Name: Class: Mark:

1. Desmond is buying a new computer for editing photos and videos. A friend says that he will need a large amount of primary and secondary storage.

(a) Define what is meant by main memory. [1]

(b) Define what is meant by secondary storage. [1]

(c) Two technologies that can be used to store data in a laptop computer are magnetic hard disk drives or a solid state drives.

State **one** other technology that can be used to store data. [1]

(d) Desmond is deciding whether to get a magnetic hard disk drive or a solid state   
drive for his computer. Explain **two** advantages of a solid state drive. [2]

(e) The solid state drive makes use of memory cells. Each memory cell has both a control gate and a floating gate.

(i) Describe how a floating gate is used to store one bit of data. [2]

(ii) Describe how control gates are used to write a 1 to the memory cell. [2]

(f) Desmond has decided to purchase an external optical storage device. He would rather have a Blu-ray drive rather than a DVD drive.The DVD drive makes use of a red laser whilst the Blu-ray drive makes use of a violet laser.

State the difference that using a violet laser makes in a Blu-ray drive. [1]

[Total 10 marks]