

FOR OFFICIAL USE

--	--	--	--	--	--

G

NATIONAL QUALIFICATIONS 2012

--	--	--

KU PS TOTAL

COMPUTING STUDIES
STANDARD GRADE
General Level



* 0 5 6 0 2 9 0 1 *

WEDNESDAY, 25 APRIL
10.20 AM – 11.35 AM

0560/29/01

Fill in these boxes and read what is printed below.

Full name of centre

Town

Forename(s)

Surname

Number of seat

Date of birth

Day

Month

Year

Scottish candidate number

--	--

--	--

--	--

--	--	--	--	--	--	--	--	--	--

Read each question carefully.

Attempt **all** questions.

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

Write as neatly as possible.

Use **blue** or **black ink**.

Answer in sentences wherever possible.

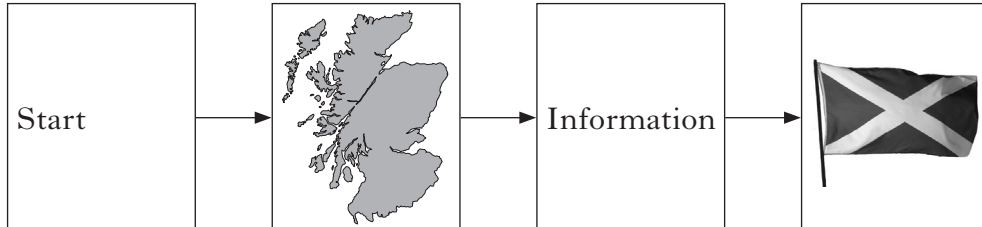
Before leaving the examination room you must give this book to the Invigilator. If you do not, you may lose all the marks for this paper.



* 0 5 6 0 2 9 0 1 0 1 *

1. (continued)

(d) Ibrahim's first attempt at his presentation displays the slides one after another.



(i) State what kind of linkage is used here.

1

(ii) He changes the presentation so that when he clicks on the map of 'SCOTLAND' a website about Scotland opens up.

State what he has used to connect the picture and website.

1

(iii) On one of the slides he has added a sound track of himself talking about the country on view.

State the input *device* that he used to add the sound track.

1

(e) Ibrahim wants to print the last two slides of his presentation.

Describe how he would print only the last two slides of his presentation.

2

[Turn over



2. John works in the local newsagent and delivers the morning newspapers. He has created a *database* to store his paper delivery round.

Here is a *record* from the database.

Name	Anne Jones
House Number	12
Street	Main Street
Phone number	(0101) 345 6789
Newspaper	Daily Best

- (a) Some of the fields contain text and some contain numbers.

State the *field type* John has used in the Phone number field.

1

- (b) John wishes to find out who gets the 'Daily Best' and lives on 'Main Street'.

Describe how he could do this.

3

- (c) John wants a list of all his customers in alphabetical order of surname.

The current database structure does not allow him to do this.

Describe what he must do to the structure of the database to enable him to create the list.

2



2. (continued)

(d) Anne Jones has moved to 23 Glebe Street.

Explain what changes John needs to make to his database.

KU	PS
	2

[Turn over



3. (continued)

KU	PS
	2
2	

(e) Mark uses a bank card to pay for his purchases.

This makes use of *Electronic Funds Transfer* (EFT).

State **two** advantages to **Mark** of using *Electronic Funds Transfer*.

1 _____

2 _____

(f) Mark made use of the self-service checkout of the store. This is an *EFTPOS* device.

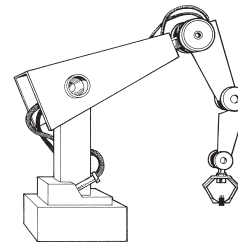
Fill in the missing words.

Electronic Funds Transfer P_____ of S _____.

[Turn over



4. Action Robots Ltd is a manufacturer of robots.
They build both *mobile* and *stationary* robots.



KU	PS
----	----

(a) One method of guiding robots is to paint white lines on the floor for them to follow.

(i) Describe how robots can follow this line.

2

(ii) State **one** possible problem with this method of guidance.

1

(iii) State another method that could be used to guide the robots around a factory.

1

(b) State **two** safety devices that Action Robots Ltd could attach to their mobile robots to protect their workers.

1

2

2

(c) The robots need to react immediately to any event taking place.
State the type of processing involved.

1



4. (continued)

KU	PS
----	----

(d) Action Robots Ltd also sells robot arms. These can cost many thousands of pounds each.

State **two** reasons why companies are prepared to spend this large amount of money on robots.

1 _____

2 _____

2

(e) Complete the following sentences using some of the words below.

feedback interfaces sensors simulations motors

(i) Robots use _____ to detect the items they will pick-up.

1

(ii) Robots use _____ to connect to a computer.

1

(iii) Designers can use _____ to check the robots will work correctly.

1

(f) Action Robots Ltd have offices all over Britain which are connected by a *network*.

(i) State the type of network they should use.

1

(ii) State **one** reason for your choice.

1

[Turn over

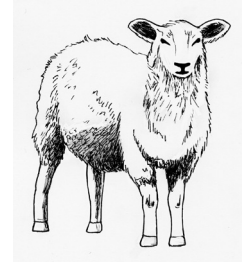


5. Mary is a sheep farmer.

She uses a *spreadsheet* package to work out the profit she will earn from each sheep.

The total costs for each sheep and the profit from each are calculated automatically using formulae.

Here is part of the spreadsheet she uses.



KU	PS
----	----

	A	B	C	D	E	F
1	Sheep No.	Feeding Costs	Vet Costs	Total Costs	Selling Price	Profit
2						
3	SSTSD12	425.2	125	550.2	£1050.00	£499.80
4	SSTSD13	300.5	90	390.5	£950.00	£559.50
5	TTFNW89	260	110	370	£525.00	£155.00
6					Greatest profit =	£559.50
7					Total profit =	£1214.30

(a) Mary changes the *value* in cell C4 to 95.

Name **three** other cells that will change.

Cell _____

Cell _____

Cell _____

3

(b) All the numbers in columns B, C and D should look similar to columns E and F.

Describe how Mary could change these numbers to make them look similar.

2

(c) Cell F6 contains a formula. State the formula.

= _____ (_____ : _____)

2



5. (continued)

KU	PS
----	----

(d) The formula =E3-D3 was entered in cell F3.

Describe how a similar formula could be entered into cells F4 and F5 without typing.

2

(e) Mary could display the Profit using a *chart*.

State **one** reason for using a chart.

1

(f) Mary has to send the spreadsheet to her bank.

(i) State **one** advantage of sending the spreadsheet by *electronic mail* rather than posting a printed copy.

1

(ii) State **one** disadvantage of sending the spreadsheet by *electronic mail* rather than posting a printed copy.

1

(g) Mary needs to show the spreadsheet to the other workers on her farm but she does not want them to alter any of the figures.

State how she can stop any alteration taking place.

1

[Turn over



6. Samantha bought a new *laptop*. It has a modem *GUI*.

(a) State what the initials GUI stand for.

G _____ User I _____

(b) The laptop has a game and a number of other programs pre-installed. The programs were written using a *high level language*.

State **two** features of a high level language.

1 _____

2 _____

(c) Samantha transfers some photographs from her digital camera to her laptop.

State **two** methods she could use to transfer the pictures.

1 _____

2 _____

(d) Samantha has copied 200 pictures from her camera to her computer. She wants to organise them into different groups.

State how she could do this.

KU	PS
2	
2	
	2
	1

[Turn over for Questions 6(e) and (f) on Page fourteen



6. (continued)

(e) The laptop computer makes use of both *program files* and *data files*.

Describe what is meant by:

Data file _____

Program file _____

2

(f) Samantha's laptop uses bitmap graphics to display the icons on her laptop.

Fill in the blank grid to show the graphical representation of the bitmap graphic.

0	0	0	1	1	0	0	0
0	0	1	1	1	1	0	0
0	1	0	0	0	0	1	0
1	0	0	1	1	0	0	1
1	0	0	1	1	0	0	1
0	1	0	0	0	0	1	0
0	0	1	1	1	1	0	0
0	0	0	1	1	0	0	0

2

[END OF QUESTION PAPER]



ADDITIONAL SPACE FOR ANSWERS

DO NOT
WRITE
IN THIS
MARGIN

KU	PS



* 0 5 6 0 2 9 0 1 1 5 *

ADDITIONAL SPACE FOR ANSWERS

DO NOT
WRITE
IN THIS
MARGIN

KU	PS

