



**INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY
STANDARD LEVEL
PAPER 2**

Friday 12 November 2004 (morning)

2 hours

INSTRUCTIONS TO CANDIDATES

- Do not open this examination paper until instructed to do so.
- Section A: answer **all** parts of the question.
- Section B: answer **two** questions.

SECTION A

Answer **all** parts of the question.

Area of Impact: Business and Employment

1. The use of the Internet by office workers for non-work related activities during business hours is of great concern to employers.
 - (a) Identify **two** non-work-related activities office workers could perform using the Internet during business hours. *[2 marks]*
 - (b) Describe **two** types of communication access a business could use to connect its local area network (LAN) to the Internet. *[4 marks]*
 - (c) Describe **two** information technologies employers could use to monitor office workers' non-work-related Internet use. *[4 marks]*
 - (d) Discuss **three** social **and/or** ethical issues resulting from non-work-related Internet use by office workers. Evaluate your arguments. *[10 marks]*

Total: *[20 marks]*

SECTION B

Answer **two** questions.

Area of Impact: Education

2. A school is considering installing webcams in classrooms and other locations for a variety of reasons. Images and sounds from these cameras will be available on the school’s Web site.
- (a) Identify **two** information technologies, other than a webcam, necessary to broadcast these images and sounds on a Web site. *[2 marks]*
 - (b) Identify **two** different locations for webcams in a school, other than in classrooms, and describe a different purpose for each. *[4 marks]*
 - (c) Identify **two** groups of stakeholders and describe a different benefit for each which results from having webcams in a school. *[4 marks]*
 - (d) Discuss **three** social **and/or** ethical impacts of this course of action on students. Evaluate your arguments. *[10 marks]*

Total: *[20 marks]*

Area of Impact: Health

3. Telemedicine has the potential to make a difference to people’s lives in remote rural areas.
- (a) Describe **two** ways a doctor can use telemedicine. For each way identify the technology used. *[4 marks]*
 - (b) Describe **two** software methods necessary to protect data used in telemedicine. *[4 marks]*
 - (c) Discuss **three** social **and/or** ethical issues resulting from telemedicine. Evaluate your arguments. *[12 marks]*

Total: *[20 marks]*

Area of Impact: Arts, Entertainment and Leisure

4. Computer game rooms, called PC rooms, have experienced rapid growth in many parts of the world. The only admission requirement for children and adults is an hourly fee. The game playing is loud and accompanied by real-life graphics. Most games have warfare as the main theme where players are combating against each other using specially designed chairs, monitors and controls. Players can play against each other in the game room or other players on the Internet.
- (a) Outline **two** reasons why adult game players would prefer to pay for playing games in a PC room rather than playing games on their own home computer. *[2 marks]*
 - (b) Describe **two** ethical responsibilities of the owners of PC rooms with regard to children. *[4 marks]*
 - (c) Describe **two** advantages for game developers which could result from the increased number of PC rooms. *[4 marks]*
 - (d) Discuss **three** social **and/or** ethical problems which could result from the excessive expansion and use of PC rooms. Evaluate your arguments. *[10 marks]*

Total: *[20 marks]*

Area of Impact: Science and Environment

5. A recent study found that over 315 million computers will become obsolete by the year 2004.
- (a) Describe the hazards caused by disposal of **two** types of computer components. *[4 marks]*
 - (b) Describe **two** ways of reducing problems caused by disposal of hazardous computer components. *[6 marks]*
 - (c) Describe **three** issues resulting from the practice of developed countries donating old computers to developing countries. Evaluate the overall impact. *[10 marks]*

Total: *[20 marks]*

Area of Impact: Politics and Government

6. From October 2001 residents of Canberra, Australia have the option to vote electronically over the Internet.
- (a) Apart from a computer, identify **two** things required to place a vote online. *[2 marks]*
 - (b) Describe **one** method by which the voter's authenticity can be established. *[2 marks]*
 - (c) Evaluate **two** benefits of online voting. *[4 marks]*
 - (d) Discuss **three** social **and/or** ethical issues resulting from online voting. Evaluate your arguments. Do not repeat issues discussed in part (c). *[12 marks]*

Total: *[20 marks]*
