3 A programmer writes a program to store and sort all the data for the books in her home library.

(a) The programmer uses a high-level language to write the program.

One reason for writing the program using a high-level language is that it is easier to read and write.

Give **two** other reasons why the programmer chose to use a high-level language.

1 .....

.....

2 .....

.....

[2]

(b) The programmer uses an integrated development environment (IDE) to write the program.

One function of the IDE is to provide a translator.

(i) Complete the statements about translators.

Use the terms from the list. Some of the terms will **not** be used. You should only use a term once.

all together	all	assembler	binary	error
executable file	executing	interrupt	line by line	
partial code	some	translating	whole code	

A compiler translates the ..... at once before

..... it. A compiler produces an error report that displays

..... errors.

An interpreter translates and executes the code ..... .

An interpreter stops execution when an ..... is found

and continues once it is corrected.

[5]

(ii) Give **two** other functions commonly found in an IDE.

State the role of each function.

Function 1 .....

Role .....

.....

Function 2 .....

Role .....

.....

[4]

(c) The programmer wants to print a list of all her books on paper.

(i) Identify a suitable type of printer that she could use to print this list.

..... [1]

(ii) The programmer needs to connect the printer to her computer. The printer is on the same desk as her computer.

Give a suitable method of data transmission that could be used to connect the computer to the printer.

Explain your choice.

Data transmission method .....

Explanation .....

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[6]

(iii) An even parity check is used to detect errors in the data after it has been transmitted to the printer.

Describe how an even parity check detects an error.

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..... [4]