

5 A student stores their schoolwork on secondary storage devices. They store their schoolwork on their home computer and on cloud storage.

(a) Give **two** characteristics of secondary storage.

1 .....

.....

2 .....

.....

[2]

(b) The home computer has a magnetic storage device, and the cloud storage uses solid-state (flash memory) storage.

Complete the description of how magnetic hard disk drives and solid-state drives (SSD) read data.

Use terms from the list. **Not** all terms need to be used. You should only use a term once.

- |           |                       |                |           |
|-----------|-----------------------|----------------|-----------|
| control   | electromagnetic field | flow           | loss      |
| NOR gates | opened                | pits and lands | platters  |
| ports     | remove                | sectors        | XOR gates |

A hard disk has several platters. Each platter is split into tracks and ..... . To read data, the read/write head moves over the platters to the position where data starts. The ..... indicates if the data is a 1 or a 0.

A solid-state drive uses NAND gates or ..... . It is made of transistors that work as floating gates and ..... gates. The gates control the ..... of electrons to memory cells.

[5]

(c) (i) State what is meant by cloud storage.

.....

..... [1]

(ii) Explain the advantages to the student of storing their data on cloud storage instead of storing the data locally on their home computer.

.....

.....

.....

..... [2]

(iii) Explain the advantages to the student of storing their data locally on their home computer instead of using cloud storage.

.....

.....

.....

..... [2]