

Cambridge Assessment International Education

Cambridge International Advanced Subsidiary and Advanced Level

INFORMATION TECHNOLOGY

9626/02

Paper 2 Practical May/June 2018

MARK SCHEME
Maximum Mark: 110

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

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This document consists of **15** printed pages.



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Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

the specific content of the mark scheme or the generic level descriptors for the question the specific skills defined in the mark scheme or in the generic level descriptors for the question the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always whole marks (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate

marks are awarded when candidates clearly demonstrate what they know and can do

marks are not deducted for errors

marks are not deducted for omissions

answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

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GENERIC MARKING PRINCIPLE 5:

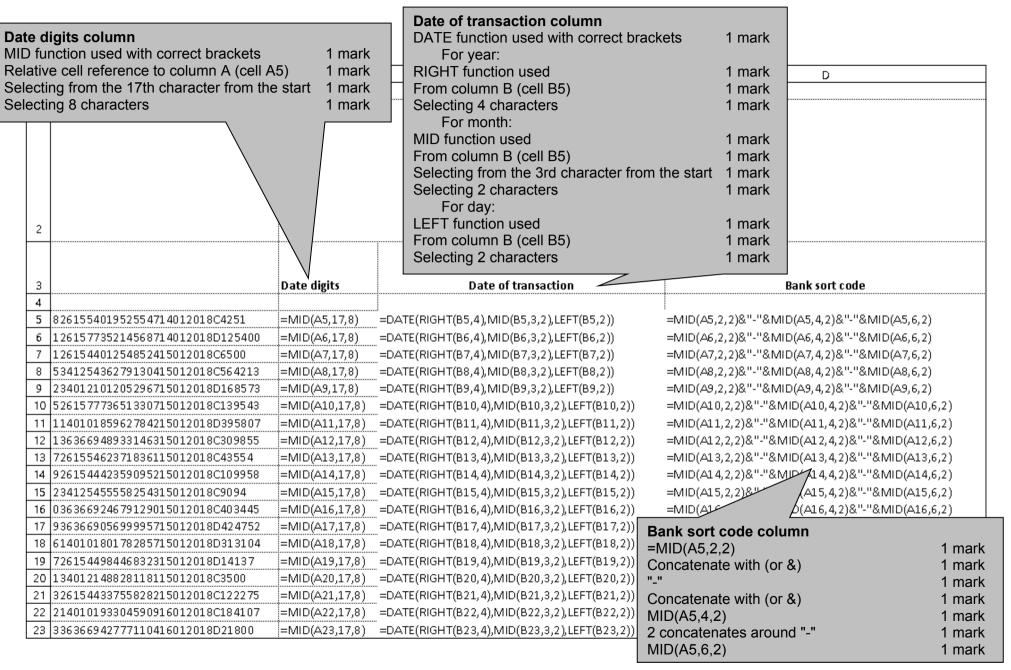
Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

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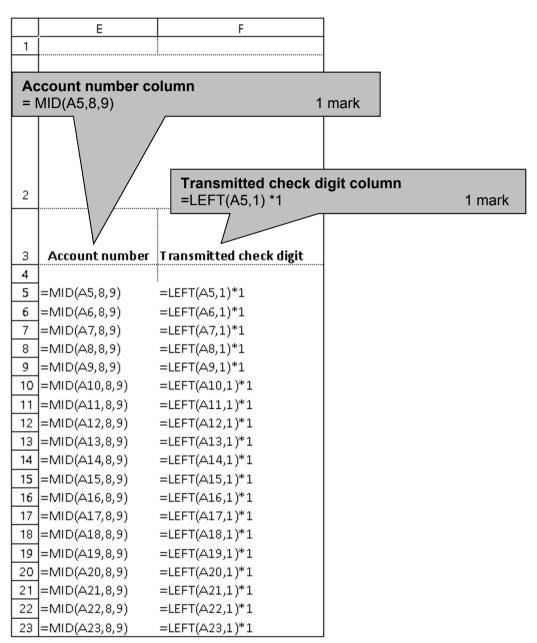
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	G								
1									
	Transactions for account: 000966543								
	between 14 January 2018	Calculated check digit column	1 m o m/s						
2	and 19 January 2018	=RIGHT(,1) 9 separate functions each containing MID function referenced to column E (E5)	1 mark 1 mark 1 mark						
		returning a single character each time with each of the 9 characters added	1 mark 1 mark						
4	Calculated check digit	*1 / value / or equivalent to ensure numeric calculation	1 mark						
_	! =RIGHT(MID(E5,1,1)+MID(E5,2,1)+MID(E5,3,1)+MID(E5,4,1)+MID(E5,5,1)+MID(E5,6,	1)+MID(E5.7.1)+MID(E5.8.1)+MID(E5.9.1).1)*1							
6	=RIGHT(MID(E6,1,1)+MID(E6,2,1)+MID(E6,3,1)+MID(E6,4,1)+MID(E6,5,1)+MID(E6,6,								
7	=RIGHT(MID(E7,1,1)+MID(E7,2,1)+MID(E7,3,1)+MID(E7,4,1)+MID(E7,5,1)+MID(E7,6,								
8	=RIGHT(MID(E8,1,1)+MID(E8,2,1)+MID(E8,3,1)+MID(E8,4,1)+MID(E8,5,1)+MID(E8,6,								
9	=RIGHT(MID(E9,1,1)+MID(E9,2,1)+MID(E9,3,1)+MID(E9,4,1)+MID(E9,5,1)+MID(E9,6,	1)+MID(E9,7,1)+MID(E9,8,1)+MID(E9,9,1),1)*1							
10	=RIGHT(MID(E10,1,1)+MID(E10,2,1)+MID(E10,3,1)+MID(E10,4,1)+MID(E10,5,1)+MID)(E10,6,1)+MID(E10,7,1)+MID(E10,8,1)+MID(E10,9,1),1)*1							
11	=RIGHT(MID(E11,1,1)+MID(E11,2,1)+MID(E11,3,1)+MID(E11,4,1)+MID(E11,5,1)+MID)(E11,6,1)+MID(E11,7,1)+MID(E11,8,1)+MID(E11,9,1),1)*1							
12	=RIGHT(MID(E12,1,1)+MID(E12,2,1)+MID(E12,3,1)+MID(E12,4,1)+MID(E12,5,1)+MID)(E12,6,1)+MID(E12,7,1)+MID(E12,8,1)+MID(E12,9,1),1)*1							
_	RIGHT(MID(E13,1,1)+MID(E13,2,1)+MID(E13,3,1)+MID(E13,4,1)+MID(E13,5,1)+MID								
-	RIGHT(MID(E14,1,1)+MID(E14,2,1)+MID(E14,3,1)+MID(E14,4,1)+MID(E14,5,1)+MID								
_	RIGHT(MID(E15,1,1)+MID(E15,2,1)+MID(E15,3,1)+MID(E15,4,1)+MID(E15,5,1)+MID								
_	RIGHT(MID(E16,1,1)+MID(E16,2,1)+MID(E16,3,1)+MID(E16,4,1)+MID(E16,5,1)+MID								
-	=RIGHT(MID(E17,1,1)+MID(E17,2,1)+MID(E17,3,1)+MID(E17,4,1)+MID(E17,5,1)+MID								
-	RIGHT(MID(E18,1,1)+MID(E18,2,1)+MID(E18,3,1)+MID(E18,4,1)+MID(E18,5,1)+MID								
-	=RIGHT(MID(E19,1,1)+MID(E19,2,1)+MID(E19,3,1)+MID(E19,4,1)+MID(E19,5,1)+MID								
-	=RIGHT(MID(E20,1,1)+MID(E20,2,1)+MID(E20,3,1)+MID(E20,4,1)+MID(E20,5,1)+MID								
-	=RIGHT(MID(E21,1,1)+MID(E21,2,1)+MID(E21,3,1)+MID(E21,4,1)+MID(E21,5,1)+MID								
-	=RIGHT(MID(E22,1,1)+MID(E22,2,1)+MID(E22,3,1)+MID(E22,4,1)+MID(E22,5,1)+MID								
23	=RIGHT(MID(E23,1,1)+MID(E23,2,1)+MID(E23,3,1)+MID(E23,4,1)+MID(E23,5,1)+MID)(E23,6,1)+MID(E23,7,1)+MID(E23,8,1)+MID(E23,9,1),1)*1							

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Н	ļ I		J		K		L
Working 1 column							
=IF() with correct syntax		mark					
Column F <> Column G	1	mark					
Display some form of error fla	ag 1	mark					
	saction columi	า					
	(A5,25,1)		1	mark			
		Ţ					<u> </u>
3 Working 1	Transaction	Working 2				Credit	D ebi
4							
5 =IF(F5<>G5,"Error","")	=MID(A5,25,1)	=RIGHT(A5,LI	EN(A5)-25)	=IF(I5="C	",J5/100	0,'''')	=IF(I5="D",J5/100,"")
6 =IF(F6<>G6,"Error","")	=MID(A6,25,1)	=RIGHT(A6,LI	EN(A6)-25)	=IF(16="C	",J6/100), ^{IIII})	=IF(I6="D",J6/100,"")
7 =IF(F7<>G7,"Error","")	=MID(A7,25,1)	=RIGHT(A7,LI	EN(A7)-25)	=IF(I7="C	",J7/100),'''')	=IF(I7="D",J7/100,"")
8 =IF(F8<>G8,"Error","")	=MID(A8,25,1)	=RIGHT(A8,LI	EN(A8)-25)	=IF(18="C	",J8/100	0,'''')	=IF(I8="D",J8/100,"")
9 =IF(F9<>G9,"Error","")	=MID(A9,25,1)	=RIGHT(A9,LI	EN(A9)-25)	=IF(19="C			=IF(I9="D",J9/100,"")
10 =IF(F10<>G10,"Error","")	=MID(A10,25,1)		LEN(A10)-25)	=IF(I10="	'C",J10/1	100,"")	=IF(I10="D",J10/100,"")
11 =IF(F11<>G11,"Error","")	=MID(A11,25.1)		LEN(A11)-25)	=IF(I11="			=IF(I11="D",J11/100,"")
Working 2 column			LEN(A12)-25)	=IF(I12="			=IF(I12="D",J12/100,"")
Working 2 column =RIGHT(A5		4	LEN(A13)-25)	=IF(I13="			=IF(I13="D",J13/100,"")
•		4 .	LEN(A14)-25)	=IF(I14="			=IF(I14="D",J14/100,"")
,LEN(A5)			LEN(A15)-25)	=IF(I15="		. ,	=IF(I15="D",J15/100,"")
-25)			LEN(A16)-25)	= F(116=11			=IF(I16="D",J16/100,"")
17 =IF(F17<>G17,"Error","")	=MID(Δ17.25.1)	=RIGHT(A1.7.	I FIMICATE AT A SECTION OF THE SECTI	<u> </u>	C". I1 7/1		=IF(I17="D",J17/100,"")
18 =IF(F18<>G18,"Error","")	Credit colun	ın		1 -	mark	00,"")	= F(18="D",J18/100,"")
19 =IF(F19<>G19,"Error","")	=IF(I5="C"				_	00,"")	=IF(I19="D",J19/100,"")
20 =IF(F20<>G20,"Error","") 21 =IF(F21<>G21,"Error","")	,J5/100				mark	00,"") 00,"")	=IF(I20="D",J20/100,"") =IF(I21= <u>"D</u> ",J21/100,"")
21 =IF(F21<>G21, Error', ') 22 =IF(F22<>G22,"Error","")	,"")			1 r	nark	00,)	= F(21= 0 ,J21/100,
23 =IF(F23<>G23,"Error","")	=MID(A23,25,1)	=RIGH Deb	it column	-11 (12 2-	U ,JZ Z/		/100,'''')
[25 -11 (125 ** 025) E11 01)	-1411D(M20,20,1)		oit column (I5="D",J5/10	nn "")			1 mark
			lication of all		2		1 mark
		Ket	nication of all	Torrituat	5		IIIIaik

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	0	Р	Q
1			
2			
3			Royal Bank of Tawara
4			First Finance Bank
5	3	261544	SSB
6	4	341254	HBSB
7	5	340121	Santrander
8	6	261577	National Bank of LLaregrebb
9	7	140101	Queens Bank
10	8	363669	GBS

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4 Rows inserted in correct place	1 mark
186title.csv placed in rows 2 and 3	1 mark
Cells B2:L2 merged	1 mark
Row 2 - >=24 point sans serif font	1 mark
Dates extracted & added	1 mark
Dates in title in long date format	1 mark

F G H I J K L

Transactions for account: 000966543 between 14 January 2018 and 19 January 2018

						-	Ĭ			T T	
	Date	Date of	Bank sort	Account	Transmitted	Calculated			Working		
3	digits	transaction	code	number	check digit	check digit	Working 1	Transaction	2	Credit	Debit
4											
5	14012018	14 January 2018	26-15-54	019525547	8 _	8		С	4251	\$42.51	
6	14012018	14 January 2018	26-15-77	352145687	1	1		D	125400		\$1,254.00
7	15012018	15 January 2018	26-15-44	012548524	1			С	6500	\$65.00	
8	15012018	15 January 2018	34-12-54	362791304	5	5		С	564213	\$5,642.13	
9	15012018	15 January 2018	34-01-21	012052967	2	_ 2`	\geq	0	168573		<u>\$1,</u> 685.73
10	15012018	Date of transac	tion colu	mn		Trar	smitted cl	heck digit co	olumn		
11	15012018	In format 12 Jar	nuary 201	8	1 marl	k Give	s correct s	ingle digits		1 m	ark 958.07
12	15012018	15 Jany	56-36-69	489331463	1	1		С	309855	\$3,098.55	
13	15012018	15 Jan aar y 2018	26-15-54	623718361	7	7		С	43554	\$435.54	
14	15012018	15 January 2018	26-15-44	423590952	9	9		С	109958	\$1,099.58	
15	15012018	15 January 2018	34-12-54	555582543	2	2		С	9094	\$90.94	
16	15012018	15 January 2018	36-36-69	246791290	0	0		С	403445	\$4,034.45	
17	15012018	15 January 2018	36-36-69	056999957	9	9		D	424752		\$4,247.52
18	15012018	15 January 2018	14-01-01	801782857	6	6		D	313104		\$3,131.04
19	15012018	15 January 2018	26-15-44	984468323	7	7		D	14137		\$141.37
20	15012018	15 January 2018	34-01-21	488281181	1	1		С	3500	\$35.00	
21	15012018	15 January 2018	26-15-44	337558282	3	3		С	122275	\$1,222.75	
22	16012018	16 January 2018	14-01-01	933045909	2	2		С	184107	\$1,841.07	
23	16012018	16 January 2018	36-36-69	427771104	3	3		D	21800		\$218.00

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	С	D	E	К	L
1					

Transactions for account: 000966543

between 14 January 2018 and 19 January 2018

\vdash		v	-		
	Date of	Bank sort	Account		
3	transaction	code	number	Credit	Debit
4					
5	14 January 2018	26-15-54	019525547	\$42.51	
6	14 January 2018	26-15-77	352145687		\$1,254.00
7	15 January 2018	26-15-44	012548524	\$65.00	
8	15 January 2018	34-12-54	362791304	\$5,642.13	
9	15 January 2018	34-01-21	012052967		\$1,685.73
10	15 January 2018	26-15-77	736513307	\$1,395.43	
11	15 January 2018	14-01-01	859627842		\$3,958.07
12	15 January 2018	36-36-69	489331463	\$3,098.55	
13	15 January 2018	26-15-54	623718361	\$435.54	
14	15 January 2018	26-15-44	423590952	\$1,099.58	
15	15 January 2018	34-12-54	555582543	\$90.94	
16	15 January 2018	36-36-69	246791290	\$4,034.45	
17	15 January 2018	36-36-69	056999957		\$4,247.52
18	15 January 2018	14-01-01	801782857		\$3,131.04
19	15 January 2018	26-15-44	984468323		\$141.37
20	15 January 2018	34-01-21	488281181	\$35.00	
21	15 January 2018	26-15-44	337558282	\$1,222.75	
22	16 January 2018	14-01-01	933045909	\$1,841.07	
23	16 January 2018	36-36-69	427771104		\$218.00

Only columns C,D,E,K and L fully visible	1 mark
Row 3 text enhanced	1 mark
Row 3 wrapped so no large spaces	1 mark
Columns K and L right aligned with \$ and 2 dp	1 mark
Correct values displayed in K and L	1 mark

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Evidence document

Evaluation:

Six from:

Function will trap some/not all transmission/data corruption errors	1 mark
Function/method are inefficient/may cause errors	1 mark
If two digits transposed then check digit is the same/ can not identify extra zeros	1 mark
The bank sort code (and other data) could be included within the check digit/checksum	1 mark
The use of a checksum (or other appropriate algorithm) would give more reliable error checking	1 mark
Manually checking the spreadsheet for the error message would be a time-consuming process	1 mark
This method changes erroneous data rather than requesting data to be re-sent	1 mark
The method of correction (incorrectly) assumes that the check digit is the error	1 mark
The error may be one or more digits in the account number	1 mark
Retransmission/resending of data would be required/requested	1 mark

Encryption:

Five from:

To scramble/jumble the data (for transmission)	1 mark
Requires an encryption key to encrypt data	1 mark
Requires a <u>private key/decryption key</u> to decrypt data/only the person with the decryption key will be able to use/understand the data	1 mark
To prevent data being understood if intercepted by a hacker	1 mark
It helps to prevent customer's personal data from being seen/used	1 mark
It helps to prevent transaction details/payment details from being seen/used	1 mark
Many banks use 128-bit or 256-bit encryption	1 mark
Some banks use 1024-bit encryption which is more secure than using the SSL in a secure website.	1 mark

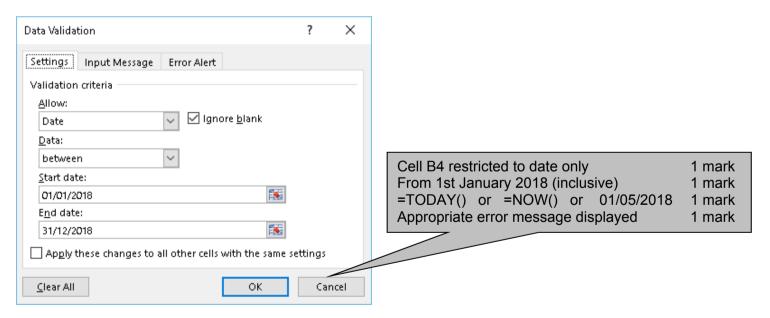
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Formatting - Bank_

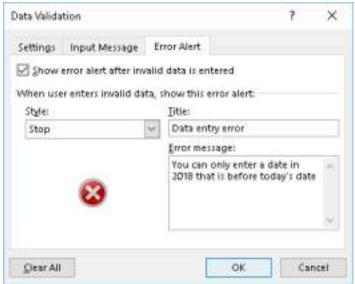


Data entered as shown 1 mark
All formatting and merging as shown 1 mark
Gridlines visible for A1 to C4 only. 1 mark

Validation - Bank_



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1 mark

1 mark

1 mark

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The Bank of Tawara

Advertising slogan

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Candidate name and numbers Appropriate blank line(s) as sp. All text is a large easily read fo Audio file clipped to last 34 sec Attached to video clip along with Movie exported / saved with co	acing between credits nt with good contrast conds th existing soundtrack	1 mark 1 mark 1 mark 1 mark 1 mark 1 mark
Video file Bank_2_ Same file exported with correct filename Same file exported in mp4 format		1 mark 1 mark

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