

FOR OFFICIAL USE

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**F**

**0560/401**



\* 0 5 6 0 2 7 0 1 \*

KU PS TOTAL

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NATIONAL  
QUALIFICATIONS  
2010

MONDAY 10, MAY  
9.00 AM – 10.00 AM

COMPUTING STUDIES  
STANDARD GRADE  
Foundation Level

Fill in these boxes and read what is printed below.

Full name of centre

|  |
|--|
|  |
|--|

Town

|  |
|--|
|  |
|--|

Forename(s)

|  |
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Surname

|  |
|--|
|  |
|--|

Date of birth

Day Month Year

|  |  |  |  |  |  |
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Scottish candidate number

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Number of seat

|  |
|--|
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|--|

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. Sadia has bought a new laptop computer to replace her old desktop computer.

- (a) State **one** benefit to Sadia of having a laptop computer instead of a desktop computer.

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- (b) Her desktop computer had a variety of *general purpose packages* which she used for different tasks.

Match the package with the task.

Use each word only **once**.

*Presentation*

*Databases*

*Spreadsheets*

*Word Processing*

*Graphics*

|                                    |  |
|------------------------------------|--|
| Type a letter.                     |  |
| Create a slideshow of school trip. |  |
| Keep an account of shop sales.     |  |
| Draw a picture.                    |  |
| Keep a list of pupils in school.   |  |

- (c) Sadia used the word processing package for a science report.

State **one** reason why Sadia would use the word processing package rather than writing the report by hand.

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| KU | PS |
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|    | 1  |
|    | 5  |
|    | 1  |
|    |    |

(d) Part of Sadia's science report is shown below.

The first experiment was to see at what temperature salt water started to boil.

The **first** experiment was to see at what temperature salt water started to boil.

## Report B

1 \_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_

- Name this feature.

1

- Name the feature that will let her do this.

1

- State **two** advantages of an **integrated package**.

2

1. (continued)

(g) The integrated package has a spreadsheet application.

Use some of the following words to label the spreadsheet shown below.

*formula value row cell column*

|          |  |                 |          |          |          |
|----------|--|-----------------|----------|----------|----------|
|          |  |                 |          |          |          |
|          |  | <b>A</b>        | <b>B</b> | <b>C</b> | <b>D</b> |
| <b>1</b> |  |                 |          |          |          |
| <b>2</b> |  |                 |          |          |          |
| <b>3</b> |  |                 |          |          |          |
| <b>4</b> |  |                 |          |          |          |
| <b>5</b> |  |                 |          |          |          |
| <b>6</b> |  | <b>=(A4*B4)</b> |          |          |          |

(h) Sadia wants to type the words “Result of Test” into cell A1 but it does not fit.

State what she must do to fix this.

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4

1

2. Alasdair is part of a group planning an expedition for their Duke of Edinburgh Award.

He has the planned route stored on his computer and wants to send it electronically to the other members of the group.

- (a) (i) State **one** item of **hardware** Alasdair's computer needs to send the route electronically.

\_\_\_\_\_

1

- (ii) State **one** item of **software** Alasdair's computer needs to send the route electronically.

\_\_\_\_\_

1

- (iii) State **one** advantage of using electronic communication rather than ordinary post.

\_\_\_\_\_

1

- (b) The information could also be sent using a mobile phone.

Apart from e-mail, state another feature of a mobile phone that can be used for sending information.

\_\_\_\_\_

1

- (c) Alasdair buys a new sleeping bag from a company that uses *e-commerce*. State what the "e" in e-commerce stands for.

\_\_\_\_\_

1

- (d) Suggest **two** reasons why companies use e-commerce to sell their goods.

1 \_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_

2

[Turn over

3. Seaness is a nuclear power station. Robots are used in many different situations.

(a) State **two** reasons why robots are likely to be used in this nuclear power station.

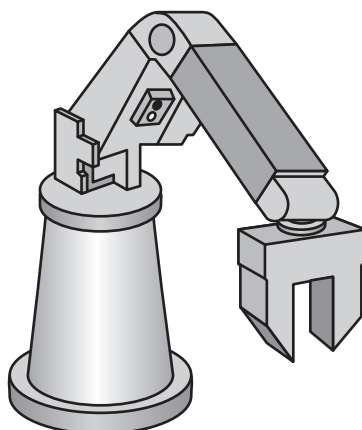
1 \_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_

(b) (i) One of the robots in the power station looks like this.



Tick (✓) **one** box only to show whether this is a *stationary* or *mobile* robot.

Mobile

☐

Stationary

☐

(ii) The robot above has a gripper tool at the end of its arm.

State another tool that could be used by the robot in a nuclear power station.

\_\_\_\_\_

| KU | PS |
|----|----|
|    | 2  |
|    | 1  |
|    | 1  |
|    |    |

(c) Complete the following sentences using the words below. Use each word only **once**.

sensors

- (i) A \_\_\_\_\_ is a device which makes a robot move.
  - (ii) Robots detect their surroundings by using \_\_\_\_\_
  - (iii) \_\_\_\_\_ is data sent back to the computer.
- (d) Some of the human workers will have to learn new skills when working with robots.

State the term used for teaching human workers new skills.

- (e) A CAD package was used to design the layout of the power station.

Fill in the missing words to show what CAD stands for.

Computer A \_\_\_\_\_ D \_\_\_\_\_

**[Turn over**

4. Stet Supplies is a company with offices around the country.

(a) The head office is in Edinburgh.

The computers in the other offices are all linked to the main computer in Edinburgh.

Tick (✓) **one** box to show the type of network being described.

Local Area Network ☐

Wide Area Network ☐

1

(b) A mainframe computer is used by head office to process all the sales information.

Tick (✓) **two** boxes to show why head office would use a mainframe computer.

|                                                                         |                          |
|-------------------------------------------------------------------------|--------------------------|
| Each office stores the sales information.                               | <input type="checkbox"/> |
| All information is processed very quickly.                              | <input type="checkbox"/> |
| Only one person can access the sales information at anytime.            | <input type="checkbox"/> |
| More than one person can access the sales information at the same time. | <input type="checkbox"/> |

2

(c) Sales are input at each office using a *terminal*.

Tick (✓) **two** boxes to show which two items are required for a terminal.

|                                                                                     |                          |
|-------------------------------------------------------------------------------------|--------------------------|
|  | <input type="checkbox"/> |
|  | <input type="checkbox"/> |
|  | <input type="checkbox"/> |

2

**4. (continued)**

(d) All sales are processed at head office.

The five stages of the data processing cycle are shown below.

*data input*                      *data output*  
*data collection*              *data preparation*      ~~*data processing and storage*~~

Put the **stages** followed by head office into the correct order.

Number 4 has been completed for you.

| Order | Stages                             |
|-------|------------------------------------|
| 1     |                                    |
| 2     |                                    |
| 3     |                                    |
| 4     | <i>data processing and storage</i> |
| 5     |                                    |

4

[Turn over]

5. (a) A computer system is made up of various devices.

Match some of the following words with the statements below.

*speaker*      *scanner*      *mouse*      *keyboard*  
*DVD-ROM drive*      *printer*      *microphone*

Use each word only **once**.

| Use                                        | Device |
|--------------------------------------------|--------|
| Used to point to an icon on the screen.    |        |
| Used to get a paper copy of your document. |        |
| Used to get a photograph into a computer.  |        |
| Used to enter text.                        |        |
| Used to input sound.                       |        |

5

- (b) A computer system's memory can either be *RAM* or *ROM*.

Using the words **RAM** or **ROM** complete the following statements.

(i) The contents of \_\_\_\_\_ cannot be changed.

1

(ii) The contents of \_\_\_\_\_ are lost when the computer is switched off.

1

- (c) State what the letters RAM stand for.

R \_\_\_\_\_ A \_\_\_\_\_ Memory

2

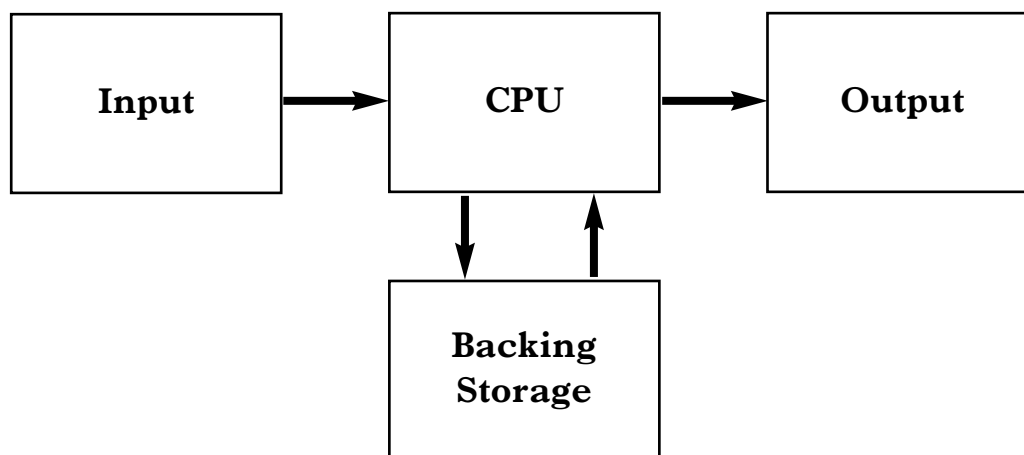
- (d) State the type of program that is loaded into RAM when the computer starts up.

O \_\_\_\_\_ S \_\_\_\_\_

2

**5. (continued)**

(e) This is a block diagram of a computer system.



State what *CPU* stands for.

C \_\_\_\_\_ P \_\_\_\_\_ Unit \_\_\_\_\_

2

**[Turn over**

6. CT Motorcycles uses a database to store information about its motorbikes. Part of the file is shown below.

| Make     | Model      | Colour | Reg No   | Price |
|----------|------------|--------|----------|-------|
| Honda    | ZXR 750    | Red    | N65 YUP  | £1500 |
| Yamaha   | Fazer 600S | Blue   | ST51 PQA | £2390 |
| Honda    | CBR 400    | Black  | T234 MNB | £1800 |
| Honda    | ZXR 400    | Blue   | T456 LKJ | £1400 |
| Yamaha   | Fazer 400  | White  | ST51 WXY | £1590 |
| Kawasaki | CBR 600    | Black  | ST03 ABC | £4500 |

- (a) (i) State the number of fields shown. \_\_\_\_\_
- (ii) State the number of records shown. \_\_\_\_\_
- (b) The sales manager decides to add a code number for each motorbike sold. Tick (✓) **one** box to show what the sales manager needs to add to the database.

|      |                          |        |                          |       |                          |
|------|--------------------------|--------|--------------------------|-------|--------------------------|
| File | <input type="checkbox"/> | Record | <input type="checkbox"/> | Field | <input type="checkbox"/> |
|------|--------------------------|--------|--------------------------|-------|--------------------------|

- (c) The sales manager wants to find all the red motorbikes. Use some of the words in the list below to describe how he would find all the red motorbikes.

*sort      records      search      contain      field*

The sales manager will \_\_\_\_\_ the file for the  
\_\_\_\_\_ which \_\_\_\_\_ “Red” in  
the “Colour” \_\_\_\_\_.

| KU | PS |
|----|----|
|    |    |
|    | 1  |
|    | 1  |
| 1  |    |
|    | 4  |
|    |    |

**6. (continued)**

- (d) The sales manager wants the records in alphabetical order by the “Make” of the motorbike.

Use some of the words in the list below to describe how he would do this.

*sort            ascending            Make            search*

The sales manager will \_\_\_\_\_ the records in  
\_\_\_\_\_ order on the \_\_\_\_\_ field.

- (e) CT Motorcycles holds customer details on a computer.

To avoid breaking the law it must ensure the data is not lost.

- (i) State a method it could use to ensure the data is not lost.

\_\_\_\_\_

- (ii) Tick (✓) **two** boxes to show what else they must do to avoid breaking the law.

|                                                           |  |
|-----------------------------------------------------------|--|
| Make sure the customer can see their file.                |  |
| Make sure the customer can change any file.               |  |
| Make sure all customers can see the entire customer file. |  |
| Make sure the data is accurate.                           |  |

- (f) State **two** advantages of a computerised database.

1 \_\_\_\_\_  
\_\_\_\_\_  
2 \_\_\_\_\_  
\_\_\_\_\_

[END OF QUESTION PAPER]

| KU | PS |
|----|----|
|    | 3  |
|    | 1  |
|    | 2  |
|    | 2  |
|    |    |

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