

ADVANCED General Certificate of Education 2016

(Centr	e Nu	mber
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Information and Communication Technology

Assessment Unit A2 1
assessing
Module 3:
Information Systems



[AP211]

MONDAY 6 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.

You must answer the questions in the spaces provided.

Do not write outside the boxed area on each page or on blank pages.

Complete in blue or black ink only. Do not write 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			mber of users of an information system has recently increased. This has in complaints about the time taken to produce reports.	
	(a)	The	e system requires software maintenance.	
		(i)	Name and describe the type of software maintenance the system requires	
			Name	
			Description	
		(ii)	Name and describe two other types of software maintenance.	
			Name	
			Description	
			Name	
			Description	
				[6]
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(i)	Describe the main features of RAD.	
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/::\	Describe two honefits of developing a system in house	
(ii)	Describe two benefits of developing a system in-house. 1	
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((a) Exp	plain what is meant by each of the following.	
		A primary key	
			[2]
	(ii)	A composite key	
			[2]
	(iii)	A foreign key	
			[3

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Details about the books which students have borrowed are shown in the table below.

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Student ID	Student Name	Course ID	Course Title	Book ID	Book Title	Loan Date	Return Date
S123	Green	C5	GCSE	B234	ICT Theory	01/07/15	08/07/15
				B452	ICT Projects	01/07/15	05/07/15
				B231	DBMS	02/07/15	10/07/15
S124	Brown	C5	GCSE	B231	DBMS	01/06/15	09/06/15
				B534	Maths	02/07/15	09/07/15
S125	Grey	C6	GCE	B734	DFDs for all	02/07/15	11/07/15
				B231	DBMS	05/08/15	10/08/15



(c)	Normalise the data in the table to 3NF showing all your work .	
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(a)	Explain the role of the Database Administrator (DBA).	
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(b)	Describe the main features of a decision support system.	_ [4
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(c) De	scribe a suitable backup and recovery strategy for the DBMS.	
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4		mmunication standards are required when data is transmitted on computer networks.
	(a)	Describe the main features of the OSI model.
		[6]
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(b)	Evaluate the use of parity bits in detecting data transmission errors.	
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(c)	Name and describe one other method of detecting data transmission errors.	
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(e)	Describe one method of ensuring that data transmitted over a network is secure.
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5	The	e user interface controls the way in which a human and a computer interact.
	(a)	Describe the main features of each of the following interfaces.
		Natural language
		GUI
		[6]
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	lame and describe two psychological factors which can influence how human nteract with a computer.
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(c) Explain	n how users o	could get sup	port from a	user group.	

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(a)	Describe the main features of touch screen technology.
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(b)	Describe three benefits of using robots in this case .
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7	Org	ganisations are making increasing use of cloud computing.	
	In o	cloud computing, data is stored on a global network of servers using the Internet.	
	Write a report evaluating		
	•	The ICT resources required by an organisation for cloud computing	
	•	The impact of Data Protection legislation for an organisation using cloud computing	
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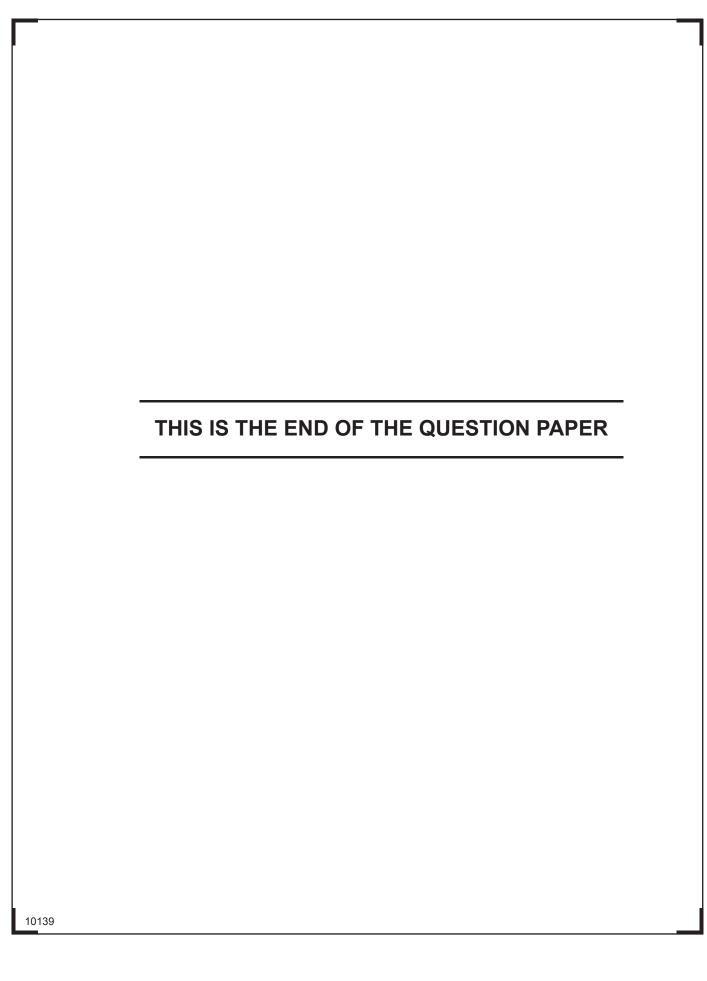
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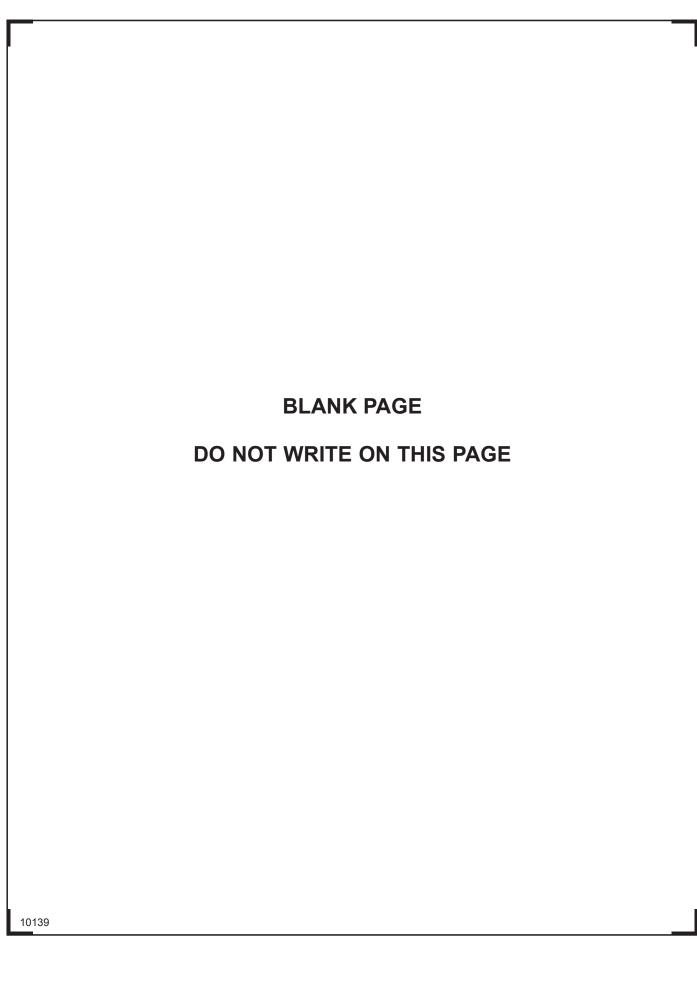
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