

8 One ethical consideration for a student connecting their personal computer to the school network is the risk of spreading malware on the network.

(a) Viruses and pharming are examples of malware.

Explain what is meant by a virus and pharming.

Virus

Pharming

[2]

(b) Give **three** other ethical considerations for a student using their personal computer to connect to the school network.

1

2

3

[3]

(c) Describe **two** social impacts of students using Artificial Intelligence (AI) to complete their homework.

1

2

2 (a) Complete the table by describing each term.

Term	Description
Copyright	
Open Source (Initiative)	
Shareware	
Software Licence	

[4]

(b) Describe the purpose of a code of conduct.

..... [2]

[2]

3 A computer program uses a digital camera to read the words on an item.

The program can read the words that are written on the item, translate the words to a chosen language and then output the words as audio. For example, when used in a supermarket, the program can output the words written on the labels on products.

The program uses Artificial Intelligence (AI).

(a) Explain how AI is used in the computer program described.

[4]

(b) State **two** social benefits of the use of AI in the computer program described.

1

2

[2]

(c) The computer program is released under a commercial software licence.

(i) Describe the features of a commercial software licence.

..... [3]

(ii) Explain the reasons why an open source software licence might **not** be appropriate for the computer program described.

..... [3]

7 Software is distributed with a licence.

(a) Give **two** benefits of distributing software using a shareware software licence.

1

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2

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[2]

(b) Give **two** benefits of distributing software using a commercial software licence.

1

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2

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[2]

- 5 A computer programmer is learning about the importance of acting ethically at work.
- (a) Explain the reasons why the computer programmer needs to act ethically towards colleagues and the public.
- Colleagues
-
-
-
- The public
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-
-
- [4]
- (b) The programmer writes a program to be used in a business. The source code of the program can be modified by the business. The business pays the programmer for the maintenance and security updates.
- (i) Identify **one** suitable type of software licence for the program **and** describe the reasons for your choice.
- Type of software licence
- Reasons for choice
-
-
-
- [3]
- (ii) Explain the reasons why the programmer should copyright their program.
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- [2]

- 5 A computer programmer writes programs that are distributed with a software licence.
- (a) Complete the table by writing the type of software licence each statement describes.
- | Statement | Software licence |
|--|------------------|
| A fee is charged for the software. The source code cannot be accessed. Users do not get a free trial. |
..... |
| Users can try the software before buying it. Users may not be able to access all features during the trial. |
..... |
| Software is usually free of charge. Users can access the source code and alter the program to their needs. |
..... |
- [3]
- (b) Explain the reasons why it is important for the computer programmer to join a professional ethical body.
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- [3]