2009 Computing Studies

Standard Grade – Foundation

Finalised Marking Instructions

KU	PS

1. Anya is the treasurer for an enterprise group. Anya uses an application package to keep details of weekly sales.

The details are entered and the computer works out the totals in Column D.

	A	B	C	D
1	**Enterprise Group**			
2	**Item**	**Selling Price**	**No. Sold**	**Total**
3	Black Pens	£0·15	15	£2·25
4	Blue Pens	£0·15	20	£3·00
5	Rubbers	£0·10	10	£1·00
6	Sharpeners	£0·15	5	£0·75
7			**Total**	**£7·00**

(*a*) State the type of *application package* being used.

Spreadsheet — **1**

(*b*) (i) Name **one** cell that contains *text*.

A2, A3, A4, A5, A6, B2, C2, D2, C7 — **1**

(ii) Name **one** cell that contains a *value*.

Cells in range B3 – C6 — **1**

(iii) Name **one** cell that contains a *formula*.

Any from D3 to D7 — **1**

(*c*) The computer package Anya is using is part of an *integrated package*.

Give **one** advantage and **one** disadvantage of using an integrated package instead of separate packages.

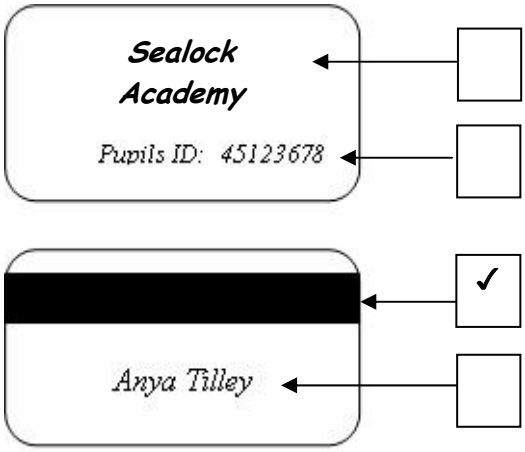
Advantage **common HCI; ease of transfer of data; easy links between documents; any other valid answer – 1 mark**

Disadvantage **fewer features than dedicated package; takes up more memory than single packages; redundant features; any other valid reason – 1 mark**

DO NOT ACCEPT POSITIVE AND NEGATIVE ANSWERS FOR ADVANTAGE/DISADVANTAGE EG COMMON HCI/DIFFERENT HCI — **2**

	KU	PS
(*d*) (i) Cell D7 contains a formula.		
This formula could be written as =D3+D4+D5+D6		
Rewrite this formula in a shorter form.		
=SUM(D3:D6)		**1**
(ii) There is also a formula in cell D4.		
Choose the correct formula from the list below.		
Tick (✓) **one** box only.		
=B4 + C4 ☐		
=B4 – C4 ☐		
=B4 * C4 ✓		
=B4 / C4 ☐		**1**
(*e*) Anya now wants to sell pencils. She has to add this information to the table.		
The items are already in alphabetical order.		
Describe how Anya could **add** Pencils to her table.		
Click on row containing Rubbers and go to insert rows. **Add a new row** **Where … between row 4 and 5** **1 mark for position and 1 mark for insert row. Max 2 marks**		**2**
(*f*) This package uses a *WIMP operating system*.		
What does "WIMP" stand for?		
The first word has already been completed for you.		
W WINDOW		
I **ICONS**		
M **MENU**		
P **POINTER**	**3**	

	KU	PS
2. Sealock Academy uses swipe cards for pupils to purchase their lunch in the dining hall.		
(*a*) The two pictures below show either side of the swipe card.		
Which of these shows a magnetic stripe?		
Tick (✓) the appropriate box.		



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	1	
(b) In the dining hall, some items have a *bar code* which is scanned at the check out.		
Which **two** of the following pieces of information are **NOT** stored on the bar code?		
Tick (✓) **two** boxes only.		

Price	✓
Sell by date	✓
Product code	
Country code	

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		2
(*c*) The school prefers to use magnetic stripe cards instead of cash.		
State **one** reason for this.		
Reduced risk of theft/safer **No need to carry cash** **Save time at checkout or any other suitable answer**	**1**	

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(*d*) Bairns Catering supply food to a number of schools throughout Scotland.

Which **two** of the following are reasons for Bairns Catering to use a *commercial data processing system*?

Tick (✓) **two** boxes only.

Lots of data can be processed	✓
Repetitive tasks are handled slowly	
Data can be processed quickly	✓
Data cannot be shared	

2

(*e*) Bairns Catering store information about their workers on computer.

Use the words below to describe what the Company must do with the information they hold on their workers.

unauthorised *errors* *accurate* *allowed*

Bairns Catering must make sure that data is **accurate** and kept up

to date and that there is no **unauthorised** access to the data.

Bairns Catering workers are **allowed** to see the data held

about them and have any **errors** in the data corrected.

4

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3. Garry has a large DVD collection and has created a database to store information on each of his DVDs.

Title	Date of Release	Main Actor	Film Type
Harry Potter & The Goblet Of Fire	24/07/2006	Daniel Radcliffe	fantasy
Shrek 3	26/07/2007	Eddie Murphy	children's
Simpsons: Movie	10/12/2007	Bart Simpson	comedy
Pink: Live From Wembley	16/04/2007	Pink	music
Hamlet	24/09/2007	Kenneth Branagh	drama

(*a*) How many *records* are shown in the database above?

5 — **1**

(*b*) How many *fields* are shown in the database above?

4 — **1**

(*c*) Garry has bought a new DVD. He wants to add the information about it to his database file.

Tick (✓) the term which best describes what Garry is doing.

Creating a new file	☐	Creating a new field	☐
Creating a new record	✓	Creating a backup	☐

1

(*d*) Garry can *search* and *sort* the records in the database. Circle whether he should "search" **or** "sort" to get the list required. The first one has been done for you.

(i) A list of all fantasy films — (**Search**) or Sort

(ii) A list of all films in order of title — Search or (**Sort**)

(iii) A list of all films released in 2007 — (**Search**) or Sort

2

(*e*) Garry keeps a *copy* of his database. What is the copy called?

Backup copy — **1**

(*f*) Garry's friend wants a copy of the database so he can decide what DVDs to borrow.

Garry decides to send him a copy of the database by e-mail.

State **one** item of hardware that Garry's computer system requires to be able to send the database electronically.

Modem — **1**

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(*g*) What does the “e” in “e-mail” stand for?

Electronic | **1**

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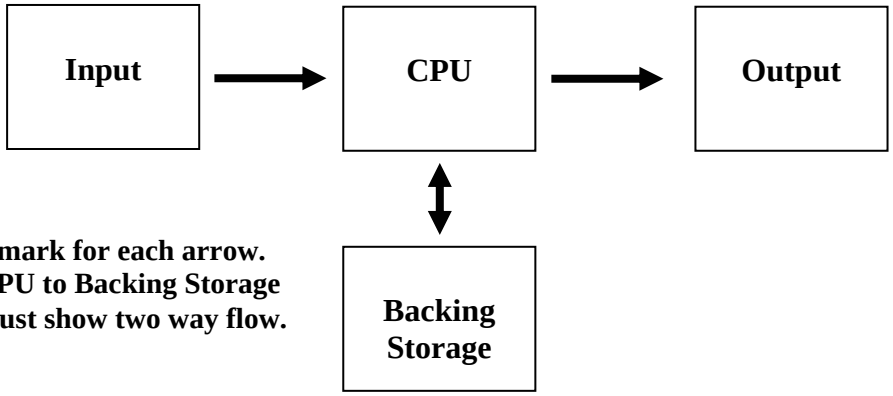
4. (*a*) Look at the block diagram below.

Draw the arrows to show the flow of data in a computer system.



1 mark for each arrow.
CPU to Backing Storage must show two way flow.

3

(*b*) What do the letters *CPU* stand for?

Fill in the spaces below.

C<u>entral</u> **P<u>rocessing</u>** Unit (**NOT Process/Processor**) **2**

(*c*) Put the following terms in order starting with the **smallest**.

Kilobyte *Byte* *Gigabyte* *Megabyte* *Terabyte*

1 **Byte**

2 **Kilobyte**

3 **Megabyte**

4 Gigabyte

5 **Terabyte** **4**

(*d*) (i) How many *bits* are in a *byte*?

8 **1**

(ii) How many *bytes* are in a *kilobyte*?

1024 **1**

(*e*) What does the term *RAM* stand for?

Fill in the spaces below.

R<u>andom</u> **A<u>ccess</u>** Memory **2**

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(*f*) Computer memory is made up of RAM and ROM.

State which one loses data when the computer is switched off .

RAM — **1**

(*g*) Which **two** sentences below correctly describe features of a *DVD-ROM*?

Tick (✓) **two** boxes only.

A DVD-ROM:

(i) **stands for Digital Versatile Disk-Read Only Memory** ✓

(ii) has less storage space than a CD-ROM

(iii) **can store more multimedia material than a CD-ROM** ✓

(iv) does not need a laser to read the data — **2**

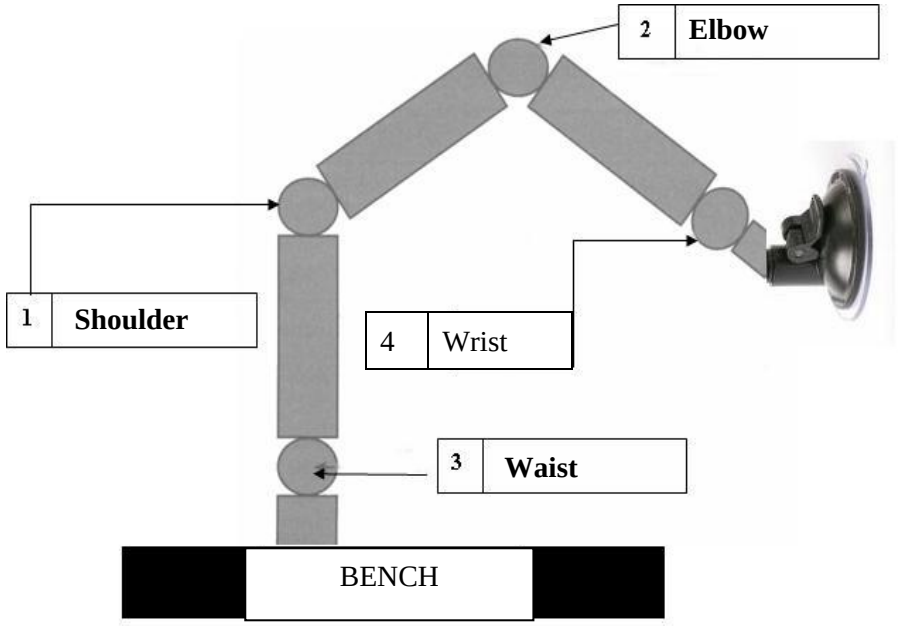
(*h*) A computer system is made up of input devices, backing storage and output devices. Use the words below to complete the following table with suitable input devices, backing storage and output devices.

joystick *monitor* *hard drive* *mouse* *plotter* *cd-rom*

Use each word only **once**.

	Input Devices	Backing Storage	Output Devices
1	keyboard	floppy disk	printer
2	**joystick**	**hard drive**	**plotter**
3	**mouse**	**cd-rom**	**monitor**

3 marks - 6 correct, 2 marks 4/5 correct, 1 mark for 2/3 correct — **3**

	KU	PS
5. A factory recently introduced robots to the production line.		
(*a*) State **two** reasons why the factory might have introduced robots.		
1 **Good at repetitive tasks; Can work in hazardous conditions;**		
2 **Don't need breaks**		
Any valid answer – 1 mark for each – max 2 marks	**2**	
(b) One of the factory's robots looks like the robot below.		
Label the parts of the robot numbered 1, 2 and 3.		
	**3**	
(*c*) The tool on the robot's arm can be changed depending on the task the robot has to complete.		
State **two** different tools that can be attached to the robot's arm.		
1 **ladel; spray; paint gun; screwdriver; spanner; suction cup; gripper/hand** 2 **any other valid tool**		
1 mark each – max 2 marks		**2**
(*d*) The robot shown is a *stationary* robot.		
Name another type of robot.		
Mobile	**1**	
(*e*) How are the robots given their instructions?		
By a program or code or feedback from sensors **NOT through a computer or high level instructions**.	**1**	

KU	PS

6. The PE Department at Sealock Academy wish to enter an under 13 football team into the school football competition.

The following notice was created for the PE noticeboard.

> Under 13 Fotball Team
>
> Selection
>
> Team 2 September 2009
>
> After School
>
> Bring ~~full~~ full kit

(*a*) (i) Which word has to be deleted?

full **1**

(ii) Which word has to be amended?

Football **1**

(iii) Which word has to be inserted?

Selection **1**

(*b*) The Principal Teacher has changed the notice to look like the following:

> Under 13 Football Team
>
> **Team Selection 2 September 2009**
>
> After School
>
> *Bring full kit*

State **two** formatting changes that have been made to the text.

1 **text centered; bold; font size (enlarge/make bigger); italics**

2 **Any two of the above**

Max 2 marks **2**

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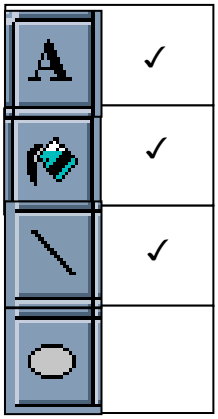
(*c*) The Principal Teacher asked a pupil to create a logo for the football team.		
The logo is shown below.		
		
Tick (✓) **two** of the graphic tools the pupil used to create the logo.		
		
Any 2 of 3 – Max 2 marks		**2**
(*d*) The word processing and graphics programs have a common HCI.		
What does "HCI" stand for?		
Fill in the spaces below.		
H**uman** Computer I**nterface**	**2**	
(*e*) The school has recently installed a new computer network.		
Suggest **two** advantages, to the school, of using a network.		
1 **Share data, programs, peripherals. Can send messages between machines on network.**		
2 **Any two of the above.**		
Max 2 marks		**2**

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2	

(*f*) The network is a *LAN*.

What does “LAN” stand for?

Fill in the spaces below.

L**ocal** A**rea** Network

[END OF MARKING INSTRUCTIONS]