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MARKSCHEME

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INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY

Higher Level

Paper 3

7 pages

Examiners should be aware that in some cases, candidates may take a different approach, which if appropriate should be rewarded. If in doubt check with your Team Leader.

In the case of an "identify" question read all answers and mark positively up to the maximum marks. Disregard incorrect answers. In the case of a "describe" question, which asks for a certain number of facts *e.g.* "describe two kinds", mark the **first two** correct answers. This could include two descriptions, one description and one identification, or two identifications.

1.   (a)   **Define the term *EDI*.**   *[2 marks]*

- computer to computer exchange of routine business documents in standard data formats
- a set of standards
- used to structure information
- used for exchanging business data from one organization's computer to the computer application of a trading partner.

[1 mark] for each point up to a maximum of [2 marks].

(b)   **Describe *one* way that *La Vianda* can benefit from ordering using EDI.**   *[2 marks]*

- reduces paper work + reason
- reduces human effort + reason, for example data is not being re-keyed
- replaces other data gathering methods such as scanning + consequence
- is faster + reason
- keep the stock level as it allows to order supplies automatically (referred to the stimulus material).

[1 mark] for identifying one way plus [1 additional mark] for development.

(c)   **Describe *one* reason why some supermarkets might resist the introduction of EDI for ordering.**   *[2 marks]*

- may have to change existing practices
- may not integrate with existing systems
- cost of changeover
- concerns about other companies having control over their systems
- concerns about security. It is necessary to implement measures to control the transactions.

[1 mark] for identifying one reason plus [1 additional mark] for development.

2.   **(a)**   *La Vianda* **is considering the use of an electronic surveillance system in order to reduce the incidence of shoplifting. From the research you have carried out into supermarket IT systems, explain how an electronic surveillance system operates.**   *[4 marks]*

Examples of points that may be included:
- goods are tagged
- magnetic tags
- acoustic magnetic tags
- radio frequency tags
- microwave systems
- the tags are deactivated on purchase
- if not deactivated a scanner detects when the article is taken from the store
- an alarm is sounded
- use of wired systems
- video cameras/electronic video surveillance (it must be clear that it is a digital system.

[1 mark]
A limited response that indicates very little understanding of the topic.

[2-3 marks]
A reasonable explanation, with some technical detail, although the answer may lack appropriate reasoning at the bottom end of the band.

[4 marks]
A clear, detailed explanation of the system with details of the technical issues involved.

(b) **Explain how biometrics may be used to help a supermarket combat either employee or customer fraud.** *[8 marks]*

Examples of points that may be included:
- security cameras
- facial recognition
- measurements taken of facial features
- matched against a database
- may recognise criminals
- may get false positives
- need access to a suitable (police?) database
- fingerprints
- as alternative to credit/debit cards
- unique way to ID a person
- can use it as a secure means of payment
- iris recognition.

[1-2 marks]
A limited response that indicates very little understanding of the topic and uses little or no appropriate subject terminology.

[3-5 marks]
A reasonable explanation that demonstrates some understanding of the topic. Some relevant examples are used to support explanations within the response. There is some use of appropriate subject terminology in the response. At the bottom end of the band the answer maybe descriptive and lack detail.

[6-8 marks]
A clear, detailed explanation of the issue which demonstrates a thorough understanding of the topic. Relevant examples are used to support explanations within the response. There is appropriate subject terminology throughout the response. At the top end of the band there is evidence of independent research in the response.

3.   **The operation of a modern supermarket can make extensive use of smart cards such as loyalty cards, store cards and credit cards, in a variety of ways. Evaluate ways in which smart cards could help *La Vianda* improve its profitability *and* the shopping experience of its customers.**   *[12 marks]*

Examples of points that may be included:
- smart cards contain a microprocessor
- they have memory
- they have processing power
- use in credit cards
- improved security
- quicker checkouts
- chip and pin
- encryption
- dialogue between smart card and card reader
- use in loyalty cards
- can be read in the store to show points remaining
- personalised details can be displayed
- special offers can be shown in real-time to shoppers when visiting
- could be charged with money
- example of use *e.g.* cash replacement without risk of running up debts
- can be used for staff ID cards
- used for access control
- used for opening tills
- record staff activity
- data collection
- privacy issues
- security of data issues
- cost of implementing.

4 ***Opinion discuss, evaluate, justify, recommend and to what extent***	**0**	*No knowledge or understanding of IT issues and concepts or use of IT terms.*
	1-2 marks	*A brief and generalized response with very little knowledge and understanding of IT issues and concepts with very little use of IT terms.*
	3-5 marks	*A response that may include opinions, conclusions and/or judgements that are no more than unsubstantiated statements.* *The response will largely take the form of a description with a limited use of IT terms and some knowledge and/or understanding of IT issues and /or concepts.* *There may be no link, implicit or explicit to the material in the case study.* 　*At the top end of this band the description is sustained.* 　*At the bottom of the band a tendency towards fragmentary, common sense points with very little use of IT terms.*
	6-8 marks	*A response that demonstrates opinions, conclusions and/or judgments that have limited support.* *The response is a competent analysis that uses IT terms appropriately. If there is no reference to IT terms the candidate cannot access this markband.* 　*At the top end of the band the response is balanced, there may be an attempt to evaluate it in the form of largely unsubstantiated comments. There is also evidence of clear and coherent connections between the IT issues.* 　*At the lower end of the band the response may lack depth, be unbalanced or tend to be descriptive.*
	9-12 marks	***There must be evidence of independent research for candidates to reach this markband.*** *A detailed and balanced (at least one argument in favour and one against) response that demonstrates opinions, conclusions and/or judgments that are well supported and a clear understanding of the way IT facts and ideas are related.* *Thorough knowledge and understanding of IT issues and concepts.* *Appropriate use of IT terms and application to specific situations throughout the response.* ***If there is no reference to IT terms candidates cannot access this markband.*** *The response is usually explicitly linked to the information in the stimulus material.* 　*At the bottom end of the band opinions, conclusions and/or judgment may be tentative.*