

FOR OFFICIAL USE

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G

KU PS

Total Marks

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0560/402

NATIONAL
QUALIFICATIONS
2007

WEDNESDAY, 2 MAY
G/C 9.00 AM – 10.15 AM
F/G 10.20 AM – 11.35 AM

COMPUTING STUDIES
STANDARD GRADE
General Level

Fill in these boxes and read what is printed below.

Full name of centre

Town

Forename(s)

Surname

Date of birth

Day Month Year

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Scottish candidate number

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Number of seat

Read each question carefully.

Attempt **all** questions.

Write your answers in the space provided on the question paper.

Write as neatly as possible.

Answer in sentences wherever possible.

Before leaving the examination room you must give this book to the invigilator. If you do not, you may lose all the marks for this paper.



1. The Gibson family are going on holiday to a Scottish island.
They are travelling by car and ferry.

(a) The family find out more about the ferry crossing by going *on-line* at www.scotferry.co.uk.

What does the “www” stand for at the beginning of the address?

W _____ W _____ W _____

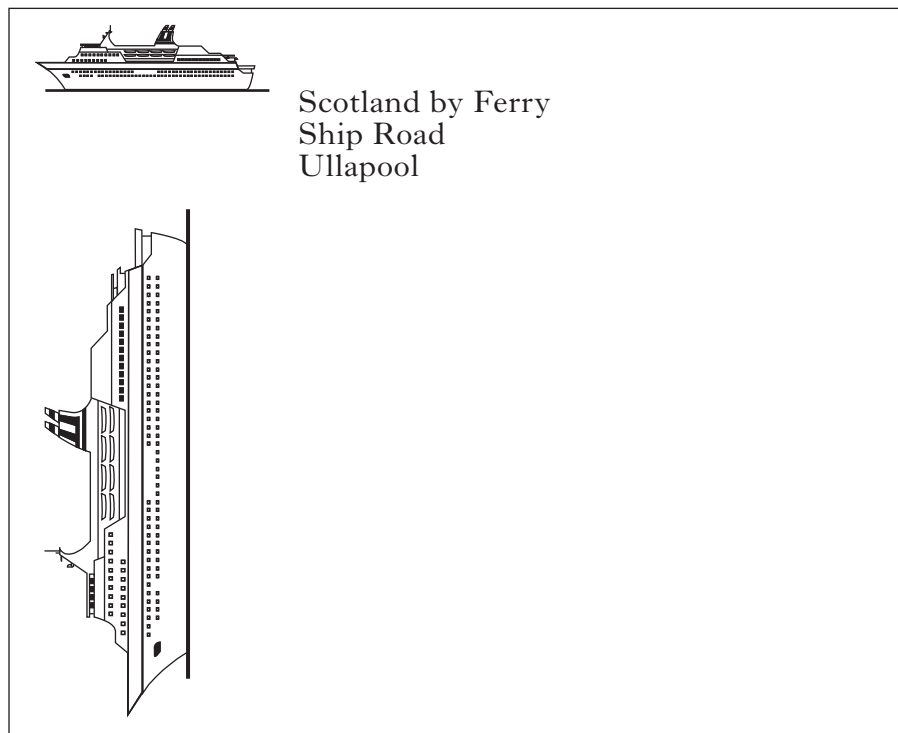
1
0

(b) The ferry company sends the Gibsons a letter confirming their booking.
At the bottom of the letter is a *standard paragraph*.

What is a standard paragraph?

2
1
0

(c) The company’s stationery looks like this:



State the changes that have been made to the graphic at the top to make it look like the one at the side.

2
1
0

KU	PS
	1 0
	2 1 0

1. (continued)

(d) Throughout the letter, Gibson has been typed as “Gibbson”.
What feature of the word processing package could be used to correct this mistake in **one operation**?

(e) The ferry company has enclosed details of its crossings.

Journey	Departure	Arrival
Ullapool – Stornoway	0900	1130
Ullapool – Summer Islands	1030	1110

State **two** advantages in using the *table* facility to create this layout.

1 _____

2 _____

[Turn over

KU	PS
2	
1	
0	
2	
0	
1	
0	
1	
0	
1	
0	

3. One of the children in the Gibson family gets seasick on ferry journeys. Mrs Gibson notices that her local chemist has an *expert system*, which covers various illnesses including travel sickness.

(a) What is an expert system?

(b) State **one** area, other than medicine, where an expert system could be used and what it could be used for in that **area**.

Area _____

What it would be used for _____

(c) On board the ferry there is a *multimedia* presentation about the island.

(i) State **one** reason for using *audio* in a presentation.

(ii) A *hyperlink* is used between slides in the presentation.

What is a hyperlink?

(iii) On one of the islands it is possible to go white water rafting. The presentation includes this as a *video* clip.

State **one** reason for using a video clip in a presentation rather than a photograph.

[Turn over

4. (a) The ferry company uses a *database* to keep a file of all its customers. For each of the fields below state a suitable *field type*.

The first one has been done for you.

<u>Field Name</u>	<u>Example</u>	<u>Field Type</u>
Name	Harry Gibson	Text
Address	3 Ballater Drive	_____
Age	36	_____
Outward Journey	13/10/07	_____

3
2
1
0

(b) Below is part of a record from the customer file.

Name	Harry Gibson
Customer Code	HG3679
Departure	Ullapool
Destination	Stornoway
Outward Journey	13/10/07
Time	1830 hours
Type of Car	Land Ranger

The ferry company wishes to know how many Land Rangers are travelling from Ullapool to Stornoway on 13/10/07.

Choose **five** words from the list below to complete the paragraph.

Search *Sort* *Name* *Stornoway* *Ullapool*
Destination *AND* *13/10/07* *OR*

Perform a complex _____ on

fields Departure equals _____

AND _____ equals Stornoway

_____ Outward Journey equals _____

AND Type of Car equals Land Ranger.

4
3
2
1
0

KU	PS
	1 0
	1 0
	1 0
	2 1 0
	2 1 0

5. The ferry has *sensors* on its doors which prevents the ferry from sailing if the doors are not sealed.

(a) (i) State the type of processing that is being used to control the ferry doors.

(ii) State a reason for this.

(b) State a type of sensor which could be used in this situation.

(c) The ferry sometimes has to transport cargo. Before loading, the cargo is kept in a warehouse. The warehouse uses automated vehicles which are guided by a light system.

Using **some** of the words below complete the paragraph about a light guidance system.

control feedback sensor magnet instructions

A _____ follows a white line. Should the vehicle move away from the line _____ causes the computer to send out _____ which bring it back to the correct position.

(d) State **two** advantages of using automated vehicles.

1 _____

2 _____

KU	PS
	2 1 0
	2 1 0
	1 0
	1 0

6. (a) Some people are very frightened of sailing. Describe how *virtual reality* could be used to overcome their fears.

(b) The shop on board the ferry uses a computer program for stock taking. It is written in a *high level language*.

Tick (✓) **two** boxes which are *common features* of high level languages.

- Written in binary
- English like
- Portable
- Cannot be edited

(c) Explain why it is necessary for high level languages to be translated.

(d) How are numbers represented in a computer?

Tick (✓) **one** box.

- ASCII
- Pixels
- Binary

[Turn over

KU	PS
2	1
1	0
0	0
1	0
0	0
1	0
3	2
2	1
1	0
0	0

6. (continued)

- (e) The shop saves information onto *backing storage*. Put the following types of backing storage into order, according to their *capacity*. One box has been completed for you.

Use **1** for the **smallest** and **4** for the **largest**.

USB Flash Drive

DVD Rewriteable

Hard Drive

CD Rewritable

- (f) The shop needs to make printouts of its stock taking. The printouts will include figures which must be able to be read clearly.

- (i) Suggest a suitable type of printer.

- (ii) State **one** reason for your answer.

- (g) Some passengers like to have a picture of themselves put onto a sheet of paper which shows the ferry and a map of the island.

Number the steps below from 1 to 4 to show the correct order of how this could be achieved. The **first step** should be **numbered 1**.

Import photograph to desk top publishing package

Print document

Take photograph of customer with digital camera

Save document

KU	PS
1	0
2	1
0	0
1	0
1	0

7. (a) Working out how many cars could travel on the ferry used to be done manually. Now a computer program calculates it.

Who would have examined the old system to see if computerisation was possible? Tick (✓) **one** box.

- Programmer
- Systems Analyst
- Engineer
- Network Manager

(b) Use **some** of the following words to complete the sentences below.

programmer engineers network manager systems analyst

When computers were first installed at the ferry company's head office they were installed by _____ .

A _____ was employed to write a program which calculates the weight on board the ferry.

There are now so many computers linked together it is necessary to employ a _____ to allocate usernames.

(c) (i) Some customers pay for their ferry crossing using cheques which have *MICR (Magnetic Ink Character Recognition)* data printed on them.

State **one** advantage of MICR

(ii) Others use *EFT* to pay for their fare.

What do the initials EFT stand for?

E _____ F _____ T _____

