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	0560				

C

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	KU	PS
Total Marks	36	36

**[CS(SG)06C]**

NATIONAL  
QUALIFICATIONS

Time: 1 Hour 15 minutes

COMPUTING STUDIES  
STANDARD GRADE  
Credit Level

Estimate Examination Paper

Fill in these boxes and read what is printed below.

Full name of school or college

Town

First name and initials

Surname

Date of birth

Day Month Year

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Read each question carefully

Attempt **all** questions.

Write your answers in the space provided on the question paper.

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.

*This test paper must be withdrawn from candidates after the examination and any follow-up discussion of marks/grades awarded. This is to ensure the 'sight unseen' status of this paper is maintained for your centre and other schools/colleges during the diet of prelim examinations in 2005/2006. Submission of this test paper for Appeals purposes will assume that these conditions have been applied.*

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1. A Computing teacher in a school uses a spreadsheet to keep track of stock levels in the Computing department. Part of the spreadsheet is shown below.

	A	B	C	D	E
1	<b>Reference Number</b>	<b>Description</b>	<b>No. in stock</b>	<b>Min amount</b>	<b>Re-order</b>
2	098332	Hp Inkjet cartridge - black	9	10	Re-order
3	098333	Hp Inkjet cartridge - colour	15	10	
4	051962	Epson S33 toner	7	8	Re-order
5	051876	Epson S21 toner	10	10	
6	129348	Box of 10 rewritable CDs	11	12	Re-order
7	285934	Box of 10 CD ROMs	13	8	

Column E uses a formula to show whether an item needs to be reordered or not. When the **No. in stock** is less than the **Min amount** then **Re-order** appears in the cells in column E. Otherwise the cells are left blank.

- (a) (i) What kind of function would be used in column E?

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- (ii) Write down the function that would be entered into E2.

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- (iii) The function in cell E2 was replicated into the other cells in column E. Would *absolute referencing* or *relative referencing* be used in this situation?

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Give a reason for your answer.

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KU	PS
1	0
3	2
1	1
0	0
2	1
1	0



2. (a) (i) The processor of a computer can be split into three main parts. Name the **three** parts.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

(ii) Explain the functions of **two** of these parts.

1. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(b) One of the features of a high level language is that it is *portable*. Explain what is meant by the term portable.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

KU	PS
3	
2	
1	
0	
2	
1	
0	
1	
0	

2.  
cont

(c) (i) High level languages need to be translated into machine code. This can be done by using a *compiler* or an *interpreter*. Identify **two** differences between a compiler and an interpreter.

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(ii) What type of *translator* do you suggest should be used when developing new software?

\_\_\_\_\_

Explain your answer.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

[Turn over

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

3. A veterinary practice uses a database to store details of its patients. One record from the database is shown below.

Field name	Sample data	Size
Animal ref no	00124	5
Animal name	Lucky	15
Animal type	Cat	16
Date of Birth	12/05/05	6
Owner name	Mr Browne	15
Owner Address	25 Stepstone Circle, Mileton	50
Owner Tel. No.	01234567891	11
Appointment date	26/06/05	6

- (a) (i) Calculate the maximum number of *bytes* needed to store one record.

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- (ii) How many records from the database could you fit on to a USB flash drive that holds 64Mb?  
**Show all working.**

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- (b) The vet uses an Expert System to help with the diagnosis of ailments.

Give **one** advantage to the vet of using an expert system for this task.

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KU	PS
	1 0
	3 2 1 0
	1 0

3. cont

(c) A report has been generated with the following layout. Part of the report is shown below.

<i>Animal type</i>	<i>Animal name</i>	<i>Animal ref no</i>
Cat	Casper	00012
Cat	Henry	04443
Cat	Lucky	00124
Dog	Benji	00096
Dog	Sam	01010

Explain how the report has been achieved making reference to the changes to the *output format* and the changes to the *order of the list*.

**Changes to the output format** \_\_\_\_\_

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**Changes to the order** \_\_\_\_\_

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(d) (i) What is the name of the legislation that protects the rights of the people whose details are being stored?

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(ii) Identify the *data subject* and the *data controller* in this case.

**Data subject** \_\_\_\_\_

**Data controller** \_\_\_\_\_

(iii) Describe **two** obligations that the data controller has to fulfil, in order to comply with this legislation.

1. \_\_\_\_\_

---

2. \_\_\_\_\_

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[Turn over

KU	PS
	3
	2
	1
	0
1	
0	
	2
	1
	0

4. Doncraft is a company that creates specialised greeting cards and sells them over the Internet.

Birthday	Anniversary	Christmas	Occasions
			

When a customer wishes to view the birthday cards they must click on the picture of the Birthday cake *hotspot* in the *table* on the web page.

(a) (i) What is a hotspot?

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(ii) Why is using a table on this web page an advantage?

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(b) The company employs a number of designers that work from home. They hold meetings once a month using *video conferencing*.

(i) What is video conferencing?

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(ii) Apart from an Internet ready computer, what hardware and software is required for video conferencing?

**Hardware**

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**Software**

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

4.  
cont

(c) Give **two** advantages to the designers of working from home.

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

(d) The company saves money on *staff costs*. Explain why this is possible.

\_\_\_\_\_  
\_\_\_\_\_

(e) A service that the company offers is to produce a card with a personalised photograph. Customers can provide the photograph in digital form or paper form.

(i) A customer uses a digital camera to obtain a photograph. Explain how this could be sent electronically to the company.

\_\_\_\_\_  
\_\_\_\_\_

(ii) Some customers send a photograph in the post. How can the company transfer the paper image into a digital format?

\_\_\_\_\_

(iii) One photograph that the company receives has a picture of three people. The customer would like only the person in the middle of the photograph to appear on a card.

State the feature of the graphics software that could be used to edit the photograph once the image has been digitised.

\_\_\_\_\_

(f) A customer has concerns about hackers gaining unauthorised access to his credit card details.

What is the name of the legislation that makes this activity illegal?

\_\_\_\_\_

[Turn over

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

5. The secretary of the local tennis club sends out letters informing the members of their fees due.

(a) (i) *Standard letters* are used to send out the information. Name **two** application packages that would be used in the creation of the letters.

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(ii) List the steps involved in creating a standard letter.

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(b) A yearly report of the accounts is created using separate packages in a software suite. The software suite offers both *static data linkage* and *dynamic data linkage*.

Explain what is meant by static data linkage.

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Explain what is meant by dynamic data linkage.

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KU	PS
2	
1	
0	
3	
2	
1	
0	
2	
1	
0	
2	
1	
0	

5.  
cont

- (c) The virus protection software that the tennis club currently uses is out of date.
- (i) The tennis club acquire *shareware* virus protection software. State **two** things that the club must do to use the shareware software legally.
1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_
- (ii) One of the members suggested that they use a *freeware* virus protection program.  
What is freeware?
- \_\_\_\_\_
- \_\_\_\_\_
- (d) The tennis club decide to buy a new computer that they want to run on a *local area network*. What piece of hardware must they ensure is with the computer?
- \_\_\_\_\_
- \_\_\_\_\_
- (e) The secretary has poor eyesight. The *human computer interface* of the computer system has been altered to make it easier for her to use.  
Suggest **two** changes that may have been made to the human computer interface.
1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_

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

[Turn over

6. Low-Kost supermarket uses a computerised database in store.

(a) The store offers a loyalty card system to its customers. The customer fills in an application form to apply for a loyalty card. The details on the application form are then entered into the supermarket's computer system using *Optical Character Recognition*.

(i) What is meant by Optical Character Recognition?

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(ii) Give **two** advantages to the supermarket in using Optical Character Recognition.

1. 

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2. 

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(b) The points of sale in the supermarket are networked to allow them access to the *multi-user database*. Many customers need to be served quickly, at the same time.

(i) Explain the term multi-user database.

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(ii) Why is a multi-user database used in this situation?

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(iii) Would sequential access or direct access be used in this situation?

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

6.  
cont

(c) Each item in the supermarket has a bar code, which contains a *check digit*.  
Is using a check digit a form of *validation* or *verification*?

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(d) A number of customers now use *smart cards* to pay for their goods.

(i) What is meant by a smart card?

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(ii) Give **one** advantage of using a smart card.

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[END OF QUESTION PAPER]

KU	PS
1 0	
1 0	
1 0	