IBO
IB DIPLOMA PROGRAMME
PROGRAMME DU DIPLÔME DU BI
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INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY
STANDARD LEVEL
PAPER 2

Thursday 16 May 2002 (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.*

Alan's Skills

1. Alan left school in 1976 and was a printing apprentice with a local newspaper. On finishing his apprenticeship he became a full-time typesetter[1] at Printex Publishing Company (PPC).

    In 1985 the newspaper introduced computerized typesetting. Alan had to be re-trained in the new skills of touch-typing and **desktop publishing**. His job was to type articles and stories written or phoned in by journalists.

    In 1987, after long negotiations between the management of PPC and the National Union of Journalists the company introduced another new system. Journalists now typed their stories directly on to the computer. Fewer typists were required. Some typists were re-trained as journalists while others were made redundant. Alan's future remained uncertain.

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[1] Typesetting used to be a skilled operation using hot metal.

    (a)   Define **desktop publishing** (DTP) (paragraph 2).   *[2 marks]*

    (b)   Describe **two** skills that professional users of desktop publishing software must have.   *[4 marks]*

    (c)   Explain **two** reasons why long negotiations might have been required before the new DTP system could be introduced in the Printex Publishing Company.   *[6 marks]*

    (d)   Discuss **two** positive social effects that the introduction of DTP software had on the publishing industry and weigh up the importance of your arguments.   *[8 marks]*

SECTION B

*Answer **two** questions. Candidates should note they are unlikely to achieve high marks for part (c) of each question if the answer is not developed and presented in a planned and structured way.*

2. Money is just another form of information and, as such, it can be digitized. Money, like any other digital information can be transmitted through computer networks. Most major financial transactions take place using computers and most money is stored on computer media. Electronic fund transfer is one of the main components of electronic commerce (e-commerce), which takes place not only on private banking networks but also on the Internet.

    (a)   Outline how an Automatic Teller Machine (ATM)* works.   *[2 marks]*

    (b)   Describe **three** electronic fund transfer operations that can take place **without** using an ATM.   *[6 marks]*

    (c)   Discuss **three** social implications (positive **or** negative) of e-commerce and weigh up the importance of your arguments.   *[12 marks]*

3. The traditional advertising which occurs in magazines and newspapers is very different to the advertising which is found on Web pages.

    (a)   State **one** software application which is necessary for producing advertisements in print and **one** software application which is necessary for producing advertisements on the World Wide Web.   *[2 marks]*

    (b)   Describe **three** differences between advertising found in magazines and newspapers and advertising found on web pages.   *[6 marks]*

    (c)   Discuss **three** ethical considerations a company must take into account before placing an advertisement on the web and weigh up the importance of your arguments.   *[12 marks]*

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*   A cash point machine

4. Computers have become an everyday part of children's lives for both school work and leisure activities.

   (a) State **two** ways in which children can locate information on the World Wide Web for their school work. *[2 marks]*

   (b) Describe **three** health issues for children related to the intensive use of computers and describe how each of them can be avoided. *[6 marks]*

   (c) Children often play computer games and online interactive games during their leisure time. Discuss **three** social effects which computer games could have on children other than ergonomic **or** health issues and weigh up the importance of your arguments. *[12 marks]*

5. Computer networks are now widely used by doctors and other health care workers. Medical information can be digitized and sent across networks by doctors and other health professions for consultation and diagnosis.

   (a) Outline **one** possible use of WANs (wide area networks) in health care. *[2 marks]*

   (b) File compression is often used when large files are sent across networks. Explain **two** benefits and **one** limitation of using file compression when sending medical information. *[6 marks]*

   (c) Discuss **three** social impacts (positive **or** negative) resulting from the possibility of sending personal health records through a WAN and weigh up the importance of your arguments. *[12 marks]*