

2006 Computing Studies

Standard Grade – General

Finalised Marking Instructions

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1. A new community centre is soon to open in the town of Bishophill. The manager is creating a web page to advertise the centre.

(a) Apart from text, name **two** other *types of data* which could be included in the web page.

Audio/sound/Photographic/video/graphics/animation/image/GIF/JPG/MP3/picture ✓

record/number/value/date/time ×

(b) State **one** method which can be used to prepare web pages.

Web authoring software/web design software/web template/ wizard from a package/HTML/JAVA/any named web design package or GPP as long as student indicates it is saved as HTML or web page ✓
web page maker ×

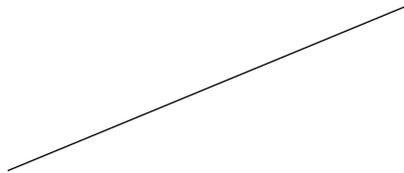
(c) The manager wants readers of the web page to be able to go directly to a page, which already exists, on the history of the town.

Describe **one** way in which this could be done.

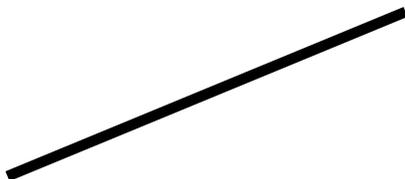
Hyperlink/hotspot/URL ✓ (one mark)

link ×

(d) A group of school children are designing a logo for the community centre, using a drawing package. A line in the logo looked like this.



It has been changed to look like the one below.



What has happened to make this change?

Line thickness has been changed/attribute ✓

it is thicker ×

1. (continued)

(e) The community centre intends holding music evening classes.

Using the Internet, the manager wants to find out what other music evening classes are available in the town of Bishophill.

Tick (✓) the **one** option which would let him find this out most efficiently.

Use a search engine and search for evening classes.

Type in the individual address of each known evening class provider.

Use a search engine and search for music evening classes and Bishophill.

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[Turn over

KU	PS
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	1 0

2. A letter is being sent out to everyone who has registered an interest in the community centre. The letter contains a *standard paragraph*.

(a) (i) What is a standard paragraph?

Ready made. A saved piece of text (one mark) which can be included in a whole document/or used repeatedly (one mark)

(ii) State **one** advantage of a standard paragraph.

Saves time, is pre-checked

(b) What feature of the word processing software would pick up the following underlined mistake?

The centre are having an opening ceremony on 27 September 2006.

Spelling and Grammar checker

(c) The letter is to include a timetable of the various activities taking place in the community centre.

Describe **two** reasons why the *table* facility would prove useful in this situation.

1 **Makes the presentation of the data clearer if laid out in a table eg reading across rows/Easy to insert rows above or below or insert a column/easier to read neatening the information and easier to “understand”.**

2 **It is easier to use than setting out tab points/Text can be wrapped within a table.**

(d) Page two of the letter starts in the middle of a paragraph.

What facility within a word processing package can be used to force the whole paragraph to move onto page two?

Page break

3. Below is a record from the database which holds details of people who have registered an interest in the community centre.

Registration Number	156
Name	Cameron Murray
Date of Birth	04/03/86
Sex	Male
Address line 1	13 Fauld Street
Address line 2	Bishophill
Postcode	BH3 82Y
Main Interest	Music

- (a) Look at the above record and write down **two** *field types* that could be used in this database.

1 **Date/Number/Text/Alphanumeric**

2 _____

- (b) What type of check could be done on the Date of Birth field to ensure that it falls within the years 1905 to 2006?

A range check/also accept validation (check) validity check

- (c) How could the database be used to identify the youngest person who has registered an interest in the community centre?

Put into ascending order. Sort (one mark) on Date of Birth (field) (one mark)

- (d) Complete the following paragraph which describes how you would obtain a paper copy of people born after 01/07/85 and who are interested in music.

search/query/

Perform a complex **filter** _____ on the "Date of Birth" field for a

date **Greater than/>** 01/07/85 AND the **Main Interest** _____ field

for "Music". Produce a paper copy using a **Printer** _____ .

[Turn over

4. The manager of the community centre has made a spreadsheet of the various activities that are planned.

	A	B	C	D	E	F	G
1	Activity	Number of Participants	Cost per Participant	Total from Participants	Tutor Fee	Cost of Room	Profit
2	Beginners French	12	£55.55	£666.60	£200.00	£60.50	£406.10
3	5-a-side football	10	£20.00	£200.00	£50.00	£100.00	£50.00
4	Learn to play Guitar	6	£75.00	£450.00	£70.00	£60.50	£319.50
5	Painting	20	£35.00	£700.00	£200.00	£80.00	£420.00
6							
7							
8							
9	Maximum attending a class	20					
10	Average Tutor fee	£130.00					
11							

(a) What can be done to prevent the Tutor Fee from being changed accidentally?

Cell protection/lock the cell/password protection ✓
lock the column × lock it ×

(b) Tick (✓) **one** box which gives the formula which is in G2.

- = B2*C2
- = D2-E2+F2
- = D2+E2
- = D2-E2-F2

(c) In cells B9 and B10 functions have been used. Fill in the spaces below with the functions and cell references in the appropriate places.

One mark for function, one mark for range.

(i) B9 = Maximum (B2 : B5) **accept Max**

(ii) B10 = Average (E2 : E5) **accept Avg**

(d) The manager wants a printout for the notice board of the number of people taking part in each activity.

State **one** reason why he might present the figures as a *chart* for this printout.

Figures are easier to read if presented in a chart form/more attractive/easier to look up

DO NOT WRITE IN THIS MARGIN

KU	PS
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1	0

KU	PS
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	1 0
	2 1 0
	1 0
	2 1 0

6. Within the reception area of the community centre there is going to be a computer which runs an *expert system*. This expert system is to give advice as to which activities people may be interested in.

(a) (i) Where else might an expert system be used?

In a Doctor's surgery (Any acceptable answer)

(ii) What would it be used for in this situation?

To help diagnose a patient (Answer must relate to example student has given)

(b) People may wish to take a printout of the results from the expert system. The manager must purchase a new printer for this.

Suggest **one** reason why he might choose to buy **each** of the following printers.

Laser **Good quality/quiet /makes little noise/ large print runs(any acceptable point)**

ref to print speed (ppm) *can't accept colour in both

Inkjet **Colour/Cheaper to purchase than laser (any acceptable point)**

(c) Expert systems are written in *high level languages*. Why is it necessary for high level languages to be *translated*?

The computer only understands machine code/so the computer can understand it

(d) Apart from translation, state **two common features** of high level languages.

English like/portable/problem orientated/easy to edit/easier to read/write/understand

6. (continued)

- (e) Live images of what is happening in reception are to be displayed on the community centre's web page.

Suggest an input device which could be used to capture these images.

Webcam/Digital(video) camera Do not accept camera on its own

- (f) The computers in the community centre have *LCDs* which use *TFT* technology.

- (i) What do the initials LCD stand for?

Liquid Crystal Display

- (ii) What do the initials TFT stand for?

Thin Film Transistor

[Turn over

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KU	PS
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7. When a person calls to book a place for an evening class, the receptionist checks the computer for availability and can respond by making the booking.

(a) What type of processing is this?

Interactive processing Real Time ×

(b) The centre creates a membership code for each member. Below is an example of a membership code and how it is created.

Write beside each one whether it is *data* or *information*.

(i) Code: CM1986M

Data

(ii) How it is created:

CM	1986	M
----	------	---

Information

Initials DOB Sex

(c) The membership code, shown above, is held in the community centre's computer.

Tick (✓) **one** box which describes how the membership code will be represented within the computer's memory.

Bitmap

ASCII

Graphics

(d) The person then sends in a cheque to pay for their evening class. The cheque contains *Magnetic Ink Character Recognition (MICR)* characters.

Describe **two** advantages of MICR.

1 **Can be read by humans/can be read by machine automatically
faster processing of cheques
Is difficult to forge
(Any 2 acceptable answers)**

2

If dirty it can still be read

7. (continued)

(h) The manager uses both *data files* and *program files*. The membership file is a data file.

Tick (✓) the most appropriate definition for each.

- | | | |
|-------------------------|--|-------------------------------------|
| (i) Program file | A set of instructions | <input checked="" type="checkbox"/> |
| | A file created by or used within a program | <input type="checkbox"/> |
| (ii) Data file | A set of instructions | <input type="checkbox"/> |
| | A file created or used within a program | <input checked="" type="checkbox"/> |

KU	PS
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KU	PS
1 0	
2 1 0	
	2 1 0

8. When e-mailing tutors who are going to take classes at the community centre the manager must be aware of *netiquette*.

(a) (i) What is meant by the term *netiquette*?

**Network etiquette - treating others with respect (when using the Internet)/ an acceptable code of conduct
notion of “a set of rules”**

(ii) Give **two** examples of rules used in *netiquette*.

- 1 **Be careful about the language used in a message/avoid using Capital letters as it looks like shouting/Don't talk about others in a message/avoid sending large attachments in a message unless they are expected as they slow systems**
- 2 **down/prompt replies/appropriate smileys/emoticons.**

(b) The manager currently uses a *dial-up connection* and wants to move to a *broadband connection*.

Give **two** advantages of using broadband.

1

Fast access/ faster downloads/always on/can use phone at same time

2

[Turn over

9. The community centre will be holding a trip to a theme park. One of the rides involves passengers travelling back in time in a car (an automated vehicle) through Dinosaurland.



- (a) One dinosaur breathes fire as it detects cars going past. Suggest a suitable device which could be used to detect the cars.

Sensor/motion detector/pressure sensor/laser sensor

1
0

- (b) Sound effects are used as part of this ride.

Is sound an analogue or digital quantity?

Sound is an analogue quantity

1
0

- (c) There is an emergency stop button in each car. This sends information back to the main computer which will then stop all other cars which are following on behind.

Why is real time processing necessary in this situation?

Prevents the cars from crashing into each other/has to happen straight away

1
0

- (d) Riders cannot control the route they take. These automated vehicles do not run on rails.

Describe another method for guiding an automated vehicle.

One mark for method (eg program/magnetic guidance/light guidance or notion of such method)

One mark for how it works (path is programmed in/follows wires/follows white line)

2
1
0

- (e) Before automated vehicles were used people were employed to drive cars around Dinosaurland.

Give **one** advantage to the owners of the theme park of the cars being automated.

**Less salaries to pay/not off sick/less mistakes made
24/7/ more accurate/less people being employed**

1
0

