



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

Thursday 20 November 2003 (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.

1. The student council in the South West College decides to conduct a survey to find out what people, in the school and local community, want to read in the college’s newsletter. The data collected will be entered in a database for analysis. The questionnaire they have designed is shown below.

SOUTH WEST COLLEGE NEWSLETTER SURVEY			
PERSONAL DATA			
Name:	Address:	Age:	Gender <input type="checkbox"/> M <input type="checkbox"/> F
Marital Status: <input type="checkbox"/> Use S: Single, M: Married, D: Divorced.			
Annual Income	Education	Occupation (tick one)	
<input type="checkbox"/> Less than \$ 35 000	<input type="checkbox"/> Elementary School	<input type="checkbox"/> Student	
<input type="checkbox"/> Between \$ 35 000 and \$50 000	<input type="checkbox"/> Secondary School	<input type="checkbox"/> Employed	
<input type="checkbox"/> More than \$50 000	<input type="checkbox"/> University	<input type="checkbox"/> Self employed	
		<input type="checkbox"/> Professional	
INTERESTS: — Please ✓ all the boxes that represent your interests.			
<input type="checkbox"/> Sports	<input type="checkbox"/> Computers		
<input type="checkbox"/> Literature	<input type="checkbox"/> Health		
<input type="checkbox"/> Handicrafts	<input type="checkbox"/> Music		
<input type="checkbox"/> Cinema	<input type="checkbox"/> Nature		

- (a) State the field type in the database for the “age” field and for the “gender” field. [2 marks]
- (b) The student council could query the database using the information from **three** fields to determine the types of articles to be included in the newsletter. State the three fields, describe the query with at least three fields and outline an example of the newspaper article which would be published. [4 marks]
- (c) Explain **two** reasons why a database is used to analyse data from the survey. [4 marks]
- (d) Discuss **three** social **or** ethical consequences that may arise from the misuse of such a database. [10 marks]

SECTION B

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

2. The airline industry uses computerized systems, both on board an aircraft and as part of a world-wide administration system.
- (a) Describe **two** situations in the airline industry where computerized systems could replace a human employee. [4 marks]
 - (b) Describe **two** computerized systems which can be found onboard an aircraft. [4 marks]
 - (c) Discuss **three** social **or** ethical considerations that could arise from the use of a Wide Area Network in the airline industry. A weighing-up of arguments is required in the response. [12 marks]
3. A recent lawsuit challenges the common, but little known practice, of “file buying”. When a private business, such as a drugstore, is sold, the data of all of its customers is also sold. The company acquiring the customer data then adds these customers to its own database.
- (a) State **two** different types of confidential information (other than personal information such as name, address or telephone number) which could be contained in the database which was sold and outline why this information should remain confidential. [4 marks]
 - (b) Describe **two** methods which could have been used to collect the data in the drugstore customer database. [4 marks]
 - (c) Discuss **three** ethical **or** social concerns that customers should have regarding the storage of their personal data in the drugstore customer database. A weighing-up of arguments is required in the response. [12 marks]

4. Interactive television providers in Britain are giving away conversion devices so homes can have access to digital TV.
- (a) Outline the difference between analogue and digital television images. *[2 marks]*
 - (b) Describe **three** features that are available with digital TV but not analogue TV. *[6 marks]*
 - (c) Discuss **three** social **or** ethical considerations that could arise from the interactive nature of digital TV, which enables two-way information transfer. A weighing-up of arguments is required in the response. *[12 marks]*
5. Many schools, universities and examination institutions are using information technology tools to combat the problems of plagiarism in assignments.
- (a) Outline **two** situations where plagiarism could occur and how IT tools or methods could be used to detect plagiarism in each situation. *[4 marks]*
 - (b) Describe **two** actions which authors can take to prevent their work being plagiarised when placed on the World Wide Web. *[4 marks]*
 - (c) Describe **two** actions which students should take to avoid the suspicion of plagiarism when they use information from the World Wide Web. *[4 marks]*
 - (d) Discuss **two** social consequences which arise as a result of plagiarism from the World Wide Web. A weighing-up of arguments is required in the response. *[8 marks]*
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