

FOR OFFICIAL USE

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Mark

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NATIONAL QUALIFICATIONS 2012

COMPUTING STUDIES INTERMEDIATE 1



* X 2 0 7 1 0 0 1 *

THURSDAY, 31 MAY
1.00 PM – 2.00 PM

X207/10/01

Fill in these boxes and read what is printed below.

Full name of centre

Town

--

--

Forename(s)

Surname

Number of seat

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Date of birth

Day

Month

Year

Scottish candidate number

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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** 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.



* X 2 0 7 1 0 0 1 0 1 *

SECTION I

DO NOT
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MARGIN

Attempt ALL questions in this section

1. Blair's band has recorded several songs and stored them on his computer.

(a) State the hardware device required to output their recorded sounds.

1

(b) All the stored songs require 2.4 Gb of storage. Blair wishes to store them on a medium that he can carry to school.

(i) Explain why Blair cannot burn all the songs onto a CD.

1

(ii) State a solution to this problem.

1

(c) Blair used a graphics package to design a graphic for a poster.



(i) Name the tool used to add the name of the album and the band name to the graphic.

1



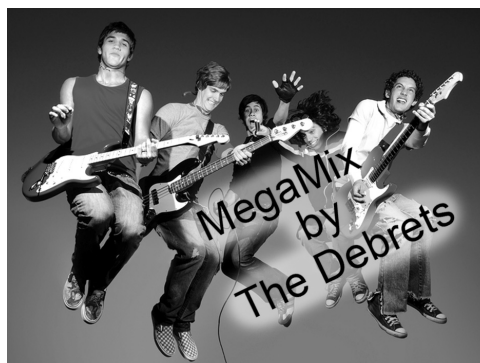
1. (c) (continued)

DO NOT
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IN THIS
MARGIN

- (ii) Blair makes a second version of the design.



Version 1



Version 2

Describe the steps taken to change the graphic from Version 1 to Version 2.

1 _____

2 _____

2

- (iii) State the hardware device required to output images to a monitor.

1

- (d) (i) Blair uses the computer to store music tracks, design graphics and to type letters. The following files are stored on his computer.

Select a suitable **file type** for each. The first one has been done for you.

Description	File Type
MegaMix graphic	jpg
Letter to record company	
MegaMix audio track	

2

- (ii) Blair notices that the songs just recorded are stored as Track 1 and Track 2. Describe what he should do to these files to make them easier to identify.

1



2. DJ Disco Dave keeps a paper catalogue of his music tracks. He decides to buy a database package. The advert for a database package is shown below.

DO NOT
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IN THIS
MARGIN

StoreSafe 2012 Database

Keep track of your data with our new version of StoreSafe.
Speedy searching and sorting and password protection.

System Requirements

500 MHz processor
512 Mb RAM
1.5 Gb Available hard disk
High resolution monitor
Reid OS 2012
Microphone
Internet Access (SpeedInt 6 browser)

- (a) From the advert identify the following requirements and complete the table below.

Amount of Backing Storage Required	
Amount of Memory Required	

1

- (b) Dave is concerned that data might be lost if his computer is destroyed by fire. State what Dave should do to prevent him from losing his data.

1

- (c) Dave wants to have a computer system available for people at his discos to select tracks to play. He is concerned that the mouse might go missing.

State another input device that would allow dancers to select tracks.

1



2. (continued)

DO NOT
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IN THIS
MARGIN

(d) Dave sets up his database of tracks. Here is a sample from his database.

Title	Artist/Group	Type	Length (secs)	Intro
MegaMix	The Debrets	Rock	210	None
OML	Usherette	Electric	212	Hard
Unhand Me	Radonna	Rock	190	Hard
Can't Stop Crying	SuGo	Folk	241	Soft
Miny Mo	Justin Bomber	Pop	210	Soft
My Love	Le\$ha	Rock	240	None
Sleep Now	Lady BaBa	Electric	200	Soft

(i) State the number of **records** in the sample shown above.

1

(ii) State the Title of the track that will appear first in the database after each of the following sorts has been performed.

1 Sort on **Length** *descending*

Title of Track _____

2 Sort on **Type** *ascending* and **Artist/Group** *ascending*

Title of Track _____

2

(iii) State how many tracks are found after the following search has been performed.

Search on **Intro** = **Soft** and **Length (secs)** > 200

Number of tracks found _____

1

[Turn over



* X 2 0 7 1 0 0 1 0 5 *

3. In Dave's office, customers who are interested in booking a disco are shown a slideshow of photographs advertising his discos.

DO NOT
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MARGIN

- (a) (i) State the **type** of application Dave has used to produce the slideshow.

1

The first slide is shown below.



- (ii) When the Valentine picture is clicked, the slide appears to fade and the new slide flies in from the side.

Name this feature of the package.

1

- (b) As well as photographs, state what Dave could include to make his slideshow more interesting.

1 _____

2 _____

2

- (c) Dave has just organised a School Prom. He wants to use this graphic on his main page so that customers can select it to view the School Prom photographs.

Explain how he should edit his slideshow to allow this.



2



3. (continued)

DO NOT
WRITE
IN THIS
MARGIN

- (d) One of the customers suggests that Dave should have a display of photographs running on a large screen during the discos.

State the output device needed for this.

1

- (e) One of Dave's customers wants hard copies of slides 6 to 9.

On the print window shown below draw a **circle** round the option he should select to print efficiently.

Print

Printer

Name: ElfBrand Laser 1400n

Status: Idle

Print range

☐ All

☐ Current slide

☐ Current View

☐ Slides

Enter slide numbers or slide ranges.

1

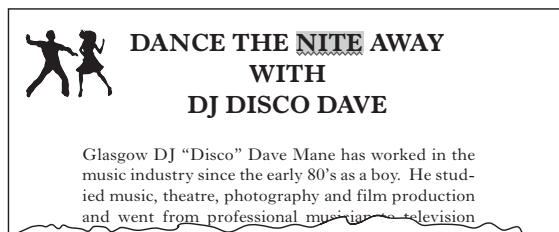
[Turn over



3. (continued)

DO NOT
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MARGIN

- (f) Dave uses a word processing package to create fliers advertising the discos.

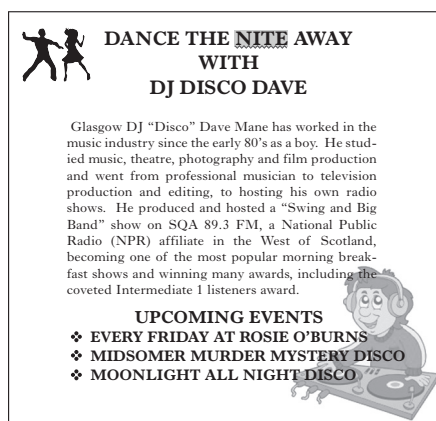


- (i) When he spell-checked the flier, the word **NITE** is highlighted.
Explain why the spell-checker highlighted this word.

1

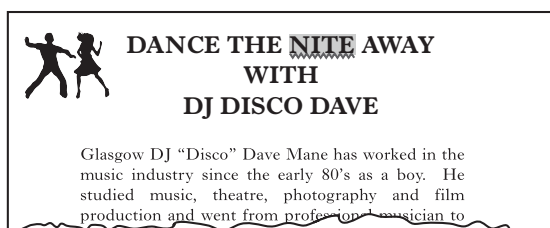
- (ii) The graphic on the flier sits behind the text.

Name the feature of the package he used to do this.

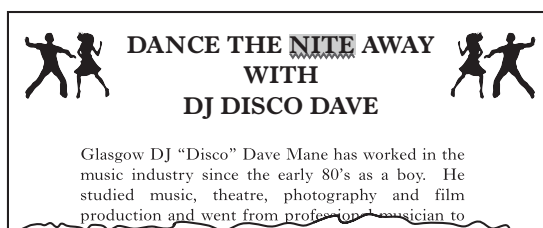


1

- (iii) Dave changed the top of the flier by adding a second graphic as shown below.



Original flier



Changed flier

Describe how he used the features of the application package to do this.

2



3. (continued)

DO NOT
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MARGIN

- (g) Dave wants to add more text to his flier but the page is full.

Explain how he could alter the **page layout** to allow more text on the page without altering any graphics.

1

- (h) Dave has a hand written set of instructions for setting up his disco. He decides to create a word processed version.

State **one** advantage and **one** disadvantage of using a scanner with Optical Character Recognition software to enter text, rather than using a keyboard.

Advantage_____

Disadvantage_____

2

[Turn over



* X 2 0 7 1 0 0 1 0 9 *

4. Rosie uses a spreadsheet to calculate how much money is made from tuck shop sales at the discos. She offers customers a refund on bottles returned.

DO NOT
WRITE
IN THIS
MARGIN

	A	B	C	D
1	Rosie O'Burn's Under 18 Disco			
2		Price Per Bottle	Number of Bottles sold	Total
3	K ² O Mango	£1.36	23	£31.28
4	K ² O Pear	£1.21	56	£67.76
5	Water	£0.89	34	£30.26
6	Choco Milk	£1.50	55	£82.50
7	Orangada	£1.10	32	£35.20
8	Tin Bru	£1.12	87	£97.44
9			Total Takings	£344.44
10		Refund per Bottle	Number of Bottles Refunded	
11	Bottle Refund	£0.25	204	£51.00
12				
13			Total Takings minus Refunds	£293.44

- (a) Some cells contain formulas. Name **one** other **type** of data that cells can contain.

1

- (b) Cell D9 contains a formula. Complete this formula below.

= _____ (D3 : D8)

1

- (c) The word "Refunded" in cell C10 cannot be seen properly.
Describe what Rosie should do to make this text fully visible.

2



4. (continued)

DO NOT
WRITE
IN THIS
MARGIN

- (d) Rosie increases the price of water in cell B5.

What effect will this have on the other cells in the spreadsheet?

Tick **one** box.

☐ Values in cells D5, D9 and D11 increase

☐ No effect

☐ Values in cells D5, D9 and D13 decrease

☐ Values in cells D5, D9 and D13 increase

1

- (e) State **one** way that the data in cell D13 has been formatted.

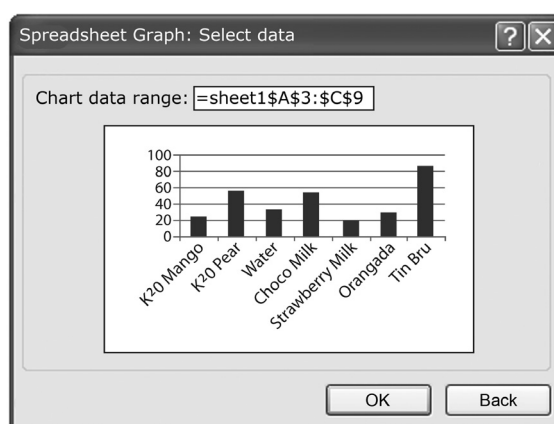
1

- (f) At the next disco Rosie adds a new drink, Strawberry Milk.

Describe how she should amend her spreadsheet to include the new drink.

1

- (g) Rosie wants to create a bar graph showing how many of each drink is sold. She answers a series of questions which guide her through the process of setting up the graph.



Name the feature of the package that guides Rosie through this task.

1

[END OF SECTION I]

(40)



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DO NOT WRITE ON THIS PAGE



* X 2 0 7 1 0 0 1 1 2 *

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

☐

[Turn over



* X 2 2 2 1 2 0 2 1 3 *

Part A — Computers and the Internet

DO NOT
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MARGIN

5. Gerald owns a computer repair shop. He repairs palmtops, laptops, desktops and servers.

(a) What is a server?

1

- (b) Gerald is working on a desktop computer that is having problems connecting to the Internet.

Which of these devices is likely to be faulty?

Tick **one** box.

☐

keyboard

☐

graphics card

☐

sound card

☐

modem

1

- (c) Gerald has successfully repaired a palmtop computer.

- (i) He selects different menus on the palmtop to check it.

Name **one** input device used to select menus on a palmtop computer system.

1

- (ii) Gerald's customer explains that he uses the palmtop computer to create multimedia presentations. Gerald recommends that the customer should buy a laptop instead. State **one** advantage and **one** disadvantage of using a laptop instead of a palmtop.

Advantage _____

Disadvantage _____

2

- (d) A laptop is brought in with a faulty CD writer. On the front of the CD tray is written "CD-RW/CD-R".

State the difference between a CD-RW disk and a CD-R disk.

1



* X 2 0 7 1 0 0 1 1 4 *

5. (continued)

- (e) Gerald uses software to keep a record of each repair and how much he charged each customer.

State the **type** of software which would be best suited to this task.

1

- (f) Gerald sometimes has to e-mail photos of damaged hardware to insurance companies. The photos have to be very high quality.

State the input device which would be best suited to taking high quality photos of the hardware.

1

- (g) Gerald also runs a website where customers can ask questions about computer problems and pay their repair bills.

- (i) State **two** running costs Gerald has with the website.

1 _____

2 _____

2

- (ii) Explain why Gerald's website must be a secure site.

1

- (h) Gerald's friend wishes to purchase a computer system to edit his holiday videos. He asks Gerald for advice.

Which computer below has the best specification for editing digital video?

Tick **one** box.

☐

4 Gb RAM, 512 Gb Hard Disk Drive and a large monitor

☐

4 Gb RAM, 20 Gb Hard Disk Drive and a small monitor

☐

1 Gb RAM, 512 Gb Hard Disk Drive and a small monitor

☐

1 Gb RAM, 20 Gb Hard Disk Drive and a large monitor

1



* X 2 0 7 1 0 0 1 1 5 *

Part A — Computers and the Internet (continued)

DO NOT
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6. Gayle and John have developed a website to allow new bands to upload their music and sell it online.

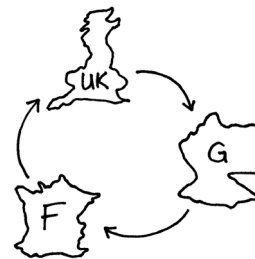
(a) Gayle and John have a meeting to discuss the completed website. They decide that the website could be improved by having a button to allow users to read the text in other languages.

- (i) State the stage of the software development cycle which involves this discussion on how a website could be improved.

1

- (ii) John sketches out what he wants a language button to look like.

What stage of the software development cycle has John returned to?



1

- (b) What is the name of the first page of a website that links to other pages?

Tick **one** box.

☐

Start page

☐

User page

☐

Home page

☐

End page

1

- (c) Gayle and John wish to add some pages to the website that can only be accessed by users who have joined as members.

Describe how they could ensure that only members have access to these pages.

1

- (d) When John creates new web pages for the site, the files can be uploaded at high speed to the website.

State the **type** of Internet connection John has.

1



6. (continued)

- (e) Gayle buys a new graphics application but gets an error message when she tries to install it on her laptop.

The application requirements and laptop specification are listed below.

Graphic Application Requirements
1.8 GHz Processor
DVD Drive
512 Mb RAM
3 Gb available Backing Storage
ReidOS2009 or Newer
17" Monitor recommended

Laptop Specification
2.4 GHz Processor
DVD RW Drive
2 Gb RAM
512 Gb Hard Disk Drive (510 Gb currently used)
ReidOS2012 Operating System
19" LCD

- (i) Suggest a reason why the application cannot be installed.

1

- (ii) Describe how this problem could be solved.

1

- (iii) Which of the devices listed below is an output device?

Tick **one** box.

- ☐ Keyboard
- ☐ 512 Gb Hard Disk Drive
- ☐ 19" LCD
- ☐ DVD RW Drive

1

(20)

[END OF PART A—COMPUTERS AND THE INTERNET]




Part B — Information and the Internet

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MARGIN

5. Joshhynd Youth Club uses a computer and a database to store personal details of club members. The computer is located in the Youth Club's office.

(a) An example of a record from the Youth Club's database is shown below.

First Name	Dee
Surname	Rae
Age	15
Photo	
Group	Music
Subscription due	16/10/2012

- (i) State the **type** of **data** stored in the Photo field.

1

- (ii) Describe how the Youth Club would amend the database to keep a record of the members who have paid their yearly subscription.

1

- (iii) Describe how the database could be used to obtain a list of all the 16 year old members of the Music group.

3

- (iv) The example shows the age field contains the number 15.
Explain why "Age = 15" is information and not data.

1



Part B — Information and the Internet (continued)

DO NOT
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MARGIN

5. (continued)

- (b) Duncan, one of the youth club members, is asked to use the office computer to create a poster. While in the office, Duncan opens the database and writes down the e-mail address of another club member.

- (i) State the law the **Youth Club** has broken.

1

- (ii) Describe how the Youth Club could ensure that club members cannot access the personal information in the database.

1

- (c) Joshhynd Youth Club pays to have their contact details in the local Yellow Pages.

- (i) What type of information system is the Yellow Pages shown?

Tick **one** box.

☐

Private and Manual

☐

Private and Electronic

☐

Public and Manual

☐

Public and Electronic

1

- (ii) The Yellow Pages also exists as a website.

State **one** advantage of using the website, instead of the paper version.

1



[Turn over



5. (continued)

(d) The Youth Club wishes to buy new equipment from e-commerce websites.

(i) A modem is required to access websites.

What task does a modem perform in a computer system?

Tick **one** box.

☐

It allows a computer to send and receive data via a telephone line.

☐

It plays video.

☐

It starts up the computer when it is switched on.

☐

It sends pictures on the web pages to the monitor.

1

(ii) State **one** security issue that may arise when buying goods from e-commerce websites.

1



Part B — Information and the Internet (continued)

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MARGIN

6. Shorenice Community High School is located on a remote island. Mr Howard runs the web design club. He has decided to enter a competition to create a new website to promote wildlife protection.

- (a) There are no telephone lines to the island.

What other method of accessing the World Wide Web may be used by the school?

Tick **one** box.

- ☐ Helplines
- ☐ Satellite
- ☐ Broadband
- ☐ Dial-Up

1

- (b) The web design club members use an *ISP* to add the website they create to the *World Wide Web*.

What does ISP stand for?

I _____ S _____ P _____

1

- (c) Mr Howard suggests to the pupils that they use the Software Development Process to develop their website. They start with the Analysis stage.

- (i) Which of these tasks should the pupils carry out at the Analysis stage?

Tick **one** box.

- ☐ Take photos of wildlife for the website.
- ☐ Install the software used to create the webpages.
- ☐ Write a user guide for the website.
- ☐ List the main topics that will be covered by the website.

1

- (ii) Name the stage the pupils will move on to after the *Analysis* stage is complete.

1



* X 2 0 7 1 0 0 1 2 1 *

Part B — Information and the Internet (continued)

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MARGIN

6. (continued)

- (d) When pupils start creating the website, Mr Howard notices that they are using pictures of birds that have been copied from other websites.

State the law the pupils would break if they used these pictures in their own website.

1

- (e) Before the website can be uploaded to the World Wide Web it must be tested.

State **one** task the pupils may carry out at the *testing* stage.

1

- (f) Once uploaded, the pupils' website can be viewed by people around the world via a large network of computer networks.

What is this large network of computer networks known as?

1

- (g) A pupil from another school hacks into the Shorenice website and deletes some graphics.

State the law the pupil has broken.

1

(20)

[END OF PART B—INFORMATION AND THE INTERNET]

[END OF SECTION II]

[END OF QUESTION PAPER]



ADDITIONAL SPACE FOR ANSWER

DO NOT
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* X 2 0 7 1 0 0 1 2 3 *

ADDITIONAL SPACE FOR ANSWER

DO NOT
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* X 2 0 7 1 0 0 1 2 4 *