



## Tuesday 17 January 2012 – Morning

### GCSE APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY (Double Award)

4872 ICT Knowledge and Understanding

Candidates answer on the Question Paper.

**OCR supplied materials:**  
None

**Other materials required:**  
None

**Duration:** 1 hour 30 minutes



Candidate forename		Candidate surname	
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Centre number							Candidate number				
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#### INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Answer **all** the questions.
- Do **not** write in the bar codes.

#### INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this paper is **100**.
- No marks will be awarded for using brand names of software packages or hardware.
- This document consists of **16** pages. Any blank pages are indicated.

Paul runs a small business 'Logo D-zines' which makes logos and emblems for garments such as T-shirts, baseball caps and sweaters.

1 Fig. 1 shows Paul's business card.



Fig. 1

Circle the following features on the business card and label them as shown in the table below. You need only label **one** example for each feature. The first one has been done for you as an example.

Label	Feature
A	Image
B	Bold text
C	Superscript
D	Text aligned right
E	Centre text

[4]

2 The logos produced by Paul's business are stitched onto fabric. He uses CAD/CAM to produce these.

(a) What does CAD/CAM stand for?

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..... [2]

(b) Describe the **advantages** for Paul of using CAD/CAM compared to producing the logos manually.

Advantages of CAD

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Advantages of CAM

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[8]

3 Paul uses a spreadsheet to work out the price to charge for a job. He enters the following information:

- the type of garment
- a set up charge, based on how much design work is needed
- the number of stitches needed for the design
- the number of garments required.

The spreadsheet then calculates the price for the job (Fig. 2).

	A	B	C
1	<b>Job Calculator</b>		
2	Type of garment	T-shirt	
3			
4	Setting up charge	£100.00	
5	Cost per 1000 stitches	£0.15	
6	Number of stitches	4000	
7	Number of garments	100	
8	Cost of stitching garments		£60.00
9	Total cost of job		£160.00
10			
11	Discount		£0.00
12	Subtotal		£160.00
13			
14	VAT	20%	£32.00
15			
16	Price of Job		£192.00

**Fig. 2**

(a) (i) State the formula that would be used in cell C8.

..... [3]

(ii) The total cost of a job in C9 is calculated by adding the setting up charge to the cost in C8.

State the formula that would be used in cell C9.

..... [1]

(iii) If the cost of the job is greater than £500 then there is a 2% discount. The discount is calculated in cell C11.

State the formula that would be used in cell C11.

..... [4]

(iv) Cell C14 shows the amount of VAT payable for a job.

State the formula that would be used in cell C14.

..... [1]

(v) State the formula that would be used to calculate the price for a job.

..... [1]

(vi) When Paul entered the setting up charge in B4 he typed 100.

How has the spreadsheet been set up to display the 100 as £100.00 as shown in Fig. 2?

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.....  
.....  
..... [2]

(b) Paul is concerned that the spreadsheet could be altered accidentally and that unauthorised people could view, edit or delete his work.

(i) Explain how Paul can ensure that the cells where he enters data are the only cells that can be altered.

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.....  
.....  
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.....  
..... [3]

(ii) Explain what Paul should do to ensure that his spreadsheet is fully protected from unauthorised access.

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.....  
..... [2]

(c) Paul saves each job file within a folder labelled with the first three letters of the name of the company for whom he is doing the work. One of Paul's customers is 'Pentachord Clothing'.

(i) The folder for Pentachord Clothing will be labelled 'pen'.

Give **two** reasons why this is not a good method of naming folders.

Reason 1 .....

Reason 2 ..... [2]

(ii) Paul named the first logo file he produced for Pentachord Clothing 'pen1'. He named the second logo file 'pen2' and so on.

Give, with a reason, a better method of naming these files.

Method .....

Reason ..... [2]

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4 'Pentachord Clothing' has the following logo (Fig. 3).



**Fig. 3**

Using design software, Paul manipulated image 1 (Fig. 4 below) until he obtained the final image (image 3).

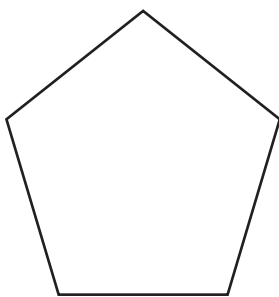


image 1

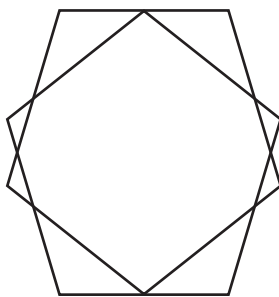


image 2



image 3

**Fig. 4**

(a) Describe the steps Paul has taken to change image 1 into image 2.

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[5]



(b) Describe the steps Paul has taken to change image 2 into image 3.

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..... [4]

5 Paul receives most of the draft designs as email attachments. He works on the design and then sends the file back to the customer to seek final approval.

(a) (i) State one possible danger of opening email attachments.

.....  
..... [1]

(ii) Explain what Paul can do to minimise the danger of opening email attachments.

.....  
.....  
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..... [4]

(b) Explain the advantages and disadvantages to Paul and his customers of using email to send and receive files rather than sending a USB memory stick through the post.

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..... [5]

- 6 When Paul started the company in October 1998 he used a card filing system to store names, addresses and contact details of his customers. Fig. 5 shows one of his cards.

<b>Company Name:</b> Pentachord Clothing
<b>Date of first job:</b> 25th June 2006
<b>Address</b>
<b>First Line:</b> 24 The Terrace
<b>Town:</b> Anytown
<b>Postcode:</b> AY7 2GT
<b>Email:</b> pentachord@nationalmail.com
<b>Telephone number:</b> 04562 337462

Fig. 5

Paul wishes to replace his card filing system with a computerised database.

- (a) (i) Design a data structure for Paul's new database by using the information in Fig. 5 to complete the table below.

Field name	Field type	Field length

[10]

- (ii) Paul uses a validation rule for the date field to ensure that the date entered is not before the 1st October 1998 and not after today's date.

Give a suitable validation rule for this field.

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..... [4]

(b) Give **four** reasons for using a computerised database of customers instead of a card filing system.

Reason 1 .....

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Reason 2 .....

.....

Reason 3 .....

.....

Reason 4 .....

..... [4]

7 Using multimedia presentation software, Paul is creating a set of slides to tell potential customers about his business. One of the slides is shown below (Fig. 6).

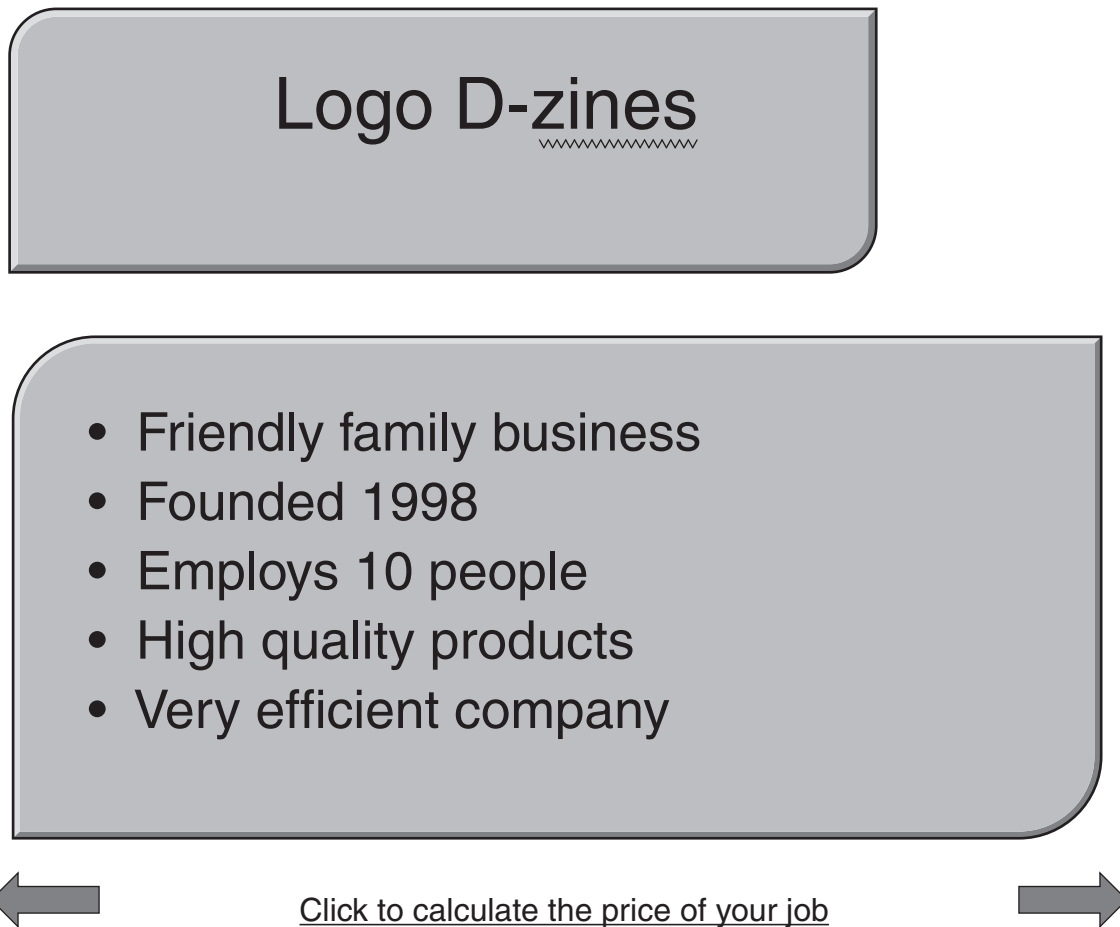


Fig. 6

(a) Other than text, give two multimedia elements that could be incorporated into the presentation.

For each element, give a suitable example and a different reason why it enhances the presentation.

Element 1 .....

Example .....

.....

Reason why the element enhances the presentation .....

.....

.....

Element 2 .....

Example .....

.....

Reason why the element enhances the presentation .....

.....

..... [6]

(b) (i) What is the purpose of the left hand and right hand arrows in Fig. 6?

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..... [2]

(ii) What is the purpose of the underlined words, 'Click to calculate the price of your job' in Fig. 6?

.....

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..... [2]

(iii) Why is there a squiggly line under the letters 'zines' in Fig. 6?

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..... [2]





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