more than 100 employees

[1]

Question 17 refers to *Anyshire Water*, a company supplying water to homes and businesses.

17 *Anyshire Water* uses sensors to monitor the quality of the water they supply. The data from these sensors is sent directly to their computer system.

(a) Give **three** reasons why this method of monitoring water quality is suitable for *Anyshire Water*'s needs, rather than taking readings manually.

Reason 1 _____

_____

Reason 2 _____

_____

Reason 3 _____

_____ **[3]**

(b) The *Anyshire Water* computer system has the following applications software:

- Word processor
- Desktop publisher
- Presentation package
- Database
- Spreadsheet
- Email software
- Web browser

(i) Identify the type of applications software that will be most suitable for analysing the data from the sensors.

_____

(ii) Give **two** features of this software that make it suitable for this purpose.

Feature 1 _____

Feature 2 _____ **[3]**

Question 18 refers to *Walker's Wood Carvings*, a company that makes individual decorative wood objects for the home.

18 Josh works for *Walker's Wood Carvings*. He uses a computer to create designs to suit customers' requirements. These designs are then used by computer-controlled machines to manufacture the actual objects.

(a) Identify the **type** of software that is **most** suitable for Josh to create the designs.

_____ **[1]**

(b) What is the name given to the process of manufacturing using computer-controlled machines?

_____ **[1]**

(c) Explain **two** advantages and **one** disadvantage to *Walker's Wood Carvings* of using computers in this way.

Advantage 1 _____

_____

_____

Advantage 2 _____

_____

_____

Disadvantage _____

_____

_____ **[6]**

APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY: DOUBLE AWARD

1494

ASSESSMENT UNIT 1: ICT knowledge and understanding

MARK SCHEME

Advice to examiners on marking scripts

1 Please ensure that you use the *final* version of the marking scheme.
You are advised to destroy all draft versions.

2 Please mark all post standardisation scripts in red ink. A tick should be used for each answer judged worthy of a mark. The tick should be placed at the point in the answer where the mark has been awarded. The number of ticks should be the same as the number of marks awarded. If two (or more) responses are required for one mark, use only one tick. Half marks should never be used.

3 No comments should be written on scripts.
Remember that scripts may be returned to Centres.

4 The marks awarded for each part question should be indicated in the margin provided on the right hand side of the page. The mark total for each question should be ringed at the end of the question, on the right hand side. These totals should be added up to give the final total on the front of the paper.

5 Correct answers to calculations should gain full credit even if no working is shown unless otherwise indicated in the mark scheme. (An instruction on the paper to 'Show your working' is to help candidates who may then gain partial credit even if their final answer is not correct.)

6 Strike through all blank spaces and/or pages in order to give a clear indication that the whole of the script has been considered.

7 An element of professional judgement is required in the marking of any written paper and candidates may not use the exact words that appear in the mark scheme. If the essence is correct *and* answers the question, contact your Team Leader/Principal Examiner for guidance.

No half marks.
No credit for named software, unless qualified.

No marks for 'quicker', 'easier', 'cheaper', 'more efficient' unless further explanation relevant to the question is given.

Each line on the mark scheme below is worth one mark unless clearly shown otherwise. Items separated by / are alternatives. Items in brackets are not compulsory for the mark.

Question						Marks
1	1 mark each correct row. 0 marks for a row if more than one tick					8

item	input device	output device	main memory	backing storage
DVD rewriter				✔
hard disk drive				✔
inkjet printer		✔		
keyboard	✔			
mouse	✔			
RAM			✔	
screen		✔		
speakers		✔		

Question			Marks
2 (a)	1 mark each correct label		5

A	example – no mark	
B	centred text - any or all of the header, or the title	
C	footer – any or all	
D	header – any or all, up to the line	
E	right aligned text – any of £750.00, telephone or fax no.	
F	superscript text – 'rd' in 3rd (date)	

Question		Marks
(b)	Two from: • bullets • numbering • bold • different font / font size • different colour	2

3	(a)	• format • currency / 2dp • UK / British / sterling / pound signs	3

	(b)	1 mark each correct row If no rows correct, 1 mark for a correct column £ signs and 2dp not necessary for mark – can enter numbers as they would be entered onto a spreadsheet	5

	A	B	C	D
1	Item	No needed	Price for 1	Cost of items needed
2	Gloss paint	2	£4.95	
3	Undercoat	2	£3.50	
4	Emulsion paint	1	£6.99	
5	Paper, type 1	3	£12.50	
6	Paper, type 2	6	£10.99	
7	Labour (hours)	40	£9.50	

	(c)	3 from: • D2 • D3 • D4 • D5 • D6 • D7 • D11 • D12	3

	(d)	= signs not necessary, accept alternative signs that could conceivably be used by software, eg @ or + 1 mark for correct formula in D2. Accept x for * 1 mark for formula in D2 replicated to D3 through D7 (FTC available) 1 mark for each of D10, D11 and D12. Accept other formulas that would work (eg D2+D3+D4+D5+D6+D7+D8 in D10 and D10+D10 * 0.175 in D110	5

	A	B	C	D
1	Item	No needed	Price for 1	Cost of items needed
2	Gloss paint	2	£4.95	=B2*C2
3	Undercoat	2	£3.50	=B3*C3
4	Emulsion paint	1	£6.99	=B4*C4
5	Paper, type 1	3	£12.50	=B5*C5
6	Paper, type 2	6	£10.99	=B6*C6
7	Labour (hours)	40	£9.50	=B7*C7
8	**Extras**			**£23.65**
9				
10	**Total for items**			**=SUM(D2:D8)**
11	VAT at 17.5%			=D10*1.175
12	Final total			=D10 + D11

(e)	Four marks from: • enter label 'Discount' (to A13/14) • enter formula =D12 * 0.05 (1) or =IF(D12>2000,D12*0.05) or =IF(D12>2000,D12*0.05,0) (2) • enter label such as 'Reduced Total' (to A14/15) • enter formula =D12-D13/14 (or to match where discount is) Award marks for entries onto Fig.2 and/or for descriptions written on the lines. Max 3 marks if no check for total >2000 If candidate calculates discount and reduced total in a single formula then award both formula marks (e.g. =IF(D12>2000,D12*0.95) (3) or =D12*0.95 (2)		**4**
4 (a)	Two from: • accidental deletion / overwriting • hardware failure / specific example • virus • hackers / deliberate actions by others Other answers may be accepted if they are clearly possible		**2**
(b) (i)	• A copy of a file • If data is lost/damaged it can be retrieved from the backup		**2**
(ii)	One from • needs to be secure / locked • needs to be safe / fireproof / waterproof etc • needs to be kept away from the computer		**1**

5 (a)	1 mark each correct answer Title Text Surname Text Address1 Text Address2 Text Telephone number Text Last quote (£) Numeric Date of last quote Date Quote accepted? Boolean		**8**
(b)	7 from • choose search / find / query • date of last quote • more/greater than (>)Today –28 (or correct date 28 days before time of sitting paper) • AND • quote accepted equal to (=) N • display names and telephone numbers • create report based on this query • print report / query		**7**
(c) (i)	Data Protection (Act) Correct answer only		**1**
(ii)	3 from • data users have to register • data subjects have a right to see data held about them • data subjects can insist incorrect data is corrected • data must not be held longer than necessary • data must be accurate / up to date • data must not be excessive / only what is needed • data must only be used for the registered purpose • data must be secure • data must not be sent outside EU / to countries without adequate DP laws *NOT* 'data cannot be kept without subject's permission'		**3**
(d)	3 from: • all quotes could be put into a separate table • could have a table connecting quotes to clients • can show more than one table on a form • tables can be linked • can include more than one table in a query / report • don't need to duplicate data • don't need lots of fields if lots of quotes		**3**

		3 from:	
6	**(a)**	• ability to change appearance of text – size, font, colour, highlighting • ability to add pictures/graphics/clip art/images/photos • can crop / rotate / flip pictures • ability to arrange text and pictures on the page • word art / text effects • borders • existence of templates for different leaflet layouts (need more than 'templates') • existence of wizards / smartmasters to guide you through design process (need more than 'wizards') ***NOT*** printing multiple copies Other answers may be accepted if they are features of DTP that are useful in leaflet design	**3**
	(b)	8 from: Digital camera: • can take picture of any **real** object • so can take photographs of products / specific company details • allows people to see what products really look like (only allow once) • don't have to take the picture and then scan it in • need to be where the product / site is to take the photo • files can be very large • which could slow down the computer (only allow once) Scanner: • can scan any picture **from paper** • can scan photographs of products / supplied by customers • allows people to see what the products really look like (only allow once) • takes longer to find paper and scan it in • files can be very large (only allow once) • which could slow down the computer (only allow once) Clip art: • easy and quick to use • ready-drawn • lots to choose from • good quality drawings • include animations / fun pictures • suitable for making leaflets eye-catching/'friendly'/attractive • not unique • can't get pictures specifically about company / products Some candidates might give an advantage from the list above as a disadvantage of another. Award this if not already awarded.	**8**

7	(a)	Two from: • small/hand-held • computer • used as an organiser / diary / address book / for notes	2
	(b)	5 from Benefits: • small / light / easy to carry around • more convenient to get out when vesting clients etc • can quickly find telephone numbers / addresses / appointments etc / don't need to wait for laptop to load OS etc • can link to laptop (to keep data on both up to date) • can link to the Internet to download mail when not convenient to get out laptop • can buy/use a GPS program with it / can find travel directions Drawbacks: • more to carry around / cost to buy when he can do all he needs on his laptop (*NOT* just cost on its own) • easier to lose / get stolen • (if not linked) could end up with incorrect data on either laptop or PDA • not as quick to enter data – no proper keyboard • small screen 1 additional mark available for a reasoned conclusion	5
8		Bar-code reader 0 marks if more than one answer underlined	1
9	(a)	Input device - (temperature) sensor Output device – any attempt at defining a freezing / cooling device	2
	(b)	4 marks from: • sensors constantly • monitor/read the temperature • and send temperature/data to computer/processor • if temperature too high the cooling device is switched on • by the processor • if temperature OK / low enough the cooling device is switched/kept off	4

10 (a)	8 marks from: Advantages: • attracts customers from a larger area (than a local shop) • attracts more customers (1) because of convenience / any other reason for customer satisfaction (1) • makes supermarket appear up to date / efficient • need one to compete with other supermarkets • need fewer / smaller shops • need fewer staff in shops Disadvantages: • need/cost of delivery staff • need/cost of vans • need/cost of freezer facility in vans • might need to travel long distances between customers • cost of petrol • need security on website / problems with hackers • need expertise / cost to construct website • need staff / cost to maintain website There may be other answers worthy of marks, but they must be advantages to the *supermarket.* Max 6 marks for advantages or disadvantages only	**8**
(b)	Max 3 from: Up to 2 marks for what encryption is: • data is scrambled • makes data unintelligible / meaningless • unless you have a (decryption) key Up to 2 marks for why encryption is used for bank card data: • keeps bank card data secure (from hackers) • needed to keep customers' money safe / because it involves money	**3**

11 (a)	• select/highlight/mark numbers/B2 to D7/columns B to D • format • currency / 2dp • UK / British / sterling / £ signs	**4**
(b)	4 marks from: • select/highlight/mark data/columns A to D/A1 to D7 • choose graph option/wizard / click on graph (button) • choose type of graph / bar chart / pie chart / line graph • choose where to put graph • add titles / labels • add/change colours/backgrounds / any other change to format/appearance	**4**
(c)	2 marks from: • too much data / 199 (accept 200) items • too many bars / bars will be too small • hard to see / look too complicated • difficult to read	**2**
(d)	Max 5 marks overall Max 4 marks for formulas: • average price from each supermarket • =AVERAGE(B2:B200) / equivalent for column C or D • average price of items / average • =AVERAGE(B2:D2) / equivalent for any row 3-201 • find difference between FnF price and average • =B2-E2 / =E2-B2 / equivalent for any row 3-201 (E2 must refer to cell containing average) • minimum price of items / average • =MIN(B2:D2) / equivalent for any row 3-201 • find difference between FnF price and minimum • =B2-E2 / =E2-B2 / equivalent for any row 3-201 (E2 must refer to cell containing minimum) Be prepared to award marks for other formulas that would meet the requirements Max 2 marks for reasons, e.g.: • average price for all items allows Rajesh to compare a single number/see how FnF compare overall • average for an item / of averages allows Rajesh to compare FnF price / see if it is above or below average • minimum allows Rajesh to compare FnF price / see if it is the lowest or not There will be other acceptable reasons	**5**

12 (a)	4 marks from two pairs: • keyboard (1) for entering text (1) • mouse/tracker ball/other pointing device (1) for choosing from menus / pointing and clicking / moving items on the page (1) • graphics tablet (1) for drawing (1) • scanner (1) to scan drawings/text from paper into computer (1) • digital camera (1) to enter/take photographs (1)	**4**
(b)	4 marks from • monitor/screen/VDU (1) to see work as it progresses / see what she is doing (1) • printer (1) to print leaflets / get permanent/hard copy / see what leaflets will look like (1) *NOT* just to print	**4**
(c) (i)	desktop publishing / desktop publisher / DTP / publications No other answer acceptable	**1**
(ii)	3 from: • ability to change appearance of text – size, font, colour, highlighting • ability to add pictures/graphics/clip art/images/photos • can crop / rotate / flip pictures • ability to arrange text and pictures on the page • word art / text effects • borders • existence of templates for different leaflet layouts (need more than 'templates') • existence of wizards / smartmasters to guide you through design process (need more than 'wizards') *NOT* printing multiple copies Other answers may be accepted if they are features of DTP that are useful in leaflet design	**3**

13 (a)	3 marks from: • received/delivered quickly / immediately • can get a reply quickly • more convenient than posting / don't have to leave desk • better quality than fax • no need to print leaflet • cheaper to email than post/fax	**3**
(b)	4 marks from: • open email software • write subject/heading • write message • add address / look up address in address book • choose/press attach (option) • choose leaflet / document • choose/press send (option) Max 3 marks if no reference to attaching document	**4**
(c)	4 marks from: • split into packets • sent via telephone lines / modem / router • to Alison's / Topgrade Promotions' service provider • sent via intermediate computers/routers • to client's service provider • reassembled • transferred to client's computer • when client logs onto email	**4**
(d) (i)	Spam	**1**
(ii)	2 marks from: • wastes time • harder to find mail you want • often undesirable/illegal content • might delete wanted mail by mistake • could fill up storage allowance on mailbox/account	**2**
14 (a)	• text • graphics • video/animation • sound	**4**
(b)	3 from: • add hot spots / hyperlinks / add a menu page / add home buttons • click on text/graphic / add a button • choose/click on hyperlink (option) • choose destination	**3**

15 (a)	1 mark for any answer indicating that computers are **linked** together	1
(b)	3 marks from: • can share devices / printers / other example of device • can share data / pictures / other example of data • can use internal email • can have an intranet • can access own work from any computer • centralised management / auditing *NOT* cheaper software	3
(c) (i)	• a program • that copies itself / spreads • that disrupts the way a computer works / deletes/corrupts data/programs	3
(d)	1 mark from • broadband • ISDN • ADSL	1
(e) (i)	1 mark for any answer indicating unauthorised access / hacking	1
(ii)	firewall	1
16 (a) (i)	1 mark from: • keyboard • mouse • pointing device	1
(ii)	2 marks from: • tilted keyboard • ergonomic keyboard • wrist rest on keyboard • wrist rest on mouse mat / for mouse • table large enough for keyboard and mouse • alternative pointing device, e.g. rollerball • alternative to keyboard – microphone/voice recognition software 1 mark for 'wrist rest' on its own	2
(b)	4 marks from paired answers: Problem – eye strain /headaches (1) • TFT screen • screen filter • blinds • diffused lighting Problem – back strain (1) • adjustable (*NOT* comfortable) chair • table of correct height • footrest • monitor at correct height • keyboard/mouse at correct height	4
(c)	1 mark for any answer indicating regular breaks from computer work, whether this is rest breaks or other work. Allow answers that give a particular time that is not completely unreasonable. Any answer less than 30 minutes or more than 4 hours, e.g. 'take a break every 5 minutes' should not be awarded a mark.	1
(d)	There are health and safety laws that set minimum standards for all companies	1

17 (a)	3 marks from • more accurate (*NOT* just 'accurate') readings • more accurate (*NOT* just 'accurate') time intervals • can take readings over long periods of time • can take readings at very short time intervals • automatic / no human intervention needed • data can be transferred directly to a computer (for processing/analysis) • might need to take readings from places that are difficult for people to access	**3**
(b) (i)	Spreadsheet	**1**
(ii)	2 marks from: • ability to do calculations / use formulas • ability to create graphs/charts • automatic layout in table form • easy to copy/replicate formulas • automatic updating / recalculation	**2**
18 (a)	1 mark from • graphics • Computer Aided Design / CAD	**1**
(b)	Computer Aided Manufacture (CAM)	**1**
(c)	Up to 2 marks for each of 2 advantages with explanation: • CAD links to CAM (1) so design automatically produced (1) • changes can be made to designs (1) so individual/changed items can be produced (easily) (1) • fewer employees needed (1) making goods cheaper (1) • automatic process (1) makes goods more quickly (1) • more consistent / better quality (1) because less human error (1) Up to 2 marks for a disadvantage **to the company**, with explanation • cost (1) of setting up / buying equipment / training staff (1) • need more skilled staff (1) which costs more (1) • products will look machine produced (1) and people like things to look hand-made (1) There are other possible answers. An explanation usually includes the words 'so' or 'because'.	**6**
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