

# Centre Number

ADVANCED

General Certificate of Education 2014

Candidate Number				

## Information and Communication Technology

Assessment Unit A2 1

assessing

Module 3: Information Systems



[AP211]

**MONDAY 2 JUNE, MORNING** 

\*AP211\*

### 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	Checksums and encryption are used when data is transmitted over a client server network.				
	(a)	Describe the main features of a client server network.			
		[4]			
	(b)	Explain what is meant by data encryption.			
		[4]			
8755					

20 06 GGE-DO GE **G**33 D GE 633 DO GE GG3 D GE G33 DO GE **G9**3 D GE COD DO CE G G G G D C G33 DO GE G33 20 00 GG3 DO GE G93 DO GE CO TO DO CE G T D C GTT 20 06 **G**33 20 06 **G** DO GE GG3 D GE GGGDO CE G G G G 20 00 **G9**3 DO GG

Reserving Learning



(c)	Explain how checksums can be used to detect errors in data transmission.	Examin Marks
		_
		_
		[4]
An	organisation uses a distributed database.	
(d)	Describe the main features of a distributed database.	
		_
		_
		_
		[4]
		[4]
		[4]

20 03 <del>-</del> **33** 20 GE G93 D Œ COD D GE 693 DO CE G33 DO GE 693 D GE COD 20 GE GOO DE GEE DO GE G93 20 00 G33 DO GE CED DO GE CEE D GE 693 D CE G93 D Œ G33 DO GE 693 DO CE GGG D G G G G G DO GE GG3 D CE GG3 20 00

Researching Learning

Page Company

Researching Learning

Parametring Learning

Parametring Learning



Describe <b>two</b> advantages of a centralised database over a distributed database.	Examiner Only  Marks Remark	
1		
2		
[4]		
	Total Question 1	
	1.         2.	database.  1



8755

20 06 GGE-DO GE

**G**33 DO GE

G3D DO GE GG3

D GE G33 DO GE G93

DO GE COD 20 GE G G G G

D C COD DO GE G33

20 00 **G**33 DO GE G93 20 06

G 3 DO CE G T DO GE

**G** DO GE G T DO CE

COD DO CE G G G G

20 00 **G9**3 DO GG

20 00 

20 00 COT 20 GE CEE 20 GE G93 20 GE GG3 D GE GGT 20 GE GG 3 20 00 G33 20 03 G33 DO GE GG3 20 00 G33 DO GE GGGDO GE GEE 20 GE G93 DO CE GG3 DO GE **G9**3 DO GE 693 20 GE GGGDO CE **GEE** 20 00 G93 20 GG G33 20 00

8755

COD Rowarding Learning

Financing Learning

Financing Learning

Page | General |
Reserving | Reserving |

DO NOT WRITE ON THIS PAGE

(Questions continue overleaf)

[Turn over

2	A publisher uses a relational database to produce information essential to				
2	A publisher uses a relational database to produce information essential to the running of the business.  Examiner Only Marks Remai				
	(a)	(a) Explain what is meant by			
		Data inconsistency			
		Data independence			
		[6]			
8755			Ī		

20 06 GGE-DO GE **G**33 D GE 633 DO GE GG3 D GE G33 DO GE **G9**3 DO GE COD DO CE G G G G D C G T DO GE G33 20 00 G33 DO GE G93 DO GE G 3 DO CE G T 20 66 GTT 20 06 **G**33 D CE **G** DO GE GG3 DO CE GGGDO CE G G G G 20 00 **G9**3 DO GG

Reserving Learning



Learning	Rewarding i
3	20
Herearthy	CE Rowarding
Action in Property	20 g Learning
20	GE Rewarding
	20
A District Conf.	y Lourning
	GG Remarking i
G.	D Looming
20	GG Rowarding
	D Learning
Learning	<b>GE</b> Rewarding i
G.	DED .
	Œ
,	
	20 g Leeming
DED 7 Learning	GE Rewarding
G	20
	9
	GG Rewarding I
Rowardin	DED Learning
20	GG America
	200
	GE Remarking i
G.	20
20	GG Rowarding I
2.0	DED g Learning
Leaning	GE Rewarding I
G.	20
nowaran	GE Researching i
A Distribution	20 g Learning
PED 1 Learning	GE Rowarding
	DO Learning
Personal	GE Rewarding i
Reversion	DED Learning
20	<b>GE</b>
	Paranting i
Hawardin	g Leeming
100	GE Rewarding I
G.	DED .
20	Œ
) country	rioma arrigin
	2
· 12-1	DO Learning
Learning	Learning CE Rewarding I
,	GG Rewarding i
Rewardin	Rewarding I
Rowarding J. Learning	Rewarding I
Rewards D 7 Learning C	Remarking I
Rewards D 7 Learning C	Rewarding I
Reserving  Learning  Reserving	Presenting I
Reserving  Leaving  Reserving  Reserving  Reserving	Remarkly I  Dip Lenning  GER  Remarkly I  Dip Lenning  GER  Remarkly I  Dip Lenning  GER  Remarkly I
Research  Day  1 Learning  Company  Company  Company  Company  Learning  Learning  Learning	Amendag I  Dig Lauring  QCA  Researching I  Dig Lauring  GCA  Researching I  Dig Lauring  GCA  Researching I  Dig Lauring  GCA  Researching I
Research  Day  1 Learning  Company  Company  Company  Company  Learning  Learning  Learning	Remarkly I  Dip Lenning  GER  Remarkly I  Dip Lenning  GER  Remarkly I  Dip Lenning  GER  Remarkly I
Construction  Construction	Amendag I  Dig Lauring  QCA  Researching I  Dig Lauring  GCA  Researching I  Dig Lauring  GCA  Researching I  Dig Lauring  GCA  Researching I

8755

(b) Three of the entities in the database are BOOK, AUTHOR and 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.

Examiner Only

Marks Remark [7] [Turn over

(c)	Describe <b>three</b> different costs involved in producing information.	Examin Marks	er Onl Rem
	1		
	2		
	3		
	[6]		
		T-t-LO	4:
		Total Qu	iesti

20 06 GGE-DO GE COD DO GE **GG** DO GE **G**33 D GE G33 20 GG G93 DO GE GG3 DO GE G93 DO GE COD DO GE G33 20 00 GTT 20 00 G93 20 06 GG3 D GE GG3 20 66 G93 20 06 GG3 DO GE **GG** DO GE **G3** DO CE GGGDO GE CEE 20 06

COD Researching Learning

Reserving Learning



20 00 COT 20 GE CEE 20 GE G93 20 GE GG3 D GE GGT 20 GE GG3 20 00 G33 20 03 G33 DO GE G33 20 00 G93 DO GE GGGDO GE GEE 20 GE G93 DO CE GG3 DO GE **G9**3 DO GE 693 20 GE GGGDO CE **GEE** 20 00 G93 DO GE G93 20 00 **G9**3

8755

DO GE

Financing Learning

Financing Learning

Page | General |
Reserving | Reserving |

DO NOT WRITE ON THIS PAGE

(Questions continue overleaf)

[Turn over



j i	aminer Only
1	rks Remark
2	
2	
2	
2	
2	
2	
(b) Explain how a project management CASE tool could be used during	
(b) Explain how a project management CASE tool could be used during	
(b) Explain how a project management CASE tool could be used during	
(b) Explain how a project management CASE tool could be used during	
(b) Explain how a project management CASE tool could be used during	
(b) Explain how a project management CASE tool could be used during	
[4]	
8755	

20 06 GGE-DO GE G93 D GE G33 DO GE 693 D GE G33 DO GE G33 D GE COD DO CE G G G G D C G33 DO GE G33 20 00 G33 DO GE G G G G DO GE CO TO DO CE G T D C GTT 20 06 **G**33 D CE **G** DO GE GG3 D GE GGGD G G G G G 20 00 **G9**3 DO GG

Reserving Learning

Researching Learning

TO GE



The new system undergoes testing and mair	ntenance.
(c) Explain what is meant by each of the foll	lowing:
Alpha testing	
Acceptance testing	
	[6]

DE Remarking



(d)	Explain how software maintenance can improve the quality of the new system.	Examiner Only  Marks Remark
	[6]	
		Total Question 3
0755		1
8755		



Page | George | Researchy | Researchy | Factority | Researchy | Re

Paraming Researching |
Paraming Learning |
Paraming Learning |
Paraming Learning |
Paraming Researching Researching |
Paraming Researching Researching Researching |
Paraming Researching Researching

Reserving Learning

Reserving

Reserving Learning

Reserving Learning

Reserving Learning

Parameter Research Re

Research (Learning)

Proceeding Learning
Planning
Proceeding Learning

Researching Learning

Dig Google

J. Learning Researching

Researching Learning

Researching Learning

Researching Learning

Researching Researching

Reserving Learning

Learning

Reserving

Learning

Reserving

Reserving

Reserving

Reserving

Reserving

Reserving

Reserving

Reserving

Reserving

Research Learning

Research Lear

Par George
Research |

Researcing Learning

Page (Researcing )

Researcing (Learning )

Researcing (Learning )

Towning Rewarding I

Reserving Learning

Reserving Researching I

DO NOT WRITE ON THIS PAGE
(Questions continue overleaf)

[Turn over

8755

20 00

COD Reserving Learning

COD Passerby Learning TOD COD 1 Learning Researcing 1

Research Community Communi

20 03 <del>-</del> **33** 20 06 GG3 20 00 COT 20 GE CEE 20 GE G93 20 GE GG3 D GE GGT 20 GE G93 20 00 COD 20 03 G33

D GE g Learning Proventing 1

20 00 G33 DO GE GGGDO GE GEE 20 GE G93 DO GE GG3 DO GE **G9**3 DO GE 693 20 GE GGGDO CE **GEE** 



4	An organisation uses a management information system (MIS) to assist decision-making.				
	(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			
		Description			
		[6]			
8755					

20 06 GGE-DO GE **G**33 D GE G33 DO GE 693 D GE G33 DO GE G93) D GE COD DO CE G G G G D C G33 D G G33 20 00 GG3 DO GE G93 DO GE CO TO DO CE G T D C G T 20 06 GG3 20 06 **G** DO GE G T D GE GGGD Œ G G G 20 00 GG3 DO GG

Reserving Learning

Researching Learning

TO GE



riting Learning (C)	The organisation also uses an expert system. Name and describe the	Examiner Only	_
Tring Learning	three components of an expert system.	Marks Remar	rk
GE Rewarding 1	1. Name		
	Description		
	2. Name		
	Description		
	3. Name		
	Description		
	[6]		
		Total Question	4
		[Turn ov	er
8755			

DE GE

PLearning Rewarding |
Reserving Learning
Reserving Rewarding |
Rewarding |



Em	ployees can access a company's intranet.	Examine	
(a)	Explain the difference between an intranet and the Internet.	Marks	R
		_ [4]	
(b)	Explain <b>two</b> reasons why the company does not allow the use of portable storage devices.		
	1		
	2		
		_ [4]	
5			

20 06 GGE-DO GE **G**33 D GE 633 DO GE GG3 D GE G33 DO GE G93 D GE COD DO CE G G G G D C G33 DO GE G33 20 00 GG3 DO GE G93 DO GE G G G G DO CE G T D C GTT 20 06 GG3 20 06 **G** DO GE GG3 D GE GGGDO CE G G G 20 00 **G9**3 DO GG

Reserving Learning



Reverting Learning  Day GE			
Research Learning  Research   Research	(c)	Describe <b>three</b> different health problems which can arise from the use of ICT.	Examiner Only  Marks Remark
Researching Learning  Researching  Researching		1	
GGG Roserting Learning			
Par GE 1 Learning Researcing 1			
Reserving Learning			
Remarking Learning			
DO GG 7 Learning Remarking I		2	
Rowarding Learning  TO GE			
y Learning Researching I			
DE GE			
Researcing Learning  TO GE			
7 Learning Rewarding I		3	
DO GE Abovarding 1			
GGD Reverting Learning			
y Learning Rewarding I		[6]	
DO GG			
COO Reverding Learning			
Par GE 7 Learning Researching I			
Powerding Learning  Described Remarking I			
GEO			
DE GE 7 Learning Rewarding I			
Powerding Learning  20  1 Learning Rewarding I			
CCC Reverding Learning			
DE GE 7 Learning Promanting 1			
Researching Learning  DO GG  1 Learning Researching i			
GGG Researching Learning			
TO GG 7 Learning Researching 1			
Rowarding Learning  Rowarding Flowsarding I	8755		[Turn over
COO Remarking Learning			
DE GE 2 Learling Rewarding 1			
Parametring Learning			
g Learning Rewarding I			
D GG 1 Learning Remarking I		*24AP21117*	

DE Remarking



(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.		
	1		
	2		
	[4]		
		Total Qu	estion 5

20 06 GGE-DO GE G93 DO GE G33 20 GE **G**33 D GE G93 20 GG G93 DO GE GG3 DO GE G G G G DO GE G33 DO GE GG3 20 00 **G** 20 00 G93 20 06 GG3 D GE GG3 20 66 G93 20 06 GG3 DO CE **GG** DO GE GG3 DO CE GGGD GE CEE 20 06

Reserving Learning

Reserving Researching

Reserving Learning

Properties Leaving



COT 20 GE CEE 20 GE G93 20 GE GG3 D GE GGT 20 GE GG3 20 66 COD 20 03 G33 DO GE G33 20 00 G93 DO GE GGGDO GE GEE 20 GE G93 DO CE GG3 DO GE **G9**3 DO GE 693 20 GE GGGDO CE **GEE** 

Parameter Comments Co

DO NOT WRITE ON THIS PAGE

(Questions continue overleaf)

[Turn over

8755

20 06

COD Researching Learning

Resenting Learning

Page Google

Jeaning Resenting

Resenting Learning

Resenting Learning

Financing Learning

Financing Learning



6	A n	etwork manager uses a command line interface.		Examine Marks	r Only Remark
	(a)	Describe the main features of a command line interface.		Warks	Kemark
			[4]		
	(b)	Describe the main features of a form driven interface.			
			[4]		
8755	;				

20 06 GGE-DO GE **G**33 D GE G33 DO GE 693 D GE G33 DO GE G33 D GE GG 3 DO CE G G G G D C G33 DO GE G33 20 00 GG3 DO GE G93 DO CE CO TO DO CE G T D C GTT 20 06 **G**33 D CE **G** DO GE GG3 D GE GGGDO CE G G G 20 00 **G9**3 DO GG

Reserving Learning



	L	[Tur	n ove
	1	Total Qu	estion 6
[4]			
An on-line training course is available for end users.  Describe how ICT can be used to provide on-line training.		Marks	er Only Remark

20 03 <del>-</del> **33** 20 GE G93 DO CE COD 20 66 693 DO CE G33 20 00 693 D GE COD D CE 693 D GE G33 DO GE 690 20 00 G33 20 00 G33 20 06 COD D GE 693 20 00 G93 20 06 G33 DO GE 693 DO CE GGG D G G G G G 20 00 GG3 DO GE G93 20 GG

Researching Learning

Page Company

Researching Learning

Parametring Learning

Parametring Learning



7	The Internet can be used to legally watch movies by	Examin 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 Qu	estion 7
	[10]	Quality o	of written nication
8755			

20 06 GGE-DO GE G93 DO GE G33 20 GE **G9**3 D GE G33 20 GG G93 DO GE GG3 20 GE G G G G D C G33 DO GE G33 DO GE GTT 20 00 G93 20 06 G G G G DO CE GG3 20 GG G T 20 06 **G**33 DO CE **GG** DO GE GG3 20 06 GGGD GE GGG20 06 **G93** DO GG

Reserving Learning



# THIS IS THE END OF THE QUESTION PAPER 8755

20 03 <del>-</del> **33** DO G93 D Œ COT 20 GE CEE 20 GE G93 20 GE G93 PO GE **G9**3 20 GE GG3 20 66 COD DO GE COD **20 CE** GG3 PO GE GEE

DO GE GGT) DO GE CEE 20 GE G93 DO GE CEE DO GE **GG** DO GE G33 20 GE GGGD GE **GEE** DO GE

GG3 20 06

G G G G 20 00 GG 3

DO GE <del>-</del> GGT 20 06



### DO NOT WRITE ON THIS PAGE

For Examiner's use only		
Question Number	Marks	
1		
2		
3		
4		
5		
6		
7		
QWC		

Total Marks

Examiner Number

Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright holders may have been unsuccessful and CCEA will be happy to rectify any omissions of acknowledgement in future if notified.

179888



\*24AP21124\*

20 06 20 00 E CE DO GE E CE CEE . E CE E CE

E GE

D Œ

E CE

DO CE

E CE

D CE