

FOR OFFICIAL USE

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NATIONAL
QUALIFICATIONS
2009

THURSDAY, 4 JUNE
9.00 AM – 10.00 AM

COMPUTING
STUDIES
INTERMEDIATE 1

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

--

Attempt Section I and **one** Part of Section II.

Section I – Attempt all questions.

Section II – This section has two parts:

Part A – Computers and the Internet

Part B – Information and the Internet

Choose **one** part and answer **all** of the questions in that part.

Read all questions carefully.

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

Write as neatly as possible.

Use blue or black ink. Pencil may be used for graphs and diagrams only.

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.



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SECTION I

Attempt ALL questions in this section.

1. Sarah types the data below into a spreadsheet.

	A	B	C	D
1	Karate Camp Food Bill			
2		Quantity	Price	Total
3	Bread	15	£1.00	£15.00
4	Baked Beans (2kg tin)	6	£1.75	
5	Beef Burgers (pack of 16)	32	£1.23	
6	Sausages (pack of 4)	20	£0.99	
7	White Rolls (pack of 6)	100	£0.60	
8				
9			Total Cost	

- (a) Which of the examples below is a *cell reference*?

Tick (✓) **one** box.

☐

£15.00

☐

B6

☐

Bread (loaf)

☐

3A

- (b) A formula calculates the total cost of bread.

Write the formula in the space below.

[Turn over

1

1

1. (continued)

(c) *Fill down* could be used to complete cells D4 to D7, but Sarah does not know how to do this.

- (i) Name **and** describe the facility Sarah should use to find out about “fill down”.

Name _____

Description _____

- (ii) Sarah used fill down to enter the remaining formulae in column D.

	A	B	C	D
1	Karate Camp Food Bill			
2		Quantity	Price	Total
3	Bread	15	£1·00	£15·00
4	Baked Beans (2kg tin)	6	£1·75	£10·50
5	Beef Burgers (pack of 16)	32	£1·23	£39·36
6	Sausages (pack of 4)	20	£0·99	£19·80
7	White Rolls (pack of 6)	100	£0·60	£60·00
8				
9			Total Cost	

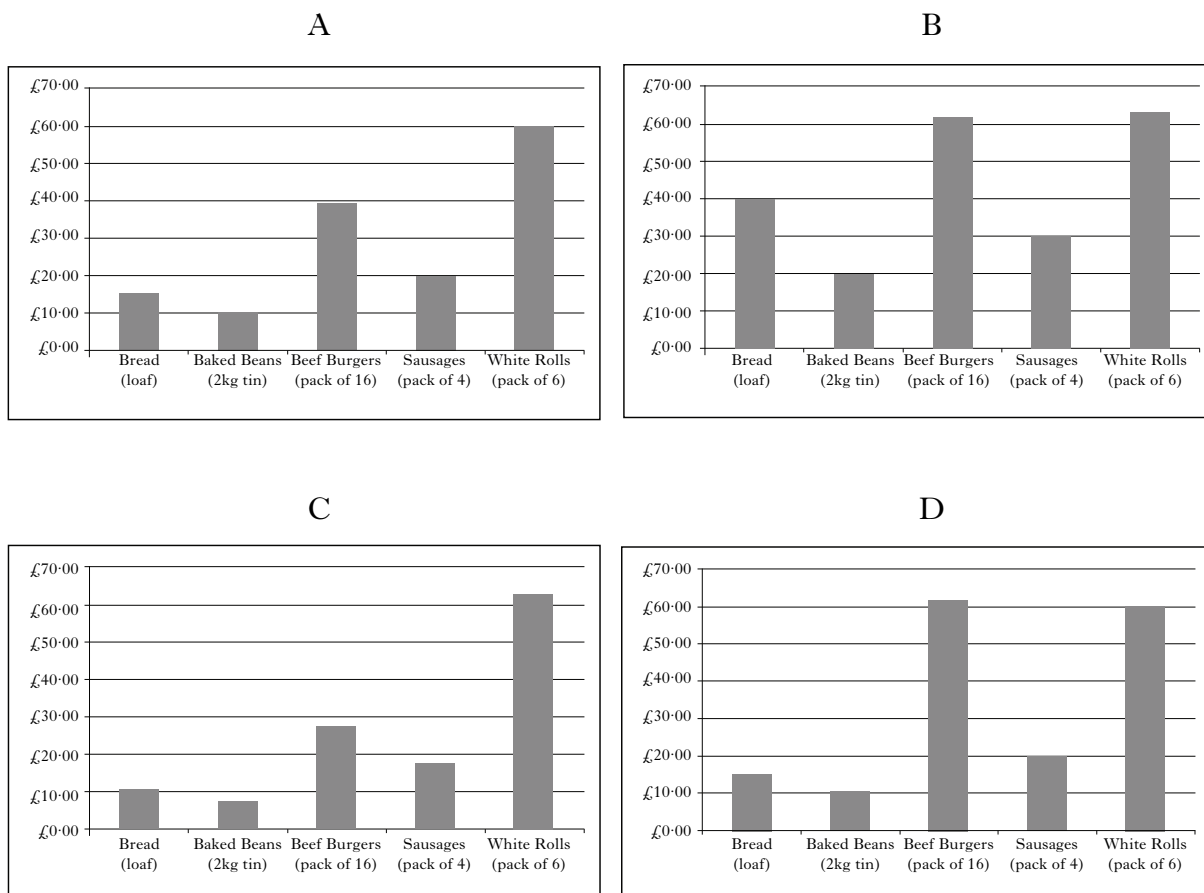
Describe how Sarah used fill down to enter the formulae into cells D4 to D7.

2

2

1. (continued)

(d) Sarah creates a bar chart using the food names and totals.



Which of the above bar charts is the one Sarah created from the spreadsheet?

Tick (✓) **one** box.

- ☐ A
- ☐ B
- ☐ C
- ☐ D

(e) Sarah calculates the total cost by entering the formula = D3+D4+D5+D6+D7 into cell D9.

State which function Sarah could have used instead of this formula.

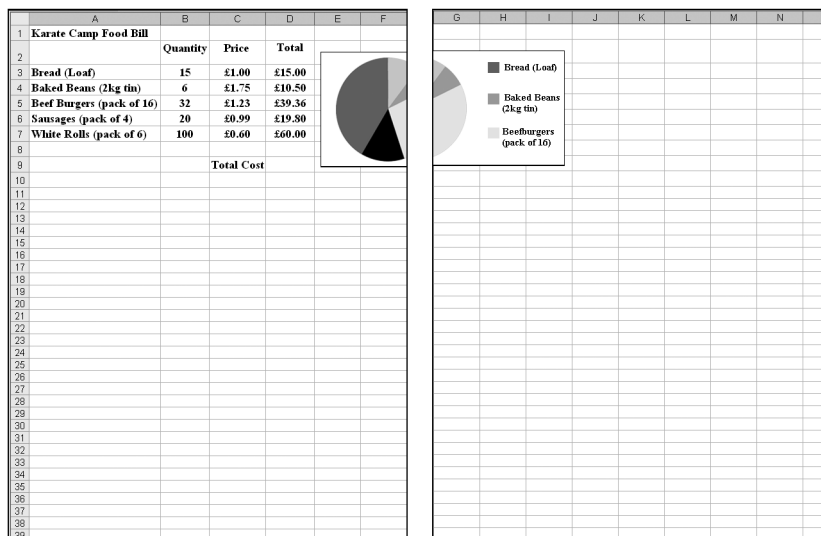
DO NOT
WRITE
IN THIS
MARGIN

1

1

1. (continued)

- (f) Sarah changes the chart type and prints the spreadsheet. Two pages come out of the printer.

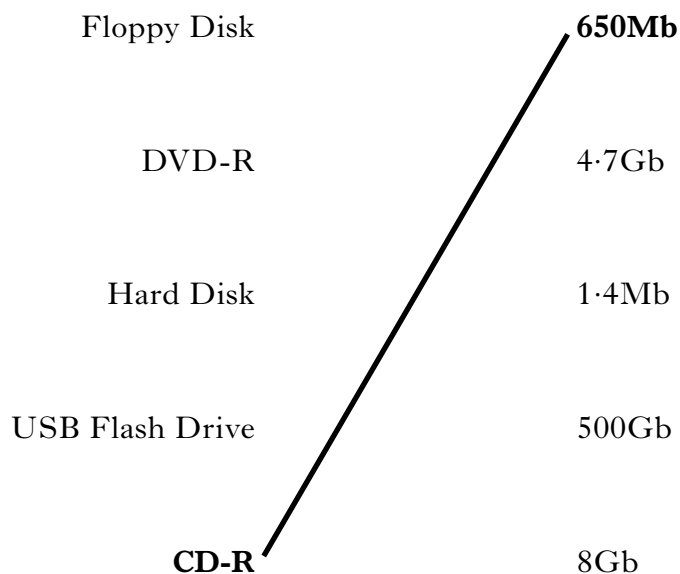


Without moving the chart, state what Sarah could do to ensure it prints onto only one page.

1

- (g) Sarah stores digital photos from the Karate Camp onto backing storage media. Match the types of storage media to the most appropriate size of data they can store.

One has been done for you.



2

[Turn over for Question 2 on *Page eight*

2. Fabby Multimedia create interactive menus for DVD movies.

- (a) Beth works as an artist for Fabby Multimedia. Beth draws a pirate ship for their latest movie. She draws the ship using the input device shown below.



Name this device _____

1

- (b) Beth saves the pirate ship graphic as a *bmp* file.

Name **one** other graphic file type Beth could have used.

1

- (c) Beth produces a second, smaller copy of the pirate ship.



Before



After

What graphic editing facility has Beth used to create the second ship?

Tick (✓) **one** box.

☐

Rotate

☐

Crop

☐

Colour

☐

Scale

1

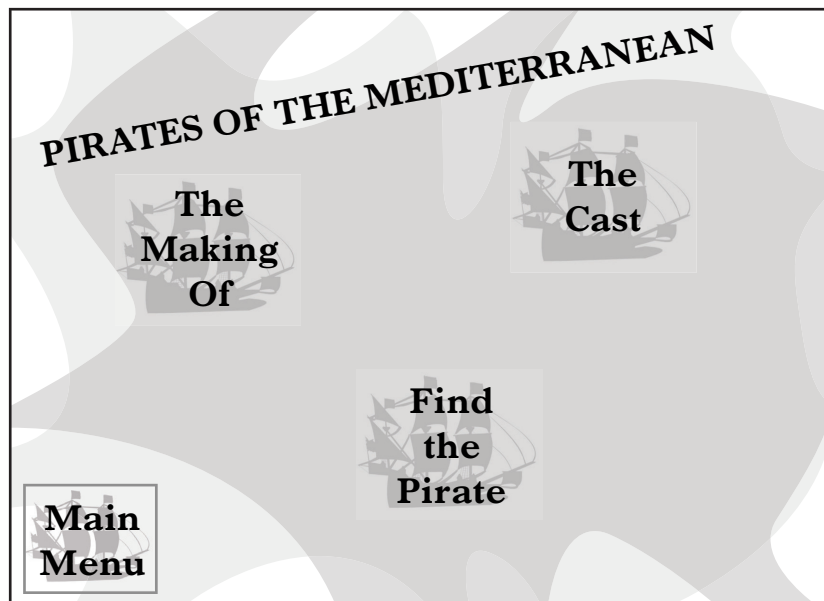
2. (continued)

- (d) When Beth starts a new graphic, she searches on the Internet for an example to help her.

Apart from a computer system, state what hardware Beth needs to connect to the Internet.

1

- (e) Beth has created an interactive menu for the new DVD.



- (i) Describe **one** way Beth could use text effects to improve the look of the menu.

1

- (ii) When one of the options is selected the user is taken to another menu.
What is this called?

Tick (✓) **one** box.

- ☐ Hypergoal
☐ Hyperlink
☐ Hyperpoint
☐ Transition

1

3. Dale uses his computer system to store details of his toy car collection.

Below is a record from the database.

Car Name	Ferrari Dino 246 GTS
Colour	Red
Doors	2
Toy Manufacturer	Corgi
Year of Car	1972
Toy Purchased	3 rd June 2005

- (a) State **one** reason why Dale has chosen to store the information in a database rather than write it on paper.

1

- (b) Give **one** example of a number field in the above database.

1

- (c) Dale wants to obtain a hard copy of the database with the records ordered from the oldest toy purchased to the most recent.

How would Dale do this?

Tick (✓) **one** box.

- ☐ Search on the Toy Purchased field in ascending order.
- ☐ Search on the Toy Purchased field in ascending order and then print.
- ☐ Sort on the Toy Purchased field in ascending order.
- ☐ Sort on the Toy Purchased field in ascending order and then print.

1

3. (continued)

- (d) Dale writes articles for a collector's magazine. His last article contained a list of his own favourite toy cars.

What word processing facility could Dale use to make the list stand out in his article?

Tick (✓) **one** box.

☐

Text Wrap

☐

Header/Footer

☐

Page Orientation

☐

Bullet Points

1

- (e) When Dale spell-checked his last article he found that the names of some of the cars were highlighted as being wrong.

Dale had typed in the car names correctly.

State why the car names were highlighted by the spell-checker.

1

- (f) Dale has made a mistake throughout his article and typed the word "weekly" as "weakly".

State the word processing facility that Dale could use to correct his mistake.

1

- (g) Dale is due to key in his next article but has recently had a bicycle accident and has broken both of his wrists.

State another way Dale could enter the text of his next article into his word processor.

1**[Turn over]**



4. John, Paul, George and Senga have been playing in the rock band, “Slugs for President”, for two years at school.

(a) The band has decided to make a multimedia presentation including sample songs and videos of them playing live. John buys a new computer system with a graphics card, sound card, modem and microphone.

- (i) What additional hardware will John need to create the presentation?

Tick (✓) **one** box.

- ☐ Digital Video Camera
- ☐ Printer
- ☐ USB Flash Drive
- ☐ Data Projector

1

- (ii) Why must John’s computer include a sound card?

Tick (✓) **one** box.

- ☐ To input sound from speakers.
- ☐ To output sound to a microphone.
- ☐ To output sound to speakers and input sound from a microphone.
- ☐ To output sound to a microphone and input sound from speakers.

1

- (iii) John’s new computer comes with a *high resolution* monitor.

State what is meant by the term “high resolution”.

1

- (b) John wishes to take video files to George’s house on his USB flash drive but the files are too large.

State what John could do to the video files to make them small enough to fit on his USB flash drive.

1

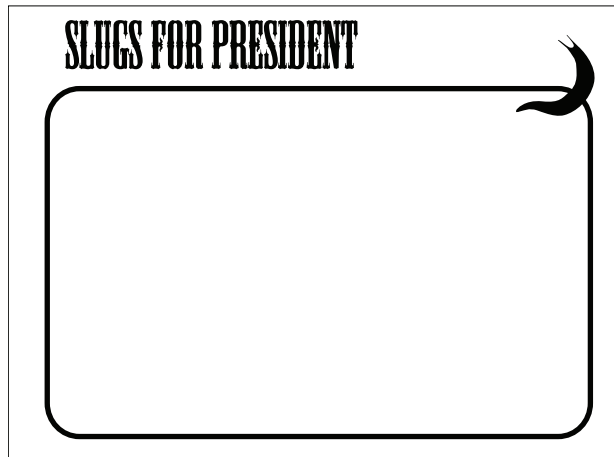
4. (continued)

- (c) John finds a copy of an old school magazine with an article about the band.

Name the input device John should use to capture the picture of the band from the magazine.

1

- (d) John uses multimedia authoring software to create a template for the band's presentation.



Explain why John should create a template.

1**[Turn over**

4. (continued)

- (e) John uses *page transitions* to improve the look of the presentation. Which feature from the list below is an example of a “page transition”?

Tick (✓) **one** box.

- ☐ Fade out
- ☐ Landscape
- ☐ Portrait
- ☐ Bold

1

- (f) John saves the presentation. It is 64Mb in size. Which of the following storage units is larger than a Megabyte?

Tick (✓) **one** box.

- ☐ Kilobyte
- ☐ Byte
- ☐ Gigabyte
- ☐ Bit

1

- (g) John and the rest of the band are asked to show their presentation to their school.

What output device would be best to show the presentation to a hall full of pupils?

Tick (✓) **one** box.

- ☐ Monitor
- ☐ Graphics Card
- ☐ Digital Video Camera
- ☐ Data Projector

1

5. Finn has just been born. Paula has taken a digital photo of him and has transferred it to her laptop computer.



- (a) State whether the above photograph is an example of a *vector graphic* or a *bit-mapped graphic*.

1

- (b) Paula decides to crop the photograph on her laptop. Apart from a mouse, what input device could she use to select an area of the photograph?



1

- (c) Paula decides to save the cropped picture to backing storage and take it into work. Name a portable backing storage medium Paula could use.

1

[Turn over

6. Ceitidh has her own gardening business. She wishes to create some postcards to advertise her company and starts by drawing the graphic below using a vector graphics package.



- (a) Ceitidh uses the above graphic to create a border on the postcard.



- (i) Which graphic operations has Ceitidh used to create the border?
Tick (✓) **one** box.

- ☐ Scale and Rotate
☐ Rotate and Zoom
☐ Scale and Duplicate
☐ Zoom and Scale

- (ii) Ceitidh *groups* the four small lawnmowers and then tries to delete one of them.

Explain what would happen when Ceitidh tries this.

1

1

6. (continued)

- (b) Ceitidh types some text on the postcard.



She highlights the text and selects *centre justification*.

On the postcard below show how the text will look now.



- (c) Ceitidh wants to make the words “Good Quality” stand out on the postcard. She highlights the text and changes it to look like this “Good Quality”.

State which word processing operation Ceitidh selected.

[END OF SECTION I]

[Turn over

1

1

(40)

SECTION II

There are two parts to this section.

Attempt **ONE** part only.

Tick the part that you intend to attempt.

Computers and the Internet

☐

Information and the Internet

☐

Part A—Computers and the Internet

7. SADA Supermarkets use the Internet to allow customers to order their shopping from home.

- (a) When an order is placed the following device displays the shopping list in the supermarket.



State the type of computer that is shown above.

1

- (b) Customers can access details of their previous orders which are held in their on-line account.

- (i) Once customers have accessed the website, what would they need in order to access their on-line personal account details?

1

- (ii) The SADA website contains many high resolution pictures and animations of the products which are sold.

State which type of Internet access you would recommend customers to use.

1

- (iii) The SADA website has a “contact us” button which allows a customer to send an electronic message directly to the company.

State which **type** of software is required to allow this electronic message to be sent.

1

- (c) Customers using the SADA website will have to enter personal details to allow their order to be delivered.

State why it is important that the SADA website is secure.

1

- (d) Users of the Internet all have to pay setup costs and running costs.

State **one** example of a running cost.

1

Part A—Computers and the Internet (continued)

8. Michael is a photographer. He uses a computer to edit the photographs he has taken.

- (a) Name the device which is most appropriate for Michael to use to take professional photographs which can be transferred to the computer.

1

- (b) Once a photograph has been transferred to the computer, Michael needs to edit it.

State the **type** of computer software that would be the most appropriate to use.

1

- (c) Michael is creating a newsletter and needs to add text to describe a photograph he has inserted on to the page.

Which type of computer software would be the most appropriate to use this time?

Tick (✓) **one** box.

☐

Word processing

☐

Database

☐

Spreadsheet

☐

Systems software

1

Part A—Computers and the Internet (continued)**8. (continued)**

- (d) Michael is buying Bug Buster, an anti-virus program for his computer. Bug Buster requires a computer system with the following specification.

Operating System	– WinView 06 or higher
Hard Disc Capacity	– 2 Gb available
RAM	– 128 Mb
Processor	– 1.2 GHz

Michael has two computer systems.

Computer A		Computer B	
Operating System	– WinView 04	Operating System	– WinView 08
Hard Disc Capacity	– 20 Gb	Hard Disc Capacity	– 80 Gb
RAM	– 256 Mb	RAM	– 512 Mb
Processor	– 1 GHz	Processor	– 1.4 GHz

State **two** reasons why Bug Buster will only run on computer system B.

1 _____

2 _____

2

- (e) Michael carries out a scan of his computer using Bug Buster. It detects a file which may contain a virus.

Using the operating system, state what action Michael could take to deal with this.

1**[Turn over]**

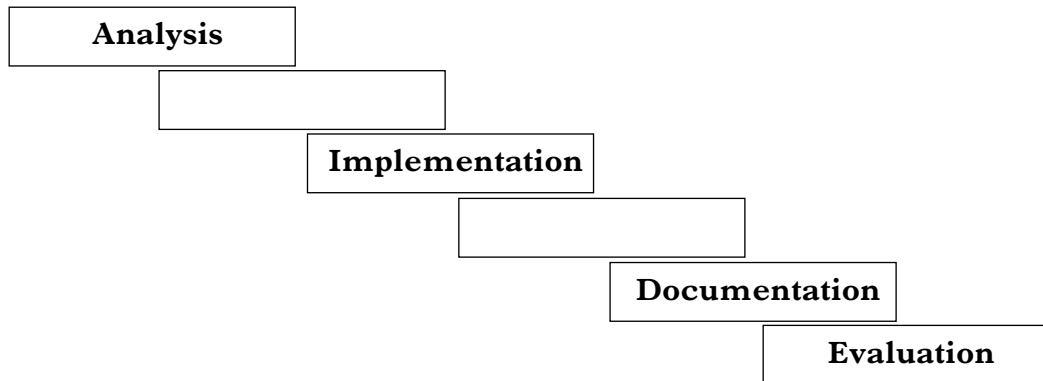
Part A—Computers and the Internet (continued)

9. Lukehall Swimming Club wants to develop a website to attract more members. They will use the Software Development Process to create the website.

- (a) The first stage of the Software Development Process is *analysis*. Explain what is meant by “analysis”.

1

- (b) Complete the missing **two** steps of the Software Development Process.



2

- (c) The club needs to evaluate the website once it is completed. State **one** item to be considered during the evaluation process.

1

- (d) Look at the information in the box below which comes from the completed website documentation.

This website requires Browser 4.2 or higher, and also requires Fasttime 3 or higher for video or multimedia presentations.

Which part of the documentation is this?

Tick (✓) **one** box.

- ☐ Test Guide
- ☐ User Guide
- ☐ Technical Guide
- ☐ Evaluation Guide

1

Part A—Computers and the Internet (continued)

10. All Star video production company uses high specification computers to produce DVDs.

(a) Which of the following devices would be required in a computer to display video images?

Tick (✓) **one** box.


- ☐ Modem
☐ Colour Printer
☐ Network Card
☐ Graphics Card

1

- (b) All Star's computers must have a *DVD Writer* and an *LCD flatscreen monitor*.
Look at the following computer advert.

Inspired 2000

Includes ...
CRT Monitor
500 MHz Processor
256 Mb RAM
DVD-ROM Drive
180 Gb Hard Drive
Internet Ready!



State **one** reason why this computer would not satisfy All Star's requirements.

1

- (c) All Star uses a number of draft DVDs when they are working on a new DVD. The draft DVDs need to be re-used in order to cut down on costs.

Which of the following backing storage media would be the most appropriate for them to use?

Tick (✓) **one** box.

- ☐ DVD+R
☐ DVD-R
☐ DVD-RW
☐ DVD-ROM

1

[END OF PART A—COMPUTERS AND THE INTERNET]

(20)

Part B—Information and the Internet

7. Sunshine Shores Travel Agency has a database of holidays available.
This is an example of a record from the database.

Resort:	Santa Margarida
Accom Name:	Top Star Apartments
Accom Type:	Self Catering
Date from:	14th July 2009
No of Nights:	14
Cost per Person:	£450.00
No of People:	4

- (a) Nathan and his family would like to travel to Benidorm after the 1st of July 2009 for 7 nights.

Explain how the travel agent would use the database to find all the matching holidays.

3

- (b) Nathan decides to book one of the holidays. He provides personal details to the travel agent.

Name the law that protects the personal information he is giving.

1

- (c) Once the holiday is selected, the database works out the total cost of the holiday.

State the type of field that is used to do this.

1

- (d) State the type of field that would be used to store a picture of the accommodation.

1

Part B—Information and the Internet (continued)

8. SADA is a large supermarket chain with many branches across the country.
They maintain an electronic information system of company contact details.

(a) What type of application is being used by SADA to store the company contact details?

1

(b) (i) State **one** disadvantage of an electronic information system.

1

(ii) State **one** example of an electronic information system.

1

(c) SADA has made its electronic information system available on the Internet.
What is meant by the term *Internet*?

Tick (✓) **one** box.

☐

A network of computer networks.

☐

A local area network.

☐

Interlinked pages of information.

☐

A website on the World Wide Web.

1

[Turn over

Part B—Information and the Internet (continued)

9. GUST is a small business selling home furnishing products.

- (a) GUST wants to create a website to advertise and sell products over the Internet. GUST employees will use the Software Development Process to create the website.

GUST must first decide exactly what has to be on the website.

Which stage of the Software Development Process is this?

Tick (✓) **one** box.

☐

Design

☐

Testing

☐

Analysis

☐

Evaluation

1

- (b) The website will be used for e-commerce.

Explain why it is important that sites for e-commerce are secure.

1

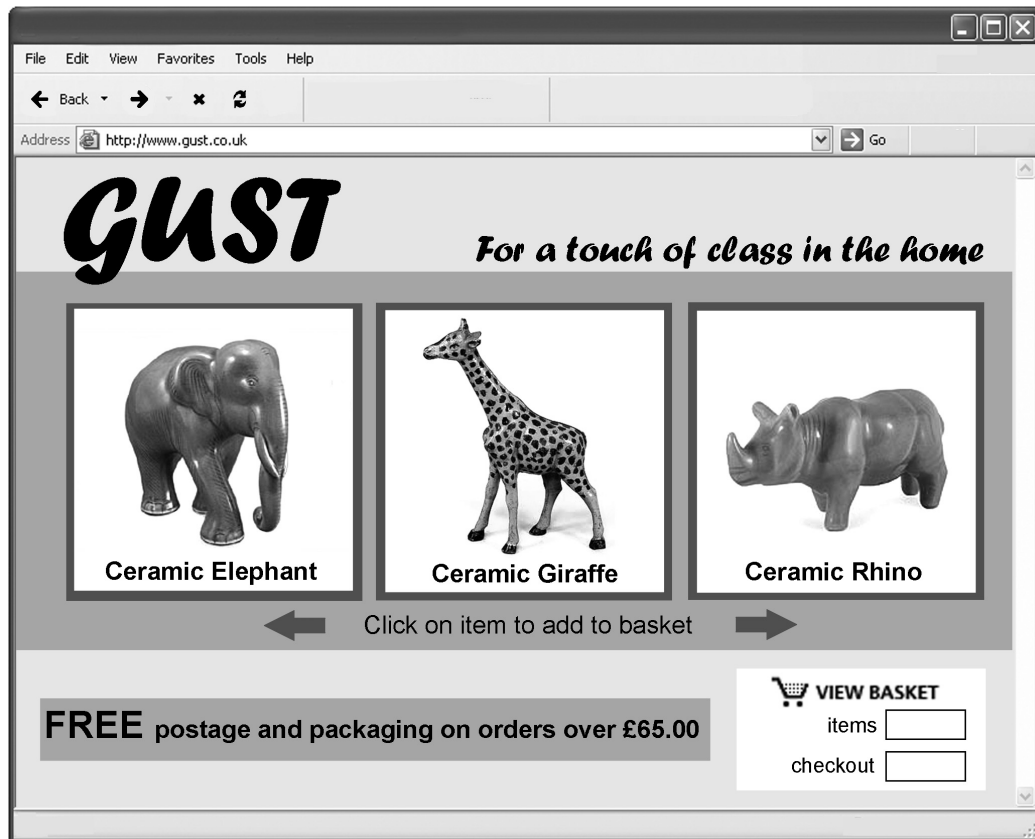
- (c) GUST will face setup costs in relation to Internet access.

State **one** example of a setup cost.

1

Part B—Information and the Internet (continued)**9. (continued)**

(d) GUST creates its website. One page is shown below.



The site must be tested. Which of the following is an example of testing?

Tick (✓) **one** box.

- ☐ Uploading pictures
- ☐ Creating hyperlinks
- ☐ Checking hyperlinks
- ☐ Adding a sound

[Turn over

Part B—Information and the Internet (continued)

9. (continued)

- (e) Once the website has been completed, it must be documented.

State **one** example of information that you would expect to find in each of the following items of documentation.

- (i) User Guide

1

- (ii) Technical Guide

1

Part B—Information and the Internet (continued)

10. Antonia would like to access the Internet from home.

(a) Which type of software will be required to access the Internet?

Tick (✓) **one** box.

- ☐ Text processing
- ☐ Spreadsheets
- ☐ Communications
- ☐ Applications

1

(b) Antonia will need to make sure that her computer system is protected from computer viruses.

State what precaution she should take on her home computer.

1

(c) (i) Antonia would like to use the Internet to watch live video footage.

State the type of Internet access that you would recommend for this task.

1

(ii) Antonia experiences problems with live video footage over the Internet.

State the service, provided by the ISP, that Antonia could use to try and resolve this problem.

1

(20)

[END OF PART B—INFORMATION AND THE INTERNET]

[END OF SECTION II]

[END OF QUESTION PAPER]

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