QUESTION 1.

5 (a) A program calculates the exam grade awarded from a mark input by the written as a function CalculateGrade.



The function:

- has a single parameter Mark of INTEGER data type
- returns the grade awarded Grade of STRING data type

The logic for calculating the grade is as follows:

Mark	Grade	
Under 40	FAIL	
40 and over and under 55	PASS	
55 and over and under 70	MERIT	
70 and over	DISTINCTION	

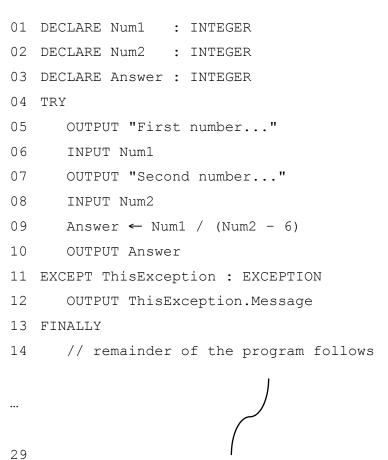
The programmer designs the following table for test data:

Mark	Description	Expected result (Grade)
	Normal	
	Abnormal	
	Extreme/Boundary	

(i)	Complete the table above.	[3]
(ii)	State why this table design is suitable for black box testing.	
		•••••
		[1]

(b)	When designing and writing program code, explain what is meant by:
	an exception
	exception handling
	[3
(c)	A program is to be written to read a list of exam marks from an existing text file into a 1D array
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(d) The following pseudocode is to read two number	(d)	The following	pseudocode	is to read	two numbers
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The programmer writes the corresponding program code.

30 ENDTRY

A user inputs the number 53 followed by 6. The following output is produced:

```
First number...53
Second number...6
Arithmetic operation resulted in an overflow
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(i)	State the pseudocode line number which causes the exception to be raised.

	[1]
Explain the purpose of the pseudocode on lines 11 and 12.	
	Explain the purpose of the pseudocode on lines 11 and 12.

.....[3]

