



YEAR: MAY/JUNE 2015

Q 1 Five statements about interpreters and compilers are shown in the table below.

Study each statement.

Tick (✓) to show whether the statement refers to an interpreter or to a compiler.

Statement	Interpreter	Compiler
takes one statement at a time and executes it		
generates an error report at the end of translation of the whole program		
stops the translation process as soon as the first error is encountered		
slow speed of execution of program loops		
translates the entire program in one go		

[5]

Q 2 (a) Five statements about interpreters and compilers are shown in the table below.

Study each statement.

Tick (✓) to show whether the statement refers to an interpreter or to a compiler.

Statement	Interpreter	Compiler
creates an executable file that runs directly on the computer		
more likely to crash the computer since the machine code produced runs directly on the processor		
easier to debug since each line of code is analysed and checked before being executed		
slow speed of execution of program loops		
it is more difficult to modify the executable code, since it is in machine code format		

[5]

YEAR: MAY/JUNE 2015

Q 3 State why a compiler or an interpreter is needed when running a high-level program on a computer.

.....
.....
.....[1]

Give **one** benefit of writing a program in a high-level language.

.....
.....
.....[1]

Give **one** benefit of writing a program in a low-level language.

.....
.....
.....[1]

MAY/JUNE 2015

Q 4 Complete the following by writing either *compiler*, *interpreter* or *assembler* in the spaces provided.

- – translates source code into object code.
- – translates low-level language into machine code.
- – stops the execution of a program as soon as it encounters an error.

[3]

YEAR: OCT/NOV 2016

Give **two** reasons why a programmer would choose to write code in a low-level language.

1

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.....

2

.....

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[2]

Study the following three sections of code.

A: 1 0 1 0 1 1 0 1

High-level languages require either an interpreter or a compiler to translate the program.

The table below lists a number of statements about language translators.

Tick (✓) to show which statements refer to interpreters and which refer to compilers.

Statements	Interpreter (✓)	Compiler (✓)
Translates the source code into machine code all at once		
Produces an executable file in machine code		
Executes a high-level language program one instruction at a time		
Once translated, the translator does not need to be present for the program to run		
An executable file is produced		

[5]

YEAR: OCT/NOV 2016

Four descriptions about compilers and interpreters are shown below.

Draw lines to indicate which descriptions refer to a compiler and which descriptions refer to an interpreter.

Description

It is more difficult to debug the code since one error can produce many other associated errors.

The speed of execution of program loops is slower.

It produces fast, executable code that runs directly on the processor.

It is easier to debug the code since an error is displayed as soon as it is found.

Compiler

Interpreter

[4]

High-level or low-level languages can be used when writing a computer program.

State **two** advantages of using a high-level language and **two** advantages of using a low-level language.

High-level language advantage 1

.....

High-level language advantage 2

.....

Low-level language advantage 1

.....

Low-level language advantage 2

.....

[4]

Akbar

.....

.....

Alex

.....

.....

.....

[6]

YEAR: MAY/JUNE 2017

Explain why a programmer might prefer to read the instruction in hexadecimal rather than in binary.

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.....
.....
..... [2]

YEAR: MAY/JUNE 2017

Programmers can use a high-level language to write a computer program.

(a) Explain what is meant by the term 'high-level language'.

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.....
..... [2]

A program written in a high-level language is translated into machine code. This is so that it can be processed by a computer.

Name one type of translator that can be used.

..... [1]

Describe how your answer to **part (b)** translates this program.

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.....
.....
.....
.....
..... [3]