

3 Tick (✓) **one** box to identify the operator that returns the quotient of a calculation with the fractional part discarded.

- A / ☐
- B DIV ☐
- C ^ ☐
- D MOD ☐

[1]

1 Tick (✓) **one** box to complete this sentence.

The result of the arithmetic operation $4 \wedge 2$ is

- A 2 ☐
- B 8 ☐
- C 16 ☐
- D 42 ☐

[1]

3 Tick (✓) **one** box to identify the most appropriate data type to store 'M'

- A integer ☐
- B char ☐
- C real ☐
- D Boolean ☐

[1]

5 Two library routines used in programming are MOD and DIV.

State the purpose of each of the library routines.

Give **one** example pseudocode statement for each of the library routines.

MOD purpose

Example pseudocode

DIV purpose

Example pseudocode

[4]

2 Tick (✓) **one** box to complete this sentence.

A pseudocode example of a selection statement is

- A CALL Sorting(Value1, Value2) ☐
- B DECLARE Count : INTEGER ☐
- C IF X = 7 THEN Y ← 21 ENDIF ☐
- D WHILE X <> -1 DO ☐

[1]

3 State what is meant by the data types integer and real.

Give an example of each.

Integer

Example

Real

Example

[4]

5 A high-level programming language makes use of arithmetic, Boolean and logical operators.

State how each type of operator is used.

Give an example statement, in pseudocode, for each one.

Arithmetic

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Example

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Boolean

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Example

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Logical

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Example

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[6]

3 Describe the characteristics of the string and char data types and give an example of each.

String

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Example

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Char

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Example

[4]

7 (a) The string operation `SUBSTRING(FullText, X, Y)` returns a string from `FullText` beginning at position `X` that is `Y` characters long. The first character in `FullText` is in position 1.

Write the pseudocode statements to:

- store the string "IGCSE Computer Science at Cambridge" in `FullText`
- extract and display the words "Computer Science" from the string and store it in a suitable variable
- output the original string in upper case.

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[4]

(b) Write the pseudocode statements to:

- store the content of the variable you created in part **(a)** to a text file named "Subjects.txt"
- close the text file at the end of the algorithm.

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[3]

6 Describe **two** types of iteration that a programmer can use whilst writing a program.

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5 Explain how variables and constants should be used when creating and running a program.

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8 Explain why a programmer would use procedures and parameters when writing a program.

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