

**GENERAL CERTIFICATE OF SECONDARY EDUCATION**

**APPLIED INFORMATION AND  
COMMUNICATION TECHNOLOGY**

**4872**

(Double Award)

UNIT 1: ICT Knowledge and Understanding

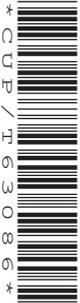
Candidates answer on the question paper

**OCR Supplied Materials:**  
None

**Other Materials Required:**  
None

**Wednesday 14 January 2009  
Morning**

**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 clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided, however additional paper may be used if necessary.

**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.

Examiner's Use Only:			
1			
2			
3			
4			
5			
6			
7			
<b>Total</b>			

Orson Coaches is a company specialising in coach holidays to various destinations in Europe. The company has a fleet of 20 coaches and has an office in Northtown.

1 Orson Coaches uses brochures to advertise its holidays.

Fig. 1 shows a holiday advertisement from one of the brochures.

# Special Offer!

Springtime in the beautiful and romantic city of Paris.

Enjoy a relaxing Easter break at our special price by booking in January. Don't delay — this is one of our most popular European breaks and we expect it to book up quickly.

- Pickup points in convenient locations throughout the UK
- Luxury air-conditioned coaches with extra legroom
- Washroom and coffee facilities onboard



- Fast channel crossing via Eurotunnel
- 3\* half-board accommodation near fashionable Mont Martre
- Full day excursion to Versailles
- Optional excursions every day

**Five days £250**

*(January bookings, normal price £275)*

To book: [www.orsoncoaches.co.uk](http://www.orsoncoaches.co.uk), ☎ 08458 568792

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Fig. 1

(a) Circle the following features on the advertisement 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.

label	feature
A	Bold text
B	Text as a graphic
C	A graphic font
D	Fully justified text
E	Italic text
F	A bulleted list

(b) Identify **two** additional features provided by the software that have been used to create the layout of the advertisement as seen in Fig. 1.

For each feature, explain why it is appropriate.

Feature 1 .....

Why it is appropriate .....

.....

Feature 2 .....

Why it is appropriate .....

..... [4]

2 Fig. 2 shows the front cover for the Orson Coaches brochure.



© iStockphoto.com / Tito Slack

**Fig. 2**

- (a) The photograph in Fig. 2 was copied from a clipart library.
  - (i) Describe **two** other methods Orson Coaches could use to obtain images for their brochure.

Method 1 .....

.....

.....

.....

Method 2 .....

.....

.....

..... [4]



3 The table below shows some of the items contained in the computer systems in the Orson Coaches office.

(a) Place **one** tick in each row to show whether the item is an input device, output device, internal storage device, backing storage device or software.

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

Item	Input device	Output device	Internal storage device	Backing storage device	Software
Keyboard	✓				
Database					
DVD writer					
Hard disk drive					
Monitor					
Mouse					
Operating System					
Printer					
RAM					

[8]

(b) The computer systems all have a number of Universal Serial Bus (USB) ports

(i) What is the purpose of a USB port?

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

(ii) Why do most computer systems have more than one USB port?

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

(c) Orson Coaches uses a Local Area Network (LAN) in its office.

(i) What is a Local Area Network?

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

(ii) Give **two** advantages to the office staff of using a Local Area Network.

Advantage 1 .....  
.....  
Advantage 2 .....  
..... [2]

(d) The office staff at Orson Coaches need to be aware of the potential health risks when using computers. These include the risk of Repetitive Strain Injury (RSI).

(i) Why are computer users at risk of RSI?

.....  
.....

(ii) Give **one** other potential health risk of using computers.

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

4 Bal works in the office at Orson Coaches. She uses database software to store details of holidays. For each holiday this includes:

- a code for each holiday
- the departure date
- the length of the holiday, in days
- details of the destination, including the country, resort and number of miles from Northtown
- details of the hotel, including the star rating, board type (bed and breakfast, full board etc), location (eg seafront, town) and a photograph
- the price
- details of the two drivers, including name, age, contact details and a photograph
- details of the coach to be used, including registration number, number of seats and type of coach
- names and contact details of all the customers booked on the holiday.

(a) Explain why more than one table will be needed for this purpose.

.....

.....

.....

.....

.....

.....

..... [3]

One of the tables needed is a table of driver details.

(b) What data type should be used for the mobile phone number field? Give your reasons.

Data type .....

Reasons .....

.....

.....

..... [3]

(c) The table needs to show the drivers' ages.

(i) Why is it **not** appropriate to have a field where the age is inputted?

.....

.....

(ii) How could this problem be overcome?

.....

..... [2]

(d) Identify **four** other tables that will be needed in Bal's database.

Table 1 .....

.....

Table 2 .....

.....

Table 3 .....

.....

Table 4 .....

..... [4]

(e) Bal has been asked to provide a list of all holidays departing in April 2009 to either France or Spain. The list needs to show the code for the holiday, the price, the destination resort, country and the hotel name.

Describe how Bal can use her database software to produce this list.

.....

.....

.....

.....

.....

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.....

..... [5]

(f) Bal needs to produce an information sheet about a holiday to Paris, code P0905. This must include photographs of the drivers and the hotel.

Describe how Bal can produce this information sheet using her database software only.

.....

.....

.....

.....

.....

.....

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.....

.....

..... [4]

- 5 Heidi works in the office at Orson Coaches. She uses spreadsheet software to calculate the cost of each holiday.

Fig. 3 shows one of Heidi's spreadsheets, which she is using to calculate the cost of an 8-day European holiday.

	A	B	C
1	<b>Holiday details:</b>		
2	Number of days	8	
3	Number of miles	2000	
4	Number of passengers	50	
5			
6	<b>Costs per trip:</b>	Per day/mile	Total
7	Drivers costs (per day)	£240.00	£1,920.00
8	Coach costs (per day)	£200.00	£1,600.00
9	Fuel (per mile)	£0.50	£1,000.00
10	Total		£4,520.00
11			
12	<b>Costs per person:</b>		
13	Hotel (per night)	£70.00	£490.00
14	Trip 1		£10.00
15	Trip 2		£25.00
16	Trip 3		£20.00
17	Total		£545.00
18			
19	<b>Total trip cost</b>	£31,770.00	
20	<b>Total cost per person</b>	£635.40	

Fig. 3

- (a) Identify the cell that shows the number of passengers on the holiday.  
Write down the cell reference. .... [1]
- (b) Heidi wants to know what the cost would be if the holiday changed to give one extra day at the resort. No extra trips or travelling would be involved.
- (i) Identify the **one** cell that Heidi would need to change.  
..... [1]
- (ii) Identify **three** other cells that should automatically change when Heidi changes this cell.  
Cell 1 .....  
Cell 2 .....  
Cell 3 ..... [3]
- (c) The number of nights in the hotel is always 1 fewer than the number of days in the holiday. For example, for an 8-day holiday there will be 7 nights in the hotel.  
Write down the formula that is needed in cell C13.  
..... [2]

- (d) Heidi has altered the column widths to allow her to use longer labels, making the sheet easier to understand.

Identify **three** other types of formatting Heidi has used on the sheet. For each, explain why it improves the spreadsheet.

Type of formatting 1 .....

Why it improves the spreadsheet .....

Type of formatting 2 .....

Why it improves the spreadsheet .....

Type of formatting 3 .....

Why it improves the spreadsheet .....

..... [6]

- (e) Explain why using spreadsheet software is more appropriate than using a calculator for calculating holiday costs.

.....

.....

.....

..... [3]





7 Orson Coaches relies heavily on the data stored on its computer network.

(a) Describe **three** ways in which this data might be lost.

Way 1 .....

.....

.....

.....

Way 2 .....

.....

.....

.....

Way 3 .....

.....

.....

..... [6]

(b) Give **three** different actions Orson Coaches should take to protect its data.

Action 1 .....

.....

.....

Action 2 .....

.....

.....

Action 3 .....

.....

..... [3]



**PLEASE DO NOT WRITE ON THIS PAGE**



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Fig. 2                    © iStockphoto.com / Tito Slack

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