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General Certificate of Education

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# Information and Communication Technology

Assessment Unit A2 1

assessing

Module 3: Information Systems



\*AP211\*

**MONDAY 2 JUNE, MORNING** 

### TIME

2 hours.

#### INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

Complete in blue or black ink only. **Do not write in pencil or with a gel pen.** Answer **all seven** questions.

#### **INFORMATION FOR CANDIDATES**

The total mark for this paper is 120 including a maximum of 5 for quality of written communication.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.



1		ecksums and encryption are used when data is transmitted over a client	Examiner Only
		ver network.	Marks Remark
	(a)	Describe the main features of a client server network.	
		[4]	
		[4]	
	(b)	Explain what is meant by data encryption.	
		[4]	
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(d)	Describe the main features of a distributed database.	
An	organisation uses a distributed database.	
	[4]	
	transmission.	

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(e)	Describe <b>two</b> advantages of a centralised database over a distributed database.	Examine Marks	er Only Remark
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2	A p the	ublisher uses a relational database to produce information essential to running of the business.	Examiner Only  Marks Remark
	(a)	Explain what is meant by	
		Data inconsistency	
		Data independence	
		Data integrity	
		[6]	
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(b)	Three of the entities in the database are BOOK, AUTHOR and	d
	AGENT.	

- Each book can have one or more authors
- An author can write multiple books
- Each agent represents a number of authors
- No author is represented by more than one agent

Draw an entity relationship (ER) diagram for these entities that does not contain a many-to-many relationship.

Marks Remark [7] [Turn over

Examiner Only

(c)	Describe <b>three</b> different costs involved in producing information.	Examine Marks	er Only Remark
	1		
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3	$C\Delta^{\circ}$	SE tools are used during the development of a new information system.	Evaminar Only
J	UA.	DE tools are used during the development of a new information system.	Examiner Only  Marks Remark
	(a)	Describe <b>two</b> main features of a graphics CASE tool.	
		1	
		2	
		[N]	
		[4]	
	(b)	Explain how a project management CASE tool could be used during	
		software development.	
		[4]	
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<b>3</b> G	The	e new system undergoes testing and maintenance.	Evenine	r Only
		Explain what is meant by each of the following:	Examine Marks	Remark
	(6)			
		Alpha testing		
		Acceptance testing		
		[6]		
			[T	
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(d)	Explain how software maintenance can improve the quality of the new system.	Examiner Marks F
	[6]	
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\*24AP21113\*

4		organisation uses a management information system (MIS) to assist sision-making.	Examiner Only  Marks Remark
	(a)	Describe the main features of a typical MIS.	
		[4]	
	(b)	Name and describe <b>three</b> levels of decision-making.	
		1. Name	
		Description	
		2. Name	
		Description	
		3. Name	
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		[6]	
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Em	ployees can access a company's intranet.	Examin Marks	er Only Rema
(a)	Explain the difference between an intranet and the Internet.	-marks	Loma
		_ [4]	
(b)	Explain <b>two</b> reasons why the company does not allow the use of		
	portable storage devices.		
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(c) Describe three different health problems of ICT.	s which can arise from the use
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\*24AP21117\*

(d)	The company arranges membership of the British Computer Society (BCS) for its ICT staff.	Examin Marks	er Only Remark
	Explain <b>two</b> benefits to an ICT professional of membership of the BCS.		
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	[4]		
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6	A ne	etwork manager uses a command line interface.		Examiner Only
	(2)	Describe the main features of a command line interface.		Marks Remark
	(a)	Describe the main leatures of a command line interface.		
			_ [4]	
	(h)	Describe the main features of a form driven interface.		
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(c)	An on-line training course is available for end users.	Examir Marks	ner Only Remark
	Describe how ICT can be used to provide on-line training.		
	[4]		
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7	The Internet can be used to legally watch movies by	Examine Marks	er Only Remark
	<ul> <li>Downloading for watching later</li> <li>Watching in real-time</li> </ul>		
	Write a report comparing these <b>two</b> methods with specific references to the ICT involved.		
		Total Que	estion 7
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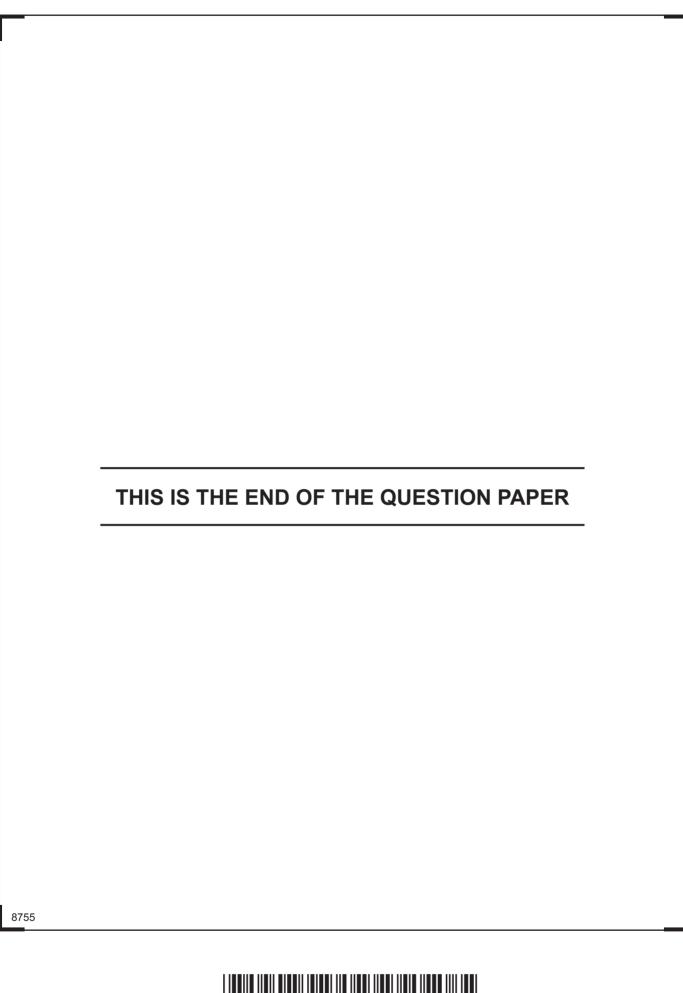
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