



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

Tuesday 15 May 2001 (morning)

2 hours

INSTRUCTIONS TO CANDIDATES

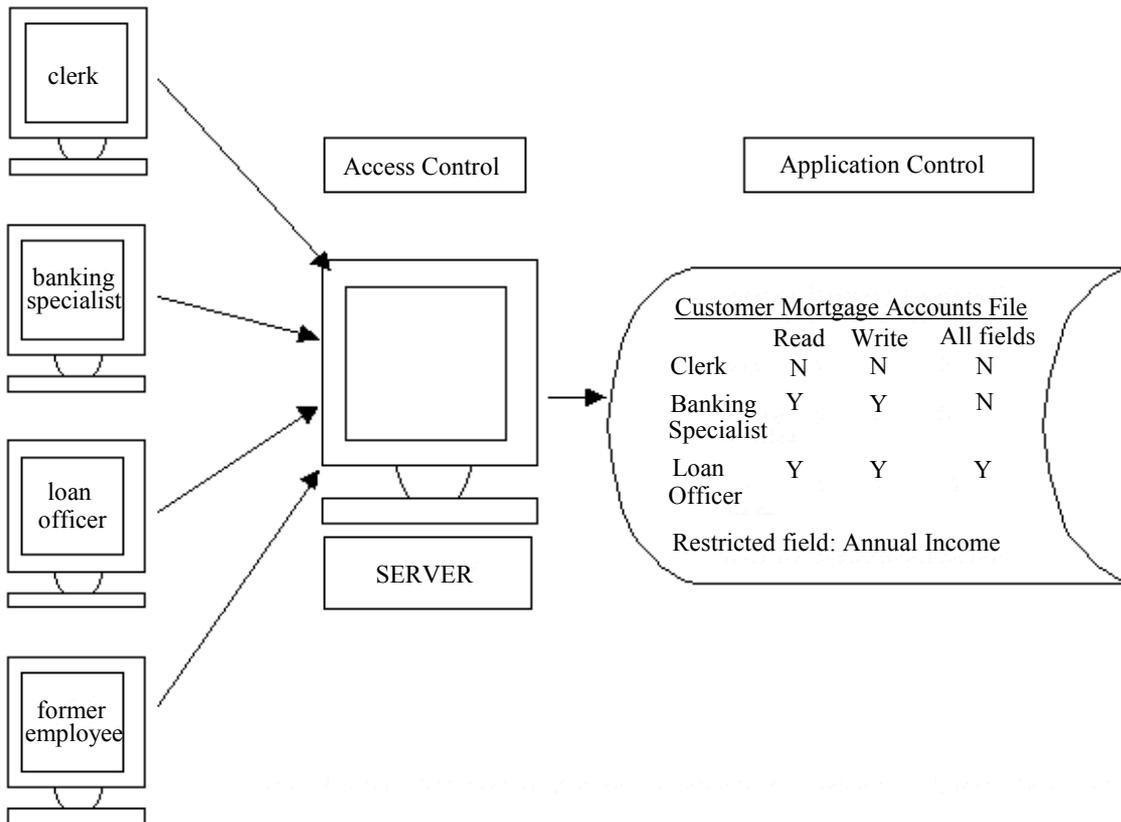
- Do not open this examination paper until instructed to do so.
- Answer Section A and two questions from Section B.

SECTION A

Answer **all** parts of the question.

Security at the Loan Company

1. This diagram illustrates the data security used by the Loan Company for its mortgage loan system. The system requires all employees to provide an authorised password when logging on. Therefore, a former employee whose password has been deleted would be unable to access the system at all. A clerk would be able to access the system but not the mortgage account files. A banking specialist could access mortgage account data but would be restricted from viewing the Annual Income field. A loan officer, however, would be able to view all the data.



[Source: *Business Information Systems*, K. Laudon & J. Laudon, Dryden Press (1991)]

- (a) Outline **two** security features of the system that controls access to the Server (other than providing an authorised password to log on). [2 marks]
- (b) State **two** situations in which data contained in the mortgage account files must be changed. [2 marks]
- (c) Describe **two** ways in which organisations keep data secure. [4 marks]
- (d) Discuss **four** social and ethical factors managers should consider when establishing IT policies for an organisation. [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. Doctors, hospitals and medical institutions record patient information into databases.
- (a) Outline **two** types of information which could be regarded as confidential in a medical database. *[2 marks]*
 - (b) Describe **two** methods which could be used to ensure that only authorized people can access the database. *[4 marks]*
 - (c) Discuss and evaluate **three** social consequences which have emerged as a result of recording patients' medical information in databases. *[12 marks]*
3. Consumers can increasingly buy a wide range of items on the Internet.
- (a) State **three** types of information the buyer needs to provide to the on-line store in order to make a purchase. *[3 marks]*
 - (b) Outline **three** ways in which consumers can find Web addresses for an item which they wish to purchase on-line. *[3 marks]*
 - (c) Discuss and evaluate **three** social consequences which have resulted from the increase in on-line purchasing. *[12 marks]*
4. A company uses a variety of application software from different suppliers. Each package has a different user interface. The company is considering changing its software to one supplier and to a common graphical user interface (GUI).
- (a) Define a graphical user interface. *[2 marks]*
 - (b) Explain **one** reason why the company might want to change its software to one supplier and explain **one** reason why a GUI is preferred. *[4 marks]*
 - (c) Discuss and evaluate **three** social **and/or** ethical consequences that the company must take into account before purchasing any new software. *[12 marks]*

5. Cellular phones are portable communications devices which are now used for a range of services.
- (a) Outline **two** communication services, other than telephone conversations, which are available through cellular phones. *[2 marks]*
 - (b) Describe **two** policies which an organisation might implement regarding the use of cellular phones. *[4 marks]*
 - (c) Discuss and evaluate **three** social **and/or** ethical impacts that could result from the widespread use of cellular phones. *[12 marks]*
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