	Centre Number
Rewarding Learning	
ADVANCED SUBSIDIARY (AS)	Candidate Number
General Certificate of Education 2014	
Information and Communication	
Technology	
Technology Assessment Unit AS 1 assessing	
Technology Assessment Unit AS 1	*AP111*

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 six questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 120 marks 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.

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1		ny supermarkets use loyalty cards to reward regular customers with cial offers.	Examiner O Marks Re	Only emark
	Cus	stomers can apply for a loyalty card by completing an application form.		
	Det	ails from these forms are keyed into a database.		
	(a)	By referring to the application form discussed above, explain what is meant by		
		A direct data source		
		An indirect data source		
		[4]		
	(b)	Describe one benefit and one drawback of using a direct data source.		
	(U)	Benefit		
		Drawback		
		[4]		
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(c)	Data verification is used when data is entered into the databa	se.	Examine Marks	er Only Remark
	Identify two methods of data verification.			
	1			
	2	[2]		
(d)	Three fields on the application form are shown below.			
		7		
	Customer number12345TownSometownPost codeBB2 8ZZ			
	Identify and justify the most suitable field for each of the follow validation checks.	」 wing		
	Type check			
	Field			
	Justification			
	Check digit			
	Field			
	Justification			
	Format check			
	Field			
	Justification		Total Qu	estion 1
		[6]		
			[Turi	n over



ae	dents have been asked to research the history of their school as part of CSE project.	Examiner On Marks Rem
(a)	The students use the Internet to obtain information for the project.	
	Describe the main features of a typical Internet browser.	
	[4]	
Th	e students obtain a hard copy of a newspaper article about the school.	
(b)	Explain how the text of the article could be input to the computer using OCR software.	
	[4]	
	[4]	
	[4]	

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(c		e newspaper contains an old photograph of the school. The otograph has been converted to a digital format.	_	Examiner C Marks Re
	(i)	Explain how computer software could be used to enhance the photograph.		
			[4]	
				[Turn o
8756				-

(ii)	Describe the main features of the following file formats for storing	Examiner	Only
()	images.	· · · · · ·	emark
	JPEG		
	Bitmap		
	[6]		
		Total Ques	tion 2
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3	The	e internal memory of a computer includes RAM and cache memory.	Examin	
	(a)	Explain the purpose of each of the following.	Marks	Remark
		RAM		
		Cache memory		
		[6]		
8756			[Tur	n over

	Exp	plain how data is written to and read from a hard disk.	Ma	arks Ren
			[5]	
(c)				
(c)	Aco	omputer requires an operating system and application software.		
(c)	А со (i)	omputer requires an operating system and application software. Describe the main features of a multi-tasking operating system.		
(c)			[4]	
(c)				
(c)				

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(ii)	Explain what is meant by application software.	Examiner Only Marks Remark
		_
		_
		-
	[-
(iii)	 Describe two drawbacks of using open source software. 1. 	
		_
		-
	2	-
	۲	_
		_
	[4	1]
		Total Question 3
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			Examiner (Or
	ompany uses a local area network (LAN).			len
(a)	Describe the main features of a star network.			
		[4]		
/h)	Describe the impact of cable failure on			
(u)				
	A star network			
	A bus network			
		[4]		
6				

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(c)	Describe the purpose of each of the following network resources.	Examiner Only Marks Remark
	An IP address	
	A router	
	Proxy server	
	[6]	
(d)	The company uses an intranet.	
	Explain what is meant by an intranet.	
	[3]	
		Total Question 4
		[Turn over
		_

An	organisation requires new software.	Examiner O Marks Rei
(a)	Describe two benefits of custom built software.	
	1	
	2	
	2	
	[4]	
6		

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	(b)		new software is developed in stages by a number of IT essionals.	Examine Marks	er Only Remark
		(i)	Explain what happens during each of the following stages:		
			User requirements stage		
			Implementation stage		
			[6]		
8756	i			[lurr	n over

(ii)	Describe the main responsibilities of each of the following during software development.	Examiner Marks F	r Only Remark
	The project manager		
	The end user		
	[6]		
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	T aa	bried desumentation is produced for the new software		
(C)		hnical documentation is produced for the new software.	Examine Marks	er Only Remark
	(i)	Identify three of the main components of technical documentation.		
		1		
		2		
		3		
		[3]		
	(ii)	Name and describe another type of documentation which will be produced for the new software.		
		Name		
		Description		
		[5]		
			Total Que	estion 5
			[Turr	ı over
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6	Sec pro	curity is an important consideration for companies which sell their ducts over the Internet.		Examine Marks	r Only Remark
	(a)	Explain how each of the following can increase security over the Internet.			
		https			
		Paypal			
			[8]		
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(b) Explain how each of the following computer viruses can affect a computer system. Image: Computer system in the following computer viruses can affect a computer system in the following computer viruses can affect a computer system in the following computer viruses can affect a computer system in the following computer viruses can affect a computer system in the following computer viruses can affect a computer system in the following computer viruses can affect a computer system. A logic bomb Image: Computer system in the following computer viruses can affect a computer system in the following computer system in the follo					
		(b)	Explain how each of the following computer viruses can affect a computer system.		
A macro virus			A logic bomb		
A macro virus					
A macro virus					
A macro virus					
[6]			A macro virus		
[6]					
[6]					
[Turn over					
[Turn over					
			[6]		
	1			[Turn o	ver
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(c)	Describe the main features of a typical disaster recovery plan.		Examin Marks	er Only Remark
		_ [4]		
		- [']		
_				
_	THIS IS THE END OF THE QUESTION PAPER			
			Total Qu	estion 6
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			commu	nication
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Question Number	Marks	
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2		
3		
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Total Marks		
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Examiner Number

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