

**THE INSTITUTE OF CHARTERED  
ACCOUNTANTS (GHANA)**



**MAY 2007 EXAMINATIONS  
(PROFESSIONAL)**

**PART 2**

**MIS AND BUSINESS SYSTEMS  
(Paper 2.5)**

**TIME ALLOWED: 3 HOURS**

## SECTION A

### ANSWER ANY 2 OF THE 3 QUESTIONS BASED ON THE SCENARIO

BUY.NET sells books on the Internet. It has a turnover of €50 billion. Operating costs are relatively low because most transactions are carried out electronically by the computer system with little or no manual intervention.

BUY.NET's main expense is interest on bank loans which were used to purchase initial hardware and software and provide some working capital for new business.

Over €20 billion was invested in computer hardware, software, stocks of books and warehousing space when the organisation commenced business last year. Interest repayments alone mean that BUY.NET is unlikely to see any profit being made in the next three years.

The overall vision of BUY.NET is to obtain 10 per cent of the retail book market within three years with a positive net profit. The underlying business strategy of BUY.NET supports this vision by providing:

- i) Appropriate information to, and ordering facilities for, customers.
- ii) Basic financial information for management
- iii) Suppliers with appropriate information on book sales

Expenditure on hardware and software for transaction processing included minicomputers linked to the Internet to receive orders from customers, minicomputers of a large database of books in print and sophisticated encryption technology to ensure that payments on the internet are secure. Some sections of the hardware configuration were below the recommended specification when they were implemented.

BUY.NET, along with the other major bookshops on the Internet, offers information on up to twelve million books to print. Books are ordered over the Internet using a secure landline and credit card facility. Dispatch of popular titles is normally within 48 hours; rare books in four to five weeks. All internet booksellers offer a similar lead-time for orders. Payment is made with the customer's authorization for a credit card transaction on dispatch of the order. Payments are made to suppliers within the standard credit period of 30 days.

Customers purchase books after identifying their book requirements by author or book title from the database of books maintained by BUY.NET. Information provided about each book includes price and shopping time; popular books also have a scanned image of the cover. Additional information on each book is available on the BUY.NET database, although the lack of band width from the database to the Internet server means that this information cannot be displayed to the customer.

Details of customer orders are maintained on the system for six weeks, or until the order is fulfilled. This information is then removed from the hard disk to save space.

Sales and support staff work from their homes using Virtual Private Network (VPN) to access the main computer systems of BUY.NET's head office. Sales and support staff are required to:

- i) Answer customer queries via e-mail.
- ii) Check stock movements and order additional copies of popular books, which would normally be in excess of normal forecast sales.
- iii) Review new books from publishers so that BUY.NET's website can be updated with details of each book prior to publication.
- iv) Write amendments to the website to add new books and remove discontinued books.

Each member of staff focuses on one of the main activities outlined above. Staff work from home, partly as a result of the security of the VPN, but mainly to minimize the use of expensive office space. BUY.NET provided all the hardware and software required and had no difficulty in recruiting the 30 staff required. However, six months after initial recruitment, more than half of the staff have resigned and BUY.NET is facing increasing charges from having to reallocate computer hardware to new support staff as well as, in some situations, providing appropriate ISDN telephone connections to the VPN.

The board of BUY.NET is concerned that the organization is not using technology effectively to gain any competitive advantage over its rivals. One proposition is to have additional EDI links to major book publishers to order books that BUY.NET currently does not have in stock. However, the publishers are unwilling to be locked into this type of agreement in case they are seen as favouring one bookshop over another.

1. Evaluate how BUY.NET can use IT to gain competitive advantage using Porter's Five Forces Model as a framework of your answer. **(20 marks)**
  
2.
  - a) Discuss any **three (3)** reasons why sales and support staff turnover of BUY.NET is so high. **(9 marks)**
  - b) Explain any to (2) methods for improving the retention of these staff **(8 marks)**
  - c) Explain the term 'encryption'. **(3 marks)**

**(Total: 20 marks)**
  
3.
  - a) Describe the purpose of an information system strategy in a commercial organization. **(10 marks)**
  - b) Evaluate how effective the IT system at BUY.NET is in supporting the business strategy. **(10 marks)**

**(Total: 20 marks)**

## SECTION B

### ANSWER ANY THREE (3) QUESTIONS FROM THIS SECTION

#### QUESTION 4

- a) Boysco Ltd has been operating an information system for four (4) years. Last year the company engaged consultants to evaluate the system and advise management.

The evaluation report from the consultants revealed that the technical quality of the system was low while the business impact was high.

As the Principal Consultant, you are required to submit a memorandum to the chief Operating Officer of Boysco Ltd detailing what advice you would give the management of Boysco Ltd regarding the company's information system. *(10 marks)*

- b) Explain the concept of 'Business Process Re-engineering' (BPR)

*(10 marks)*

**(Total: 20 marks)**

#### QUESTION 5

A feature of general systems theory and of all managerial control systems is the existence of feedback control loops. The normal feedback loop, sometimes termed single loop feedback, is the most formalized; from a system's viewpoint, higher level feedback, sometimes termed double loop feedback, can be said to be of equal importance.

- a) Using a diagram, describe a feedback control cycle, identifying each element in the loop

*(12 marks)*

- b) Discuss the importance of feedback in the control of systems.

*(4 marks)*

- c) Explain a feedforward control system.

*(4 marks)*

**(Total: 20 marks)**

#### QUESTION 6

Porter and Miller contend that IT has a potential to change the nature of competition within an industry.

One way is how IT can be used to create competitive advantage.

- a) Explain the term 'competitive advantage'.

*(4 marks)*

- b) With any **two (2)** examples, explain how Michael Porter's model for the five competitive forces operating in the competitive environment considers IT could be used by firms to manage the existing competitive rivalry in the industry.  
*(8 marks)*
- c) Explain the term 'facilities management' and give any **two (2)** reasons why a company might use facilities management.  
*(8 marks)*  
**(Total: 20 marks)**

### QUESTION 7

- a) State the major sections of a typical feasibility study report.  
*(6 marks)*
- b) Explain what is meant by the creeping commitment approach to the feasibility of a project.  
*(8 marks)*
- c) In the context of Information System Development, what is risk management, and why is it important in system development?  
*(6 marks)*  
**(Total: 20 marks)**