

**GCSE**

**4872**

**APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY**

(Double Award)

UNIT 1: ICT Knowledge and Understanding

**WEDNESDAY 6 JUNE 2007**

Morning

Time: 1 hour 30 minutes

Additional materials:  
Candidates answer on the question paper.



Candidate  
Name

Centre  
Number

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Candidate  
Number

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**INSTRUCTIONS TO CANDIDATES**

- Write your name, Centre number and Candidate number in the boxes above.
- Answer **all** the questions.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- Do **not** write in the bar code.
- Do **not** write outside the box bordering each page.
- **WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED. ANSWERS WRITTEN ELSEWHERE WILL NOT BE MARKED.**

**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.

**FOR EXAMINER'S USE**

<b>1</b>		<b>17</b>
<b>2</b>		<b>14</b>
<b>3</b>		<b>22</b>
<b>4</b>		<b>8</b>
<b>5</b>		<b>9</b>
<b>6</b>		<b>6</b>
<b>7</b>		<b>15</b>
<b>8</b>		<b>9</b>
<b>TOTAL</b>		<b>100</b>

This document consists of **12** printed page.

Southlands Motors sells new and second-hand cars. It has four branches in the UK.

- 1 There is a local area network of six computer systems in the Midlands branch. Two are in the office and the other four are available for use by sales staff in the showroom.

Fig. 1 shows the main components of the computer systems at the Midlands branch of Southlands Motors.

DVD writer	Hard disk drive	Keyboard
Monitor	Mouse	Network Interface Card
Printer	Processor	RAM

Fig. 1

- (a) Place one tick on each row of the following table to show whether the items listed are input devices, output devices or backing storage devices.

The first row has been done for you as an example.

Device	Input device (✓)	Output device (✓)	Backing storage device (✓)
Printer		✓	
DVD writer			
Hard disk drive			
Keyboard			
Monitor			
Mouse			

[5]

- (b) Describe the function of each of the following components:

RAM .....

.....

.....

Processor .....

.....

..... [4]

- (c) Give **three** advantages to the Midlands branch of Southlands Motors of connecting their computer systems in a local area network.

Advantage 1 .....

.....

Advantage 2 .....

.....

Advantage 3 .....

..... [3]

- (d) The Midlands branch can link up to the computers in other branches using an Internet connection.

- (i) Viruses can be a problem when data is shared over an Internet connection.

Describe what Southlands Motors should do to protect their computers against viruses from the Internet.

.....

.....

.....

..... [2]

- (ii) Give **one** other security problem that Southlands Motors needs to be aware of because they are sharing data over the Internet.

Describe what they should do to protect their computers from this problem.

Security problem .....

.....

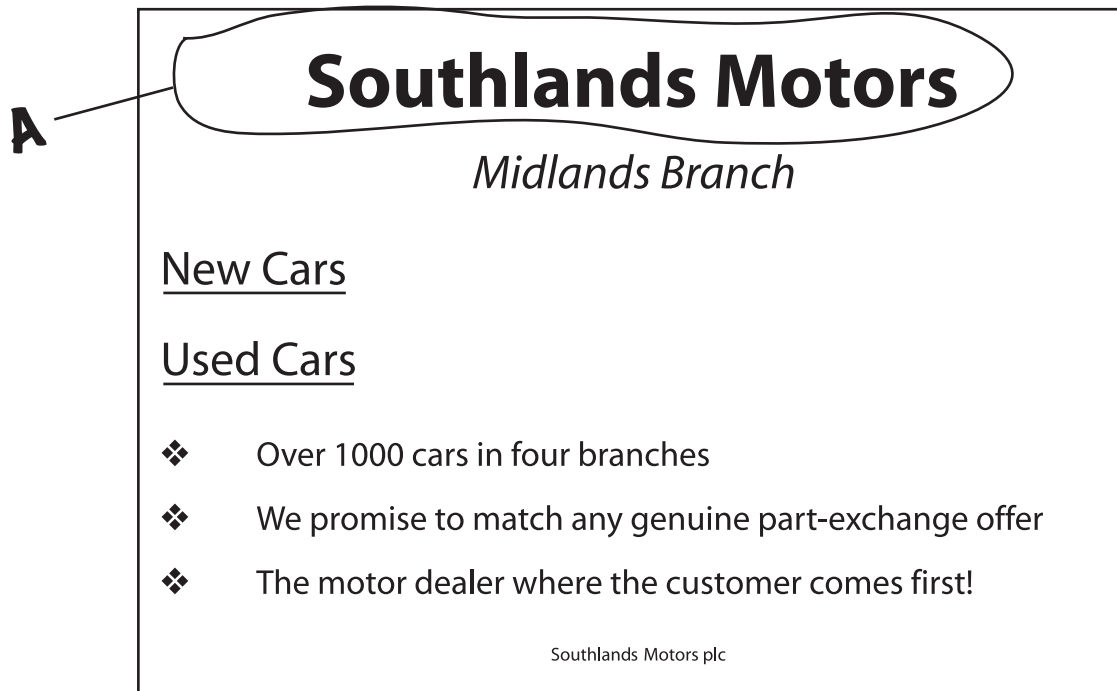
What they should do .....

.....

.....

..... [3]

- 2 Southlands Motors uses a multimedia presentation in the Midlands branch. This allows customers to view the cars available. The first page of this presentation is shown in Fig. 2.



**Fig. 2**

- (a) **Circle** the following features on Fig. 2 and label them as shown in the table below. You need only circle **one** example for each feature.

The first has been done for you as an example.

A	Centred Text
B	Italic Text
C	A hyperlink
D	A bullet
E	Text in a footer

[4]

- (b) Explain why it is not a good idea to underline the title on this page.

.....

.....

.....

..... [2]

(c) The slide in Fig. 2 contains text.

Give the **three** other ways information can be presented using multimedia software.

Way 1 .....

Way 2 .....

Way 3 ..... [3]

(d) Some of Southlands Motors' customers may have little or no experience of using hyperlinks.

Explain **one** improvement you could make to the slide in Fig. 2 to make it easier for customers to use.

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

(e) The presentation is shown on a touch screen in the showroom.

(i) What is a touch screen?

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

(ii) Give **two** advantages of using a touch screen for this purpose.

Advantage 1 .....

.....

Advantage 2 .....

..... [2]

- 3 Amir Hussain is the Sales Manager at the Midlands branch of Southlands Motors. He stores details of customers using database software. Part of his database is shown in Fig. 3.

First Name	Last Name	Address 1	Address 2	Address 3	Date of purchase	Model purchased
John	Smith	2 The Crescent	Ash Park	Midshire	21/05/2005	TC4 sports
Sanjay	Patel	4 Ash Walk	Midtown	Midshire	13/03/2007	TC7 deluxe
Alison	Parker	14 High Road	Ash Park	Midshire	16/09/2004	TC4 classic

**Fig. 3**

- (a) It is important that the data is entered correctly into the database.

Describe **two** different methods Amir should use to minimise data entry errors.

Method 1 .....

.....

.....

Method 2 .....

.....

..... [4]

- (b) Amir wishes to use the information in his database to help create personal invitations to customers.

Give **two** additional fields that will be needed in the database file so that the envelopes can be addressed correctly.

Field 1 .....

Field 2 ..... [2]

- (c) A new type of car has been developed to replace the TC4 model. Amir is planning a special event to launch the new model. He would like to invite all customers who own any type of TC4, who bought the car in 2006 or before.

Describe how Amir can use his database software to produce a list of all customers who own any type of TC4, who bought the car in 2006 or before.

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..... [6]

- (d) Describe the steps Amir should take to efficiently create personally addressed invitation letters to these selected customers.

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..... [5]

- (e) Amir uses relational database software.

Explain what a relational database is and why it might be useful to Amir.

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..... [5]

4 When a customer buys a new car there are many optional extras that can affect the price.

The sales staff at Southlands Motors use computers to calculate the final price of each car including all optional extras.

(a) Identify **one** type of software that is suitable for this purpose.

..... [1]

(b) Give **three** advantages of using a computer with this software, rather than a calculator, to produce quotations of car prices for customers.

Advantage 1 .....

.....

Advantage 2 .....

.....

Advantage 3 .....

..... [3]

(c) Ben is one of the sales staff. He sees a number of different customers every day, most of whom do not decide to purchase a car immediately. Many will contact him again after a few days to continue with the purchase so Ben needs a quick way of finding the quotation he created for these customers.

Describe how Ben can manage his files on the computer network so that he can easily find the one he needs.

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..... [4]



5 Fox Cars is the manufacturing company that makes the new cars sold by Southlands Motors. Fox Cars use CAD/CAM.

(a) Explain the terms and how they will be used by Fox Cars:

(i) CAD .....  
.....  
How used .....  
..... [2]

(ii) CAM .....  
.....  
How used .....  
..... [2]

(b) Give **three** advantages and **two** disadvantages to Fox Cars of using CAD/CAM.

Advantage 1 .....  
.....  
Advantage 2 .....  
.....  
Advantage 3 .....  
.....  
Disadvantage 1 .....  
.....  
Disadvantage 2 .....  
..... [5]

6 Some of the staff at Southlands Motors spend a lot of time using computers.

(a) One possible health risk associated with the use of computers is Repetitive Strain Injury (RSI) to the wrist.

(i) What causes RSI?

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

(ii) Give **two** ways Southlands Motors can protect staff from this risk.

Way 1 .....  
 .....  
 Way 2 .....  
 ..... [2]

(b) Give **two** health and safety requirements that need to be considered when Southlands Motors is buying chairs for staff using computers.

Requirement 1 .....  
 .....  
 Requirement 2 .....  
 ..... [2]

7 Southlands Motors has an Internet website for customers.

(a) Place **one** tick in each row below to indicate whether each statement is true or false.

Statement	True (✓)	False (✓)
Customers can access the website from an Internet café		
Customers need broadband to access the website		
Customers need to have an email address to access the website		
The website is part of the World Wide Web		
The website will load more quickly with broadband rather than dial-up access		

[5]

**(b)** Customers can access the website by typing the URL (uniform resource locator) into the address bar of their browser software.

**(i)** Give **one** other method of accessing the website.

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..... [1]

**(ii)** Give **one** advantage of this method, rather than typing in the URL.

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

**(c)** Discuss the advantages and disadvantages to Southlands Motors of having a website.

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8 Jas is the Finance Manager at Southlands Motors. She sends an email to Ken, who works for another company.

(a) Describe what happens to this email message, after Jas has clicked the send button and before Ken reads it.

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(b) Jas receives a lot of spam in her email inbox.

Explain what spam is and how it causes problems.

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