

FOR OFFICIAL USE

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NATIONAL
QUALIFICATIONS
2011

TUESDAY, 3 MAY
10.20AM – 11.35AM

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

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

Scottish candidate number

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

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.

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.



1. Mary helps with a number of fundraising events in her town.

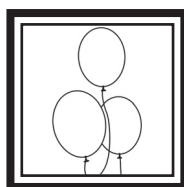
- (a) She has been asked to keep a record of each helper's name, address and funds raised. She could use either a database or a spreadsheet.

State a reason why she should use:

Database: _____

Spreadsheet: _____

- (b) Mary has created this logo on her computer.



State **two** tools that have been used to draw this logo.

1 _____

2 _____

- (c) Mary decides to *e-mail* information and flyers to companies about this event.

- (i) Give **one** advantage of using e-mail for this.

- (ii) Give **one** disadvantage of using e-mail for this.

- (iii) When sending the e-mail, Mary follows the rules of *netiquette*.

State **one** rule of netiquette.

1. (continued)

(d) The committee decide to produce and print 10,000 event flyers.

(i) State the type of printer that would be most suitable for this size of task.

1

(ii) Apart from quality of printout, state **another** reason for your choice of printer.

1

(e) The committee is planning a large fair in the local park. Payment for tickets can be made by a credit card using *Electronic Funds Transfer (EFT)*.

Describe the process of EFT.

3

(f) The event will be filmed and uploaded to a website.

(i) State the most suitable **Internet connection** that could be used to upload the film.

1

(ii) The committee created their own webpage using HTML.

What do the letters HTML stand for?

Hyper Text M _____ L _____

2**[Turn over**

2. A University holds information about its students on a computer.

A typical student record is shown below.

Reference Number	91534567
First name	Terese
Surname	Kildoga
Date of Birth	02/03/1980
Course	Medicine
Year	Third

- (a) The University wants a list of all the students who are in the **second year** of a **computing** course.

Describe how the University could produce this list.

3

- (b) Describe how the University could produce a list of students in order of age showing the youngest first.

3

- (c) When students register with the University their photograph is taken and added to the database file.

State a suitable *field type* to hold the picture.

1

KU	PS
	2
1	
	1

2. (continued)

- (d) Some of the University's webpages are a bit plain and only text based.
State **two** ways of improving the webpages.

1 _____

2 _____

- (e) When looking through the University's website you can jump straight to a page that tells you about a particular subject.

What do you click on to take you immediately to another webpage?

- (f) The University is worried in case their data is lost or damaged.

State what should be done to protect this data.

[Turn over

3. Rhuksa works in a shop and uses a *spreadsheet* to keep a note of all sales. A section of the spreadsheet is shown below.

	A	B	C	D
1	Daily Sales Record			
2				
3	Item	Number sold	Cost	Total
4				
5	A4 Paper	10	£4·50	£45·00
6	Blue Pen	8	£0·75	£6·00
7	HB Pencil	20	£0·10	2
8	Inkjet Prin	2	£39·99	79·98
9				
10	Highest number sold	20		
11		Sales Total		£132·98

- (a) The contents of cell A8 should be “Inkjet Printer”.
State how these words could be shown completely.

- (b) Cell D11 contains the formula for the Sales Total.
Complete the formula used in D11.

= _____ (_____ : _____)

- (c) Cell B10 contains the formula to display the Highest number sold.
Complete the formula used in B10.

= _____ (_____ : _____)

1

2

2

3. (continued)

- (d) The contents of cells D7 and D8 have not been formatted appropriately. Explain how you would make the format match cell D6.

- (e) While using the program, Rhuksa uses *online tutorials* and *online help*. State what is meant by:

online tutorials: _____

online help: _____

- (f) The other workers in the store can see the spreadsheet, but Rhuksa does not want them to alter any of the cell contents.

State the feature used to stop accidental changes to the cells.

[Turn over

4. Joseph uses an online banking service.

- (a) He requests a transfer of £100 from his account to his wife's account. The system asks him for confirmation of this transfer.

State the type of processing that has taken place.

1

- (b) The bank is worried about people *hacking* the online banking system.

State what is meant by the term "hacking".

1

- (c) The bank uses *encryption* when sending data over the Internet.

State what is meant by the term "encryption".

1

- (d) As part of the security checks the bank makes use of *check digits*.

Explain the purpose of a check digit.

1

- (e) The bank has to deal with thousands of users at the same time.

State a suitable type of computer for this task.

1

4. (continued)

(f) Joseph connects to his home network using a *wireless* connection.

State **two** advantages to Joseph of using a wireless connection.

1 _____

2 _____

2

(g) Joseph thinks that the information held by the bank about him contains mistakes.

State **two** rights Joseph has about this information.

1 _____

2 _____

2

[Turn over

5. A local authority is planning to introduce mobile robots to pick up rubbish from the streets.



- (a) Their workers are worried about the use of these robots.
- (i) State **one** advantage to the workers of having this job done by the robot.

- (ii) State **one** disadvantage to the workers of having this job done by the robot.

- (b) There will be a high *initial cost* involved in using the robots.
- State **one** reason the local authority could use to justify this cost.

1

1

1

5. (continued)

- (c) Before it was built, makers of this robot used a *simulation* to test the design.
State **two** reasons why designers use a simulation.

1 _____

2 _____

2

- (d) The robot uses a *magnetic guidance* system to control its movements.
State another type of guidance system that could have been used.

1

[Turn over

6. Aziz works for a company writing programs.

(a) He writes the programs in a *high-level language*.

(i) State **two** features of a high-level language.

1 _____

2 _____

2

(ii) The program needs to be *translated*.

State why this is necessary.

1

(b) Aziz can work from home.

State **two** advantages to Aziz of working from home.

1 _____

2 _____

2

(c) Aziz types the program into his computer.

State whether the program is stored in RAM or ROM.

1

2

2

[Turn over]

6. (continued)

- (d) His computer uses a *TFT* monitor.

What do the letters TFT stand for?

Thin F _____ T _____

- (e) Other computer related jobs are done in the company.

Complete the following table.

Title	Description
Systems Analyst	
	Issues user names, passwords and allows access to the computers on a network.

7. James is secretary of the Dunst Bowling Club. He uses a *word processor* to create a newsletter. The chairperson suggests some changes.

This year has been a success. We have played many matches and now find that we are well up in the league.

Date	Played	Won	Lost
12/09/10	Martins	2	1
19/09/10	Smiths	3	2

There are some matches still to play.



- (a) State **two** changes that would improve its appearance.

1 _____

2 _____

2

- (b) The results of the matches played so far are displayed using a *table*.

State **two** advantages of using a table for these results.

1 _____

2 _____

2

7. (continued)

- (c) One of the club members has handed in some old photographs to be included in the newsletter.

- (i) State an input device that James should use to transfer the photographs into the computer.

1

- (ii) When transferred into the newsletter, the picture was upside down.

State the feature of a graphics program that James could use to correct this fault.

1

- (d) In an article about two new members, Bob and Karl, the *spelling check* accepted Bob but highlighted Karl.

State why the spelling check did this.

1

- (e) A standard paragraph is a saved piece of text stored on disk which can be copied and pasted into a new document.

State **two** benefits of using a standard paragraph.

1 _____

2 _____

2

- (f) When James did a final check of the newsletter, he noticed that Zeeshan, one of the members, had been misspelled a number of times as Zeshan.

Describe how he could change “Zeshan” to “Zeeshan” in one operation.

2

[END OF QUESTION PAPER]

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