



2. Sandy uses the Internet to buy books, videos and music CDs.
- (a) He is discussing the use of the Internet with some of his friends when one of them says that the Internet is a *Wide Area Network*.
- What is a wide area network?
- (b) Sandy has a computer system that he connects to the Internet to do his shopping.
- (i) State **one** extra item of hardware that he needs to connect to the Internet
- (ii) State **one** extra item of software that he needs to connect to the Internet
- (c) Sandy sends his credit card number across the Internet to one of the on-line shops to pay for his shopping. He is worried that someone might hack into a computer and steal his credit card details.
- (i) Describe **one** type of security precaution that the on-line shop should take to prevent unauthorised access.
- (ii) What law forbids unauthorised access to computer systems?
- (d) Sandy also uses his computer to play computer games. Some of the games he plays are *virtual reality* based.
- Explain what is meant by *virtual reality*?
- (e) Sandy's computer is capable of *multi-programming*. Explain what this means.
- (f) One of Sandy's friends offers him a copy he has made of a game that is commercially available. Sandy says that making a copy of the game is against the Copyright, Designs and Patents Act. Explain why this is the case.
- (g) Sandy buys a printer for his computer system. He has connected it properly and has made sure that it has paper and ink but it still doesn't work. What item of software has he forgotten to install?

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3. Modern PCs are said to have multimedia capabilities.

(a) Name **one** input device and **one** output device that would allow the computer to be described as a multimedia computer.

(b) Large data files must be stored in RAM for multimedia presentations.

Explain how the CPU can locate data stored in RAM.

(c) (i) High level languages need to be translated by a compiler or an interpreter. Give **two** advantages that a compiled program has over an interpreted program.

(ii) High level languages are said to be *portable*. Explain the term *portable*.

(d) Another type of translator is an *assembler*. What is its purpose?

(e) Some operating systems are said to allow *multi-access*.

(i) What is meant by *multi-access*?

(ii) Describe a situation where *multi-access* would be used.

(iii) A *hierarchical filing system* would be useful in a multi-access system. Explain what is meant by a *hierarchical filing system*.

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