

FOR OFFICIAL USE

--	--	--	--	--	--

C

0560/403



KU PS TOTAL

--	--	--

NATIONAL WEDNESDAY, 13 MAY
 QUALIFICATIONS 1.00 PM – 2.45 PM
 2009

COMPUTING STUDIES
 STANDARD GRADE
 Credit Level

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

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. PetrolPatrol is a fuel company.

In order to communicate with branches in different countries they use a *Wide Area Network*.

(a) (i) Name **one** type of *transmission media* which could be used in a Wide Area Network.

1

(ii) State the main disadvantage of sending information over a Wide Area Network.

1

(b) A monthly management meeting is held using *video conferencing* facilities.

(i) State **two** advantages **for the company** holding their meetings this way.

1 _____

2 _____

2

(ii) Each video conferencing room contains a *webcam*. State the purpose of the webcam in this situation.

1

(c) The minutes of the meeting will be sent via e-mail to all the managers. They are highly confidential.

State what should be done to the file before it is sent electronically.

1

KU	PS
2	
2	
1	
	3

2. (a) Garage Galore have invested a lot of money in an *expert system* to help with diagnosing faults when servicing cars.



- (i) Explain in detail what an expert system is.

- (ii) State **two** advantages of using an expert system rather than relying on a human expert.

1

2

- (b) Christabel works in the admin department of Garage Galore. She makes use of information stored about customers to send out individual reminders when their cars are due a service.

- (i) State the process that Christabel will use to allow her to produce personal reminders without doing each one individually.

- (ii) Describe the steps involved in carrying out this process.

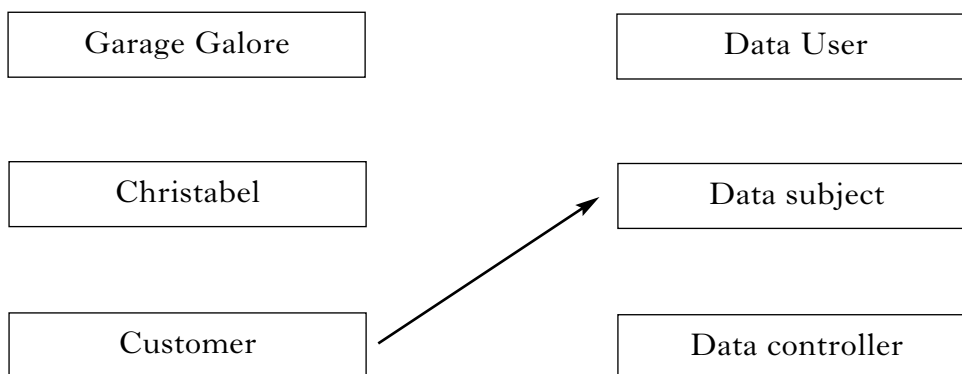
KU	PS
	2
	2

2. (continued)

- (c) Christabel gave a list of customer details to a car dealer. He wanted to send out promotional leaflets advertising special offers.

State whether Christabel was right to hand over the customers' details and give **one** reason to justify your answer.

- (d) Draw lines to show the correct relationships in the diagram below.



[Turn over

3. Classy Computers have asked their sales team to sell as many printers as possible this week. To encourage the sales team, they have offered a bonus in their wages if they sell 90 or more.

The spreadsheet shown below contains the result of the promotion.

	A	B	C	D	E	F
1	Models of Printer					
2						
3		Z331	Z361	Z391	Total	Bonus
4						
5	Y Pavlova	34	21	17	72	No
6	K Rice	25	45	20	90	Yes
7	J Hirtzel	30	39	22	91	Yes
8	H Scott	26	36	20	82	No
9	A Stewart	35	42	25	102	Yes
10						
11						
12	No. of printers sold to qualify for bonus				90	

- (a) Complete the formula that would be used in cell F5.

= IF (_____ \$E\$12 , _____ , _____)

3

- (b) The formula in cell F5 was replicated down into cells F6 to F9. Both *absolute* and *relative referencing* were used.

Explain carefully why this was necessary

2

- (c) The sales team were often asked by customers to recommend a printer that they should buy.

Apart from cost, state **two** factors that the customers should consider when buying a new printer.

1 _____

2 _____

2

5. The Senior pupils at TreeView Academy are planning to stage six coffee mornings throughout the year. They decide to create a poster giving the details.

(a) One pupil suggests they use a *freeware* program to design the coffee cup. State what is meant by the term freeware.

2

(b) Another pupil suggests they start by creating a *template*.

(i) State what is meant by a template.

2

(ii) State **one** advantage of using a template.

1

(c) They decide to use a photograph of the school from an old magazine. State how they can include the photograph in the poster.

1

(d) Once the photograph has been inserted they realise it is necessary to *crop* and *scale* it.

(i) State what it means to crop the photograph.

1

(ii) State what it means to scale the photograph.

1

KU	PS
	1
	1
1	

6. (continued)

(e) This database of customer details can be accessed by many people at the same time.

State what type of database this is.

(f) Kyrre is an employee of Nu4Old. He changed the details of his friend's car to get him a cheaper deal for his car insurance.

(i) Name the Act Kyrre has breached.

(ii) State **one** other breach of the Act.

[Turn over

KU	PS
2	
	1
	1
	3
1	

7. Fabien has been storing information about his travels using a database package.

The format of a record in his database is shown on the right.

Field Name	Sample Data
Country	Belgium
Capital	Brussels
Area (km ²)	30528
Population (millions)	10.5
Last Visited	12/05/07
Population Density	334

(a) Name **two** different data types stored in this record.

1 _____

2 _____

(b) Fabien decides to add another field to his database. The new field will contain a picture of each country's flag.

State the data type of this new field.

(c) Fabien wants to find out how many countries he has visited in the year 2000 which have a population of more than 5 million. He realises that he will need to carry out a *complex search* to produce this list.

(i) Explain what is meant by a complex search.

(ii) Describe the steps he should take to produce this list.

(d) Fabien has used a *computed field* to calculate the population density.

Explain what is meant by a computed field.

KU	PS
4	

8. Factories often use *mobile robots* to carry heavy components from one place to another.

(a) (i) Describe **two** different methods of guiding these mobile robots along their routes.

Method 1 _____

Method 2 _____

(ii) Give **one** advantage for each of the methods you have described.

Advantage of Method 1 _____

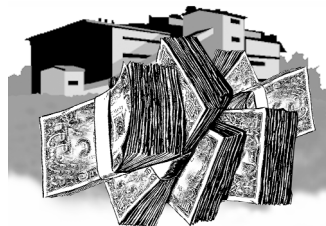
Advantage of Method 2 _____

[Turn over

KU	PS

8. (continued)

(b) The factory manager realises that new automated equipment is expensive.



(i) State **two** arguments that the factory manager could use to persuade the company to invest in new automated systems.

1 _____

2 _____

2

(ii) He decides to buy *intelligent robots*.

Name **two** hardware features of an intelligent robot.

1 _____

2 _____

2

[END OF QUESTION PAPER]

[BLANK PAGE]

[BLANK PAGE]