



## UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

General Certificate of Education Advanced Subsidiary Level and Advanced Level

CANDIDATE NAME					
CENTRE NUMBER			CANDIDATE NUMBER		

**COMPUTING** 

9691/12

Paper 1

May/June 2011

1 hour 30 minutes

Candidates answer on the Question Paper.

No additional materials are required.

No calculators allowed.

## **SUITABLE FOR HEARING IMPAIRED CANDIDATES**

## **READ THESE INSTRUCTIONS FIRST**

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

DO NOT WRITE IN ANY BARCODES.

Answer all questions.

No marks will be awarded for using brand names for software packages or hardware.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [ ] at the end of each question or part question.



1

(a)	) Define the terms:				
	(i)	hardware	Examiner's Use		
	(ii)	software			
		rol			
		[2]			
		market has a number of point-of-sale terminals. read from goods at the terminals and information is produced.			
		te <b>two</b> output devices which would be used at the point-of-sale, giving a reason for r use.			
	De	vice 1			
	Re	ason			
	De	vice 2			
	Re	ason			
!	•••••	[4]			
		te <b>three</b> types of output needed at the point-of-sale terminals. For each type of out explain why the output is needed.			
	Ou	tput 1			
	Ou	tput 2			
	Ou	tput 3			
		[6]			
		[6]			

© UCLES 2011 9691/12/M/J/11 (d) The management of the supermarket use a number of different types of software.

State what each of the following types of software would be used for.

Give a feature of each which makes it suitable for their use.

(i) Desktop publishing (DTP)

Use

Feature

[2]

(ii) Presentation software

Use

2			ms analyst is employed to produce a new stock control system for a company. The er of the company is not satisfied with the present system.
	(a)		plain the importance to both analyst and manager of defining the problem urately. You should make clear the part played by each person.
			[4]
	(b)	(i)	Explain how the evaluation of the new system will be carried out.
		(ii)	Explain why the evaluation is important to both the analyst and the manager.
			[4]

3	(a)	(i)	Explain what is meant by the character set of a computer.	For Examiner's Use
		(ii)	Explain how a character is represented in a computer.	
			[4]	
	(b)	Exp	plain the representation of integers in a computer.	
			[3]	

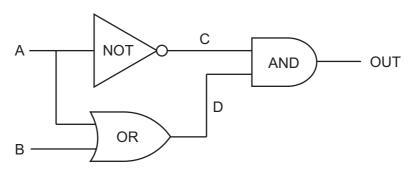
A li	brary	membership system identifies members by their unique 6-digit ID number.	For
(a)	Exp (Yo	plain how the member file could be accessed using indexes. u may find it helpful to draw a diagram.)	Examiner's Use
	•••••	[2]	
(b)	(i)	Explain how hashing could be used to access the member file randomly.	
	(ii)	Clashes can occur when the member file is accessed using hashing. State what is meant by a clash and how it can be dealt with.	
		[4]	

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(a)	Des	scribe the purpose of each of the following parts of a processor:	Fyon
	(i)	Control unit	Exan
		[2]	
	(ii)	Memory unit	
		[2]	
	(iii)	ALU	
		[2]	

(b)	Describe the use of buffers and interrupts in the transfer of data between primary memory and hard disk.
	[5]

6 Complete the table for this circuit of logic gates.



Α	В	O	D	OUT
0	0			
0	1			
1	0			
1	1			

[6]

For Examiner's Use

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An interactive computer system in a shopping mall is intended to give information to customers.

Discuss how the use of colour, layout and content will influence the design of the human computer interface (HCI).

Colour

Layout

Content

8	(a)	State <b>two</b> differences between a local area network (LAN) and a wide area network (WAN).	For Examiner's Use
		1	
		2	
		[2]	
	(b)	State what is meant by each of the following types of data transmission. Give an advantage of each.	
		(i) Serial	
		Advantage	
		(ii) Parallel	
		Advantage	
		[4]	
	(c)	The following bytes were received during a data transmission.	
		01101101 10101010 10111101 10110001	
		Parity is being used as an error check. State which <b>one</b> of the bytes has been corrupted. Explain why you chose the one that you did.	
		Corrupted byte	
		Reason	
		[3]	
			1

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9	(a)	Describe a single-user operating system.
		[2]
	(b)	Explain how a multi-user operating system allows many users to use the computer system.
		[4]

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