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INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY
STANDARD LEVEL
PAPER 2

Tuesday 13 November 2001 (morning)

2 hours

INSTRUCTIONS TO CANDIDATES

• Do not open this examination paper until instructed to do so.
• Answer Section A and two questions from Section B.

SECTION A

*Answer **all** parts of the question.*

Dramatic increase in online car sales

1.

> The number of car purchases which is influenced in some way by the Internet is predicted to rise in the United States from two million in 1998 to nearly eight million by 2003. Of those eight million purchases, 500 000 will be conducted entirely online.
>
> The Ford Motor Company in Australia is developing its online selling of cars with its new dealership plan. The plan includes a new Web site (www.fte.ford.com.au) that allows customers interested in the T-series and Cougar cars to configure a car, order it, pay a deposit and arrange financing online. They will also be able to watch a video of a T-series model going through production and track the delivery schedule of their own car using the Web site.

(a)   List **two** input devices that could be used to incorporate pictures of the cars into the Web pages.   *[2 marks]*

(b)   State the meaning of *http*, *www*, and *www.carsales.com* in the address *http://www.carsales.com*.   *[3 marks]*

(c)   Describe **one** security issue which could be a concern to buyers and sellers in a networked environment and suggest **two** possible solutions.   *[3 marks]*

(d)   Online sales can have many advantages for both sellers and customers but can also cause some concerns. Discuss **three** social issues that could result from online sales in the car industry. Do not include any answers which were given in part (c).   *[12 marks]*

SECTION B

*Answer **two** questions. Up to **two** additional marks are available for the quality of construction of each of your answers.*

2. The police department maintains records on all legal offences from minor violations to serious crimes.

    (a) Outline **two** items of information (other than name, address and telephone number) that the police department may collect about an individual or about the offence. *[2 marks]*

    (b) Describe **two** advantages that information stored in digital form has over records in paper form. *[4 marks]*

    (c) Discuss **three** consequences (social and/or ethical) arising from the storage of personal information in police records. *[12 marks]*

3. A school provides staff and students with access to its computer network. The network is used for storing student files on a central server.

    (a) Activity on the school's networking system is monitored. A list of those students who have accessed the server and the use of the server is automatically displayed on the server's monitor. State **two** items that this list might include. *[2 marks]*

    (b) The network manager is concerned that some users may install unauthorised software on a desktop computer on the network. Explain **two** problems that might arise if unauthorised software is installed. *[4 marks]*

    (c) The school is producing a Code of Conduct regarding the use of its computer network. Discuss **two** issues that the school should address in the Code of Conduct. Discuss **one** way in which the rules may be enforced. *[12 marks]*

4. Many schools are beginning to consider the implementation of laptop computers to allow students and teachers to access, process and present information at any time and in any place using the school network. There are many aspects of this development which must be considered. These include hardware and software requirements, a plan for implementation and educational changes.

    (a) Describe **two** hardware components which must be available in order for laptop computers to be able to access the school network. *[2 marks]*

    (b) Students will also be able to have access to the Internet in school from their laptop computers. Explain **two** policies regarding the access of the Internet which would have to be developed. *[4 marks]*

    (c) Discuss **three** considerations (social and/or ethical) which a school would need to consider before implementing this 'any time any place' environment which laptop computers would provide. *[12 marks]*

5. Today some dentists use information technologies and imaging tools for keeping records and predicting the outcomes of various dental treatments.

    (a) Outline **two** information technology tools (hardware and/or software) which a dentist would need in order to digitize the image of a patient's teeth. *[2 marks]*

    (b) Explain **one** advantage and **one** disadvantage of storing dental images digitally rather than in a normal x-ray or photograph. *[4 marks]*

    (c) Discuss **three** implications (social and/or ethical) which must be considered when using digital images in dentistry. Do not include any answers which were given in part (b). *[12 marks]*