

UNIVERSITI SAINS MALAYSIA

Final Examination
Semester 1, Academic Session 1994/95

October/November 1994

AGW604 - MANAGEMENT INFORMATION SYSTEM

Time: [3 hours]

Instructions

Please make sure that this examination paper consists of FOUR printed pages before you begin.

Answer **BOTH** questions from Section A and **ANY FOUR** questions from Section B.

Section A (Answer both questions in this section).

Q1. A small-business owner, with sales of approximately RM5 million annually, has decided to automate the firm's accounting system. The firm's accounting requirements are somewhat unique since it deals with custom-made products. Currently all general ledger activities are performed by an outside auditor who bills the firm approximately RM1,000 each month for services rendered. Accounts receivable and accounts payable are handled by separate employees who are accurate and reliable. An electronic bookkeeping machine, which the firm owns, is used to post charges and payments to the paper ledger cards now used to record accounts receivable. The machine is also used to prepare checks to vendors for merchandise received or services rendered. A maintenance contract, which costs the firm approximately RM125 per month, cover all parts and labor costs should repairs be needed on the machine.

When invoices are received, they are examined for accuracy and then filed by due date. Once each week the accounts payable supervisor reviews the invoices and writes the checks for those invoices to be paid (using the bookkeeping machine). A record of the payments, including the general ledger account to which they should be posted, is prepared manually. The record, along with copies of the checks, is sent to the auditor at the end of the month who reviews each transaction for accuracy and also prepares a balance sheet and profit-and-loss statements.

...2/-

Customer statements are prepared and mailed once each month. Each manually prepared statement lists the name and address of the customer, the previous account balance, all charges, payments, and adjustments since the last payment, and the current balance. The accounts are not aged.

The owner wishes to purchase a personal computer to handle the accounting activities, and anticipates that all accounts receivable and accounts payable processing would be managed using the computer system. The bookkeeping machine would no longer be needed. The owner has not yet discussed the matter with the auditor who maintains the company's general ledger.

The owner is debating whether to purchase a software package for the popular brand of personal computer being considered, or contract with someone to write the software. One question that comes to mind is whether the custom product business will also mean custom software needs for accounting.

- (a) What factors should be considered in determining whether a personal computer is suitable for handling the firm's accounting activities?
- (b) What would you tell the owner about the likelihood of locating suitable accounting software to handle accounts receivable, accounts payable, and general ledger activities? What advantages or disadvantages can such software provide?
- (c) Suppose the personal computer costs approximately RM5,000 to acquire and accounting software another RM3,000. Is this a good investment for the company to make?
- (d) What role will the auditor for the company have if an accounting system is purchased that integrates accounts receivable, accounts payable, and general ledger - that is, if the system automatically posts accounting transactions to the general ledger and can provide end-of-month balance sheets and profit-and-loss statements? Does the installation of an in-house computer system diminish the importance of the auditor to the firm?

[30 marks]

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- Q2. Several years ago, Avis Rent-A-Car, then the seventh largest automobile rental agency, developed the Wizzard System. Based on computer and communications technology, the Wizzard System interconnected all rental locations at airports, hotels, and so on. The system, which was the first of its kind in the industry, was attractive to customers because it allowed them to place car rental reservations from virtually any location around the country, in person or by telephone, and know instantly that an automobile would be available for them at the desired rental location. After the Wizzard System was introduced, and included in the company's advertising campaigns, Avis grew from the seventh largest national car rental firm to the second.

The Avis system was also designed to provide management with knowledge about the location and cost of its fleet of automobiles and about the performance of various car rental locations. It helped Avis improve cost/performance ratios while forestalling the development of substitute products and services. The information captured through the Wizzard System concerning customers, vehicle demand, and performance helped Avis bargain more effectively with its suppliers.

At the time the Wizzard System was introduced, other companies were considering entry into the automobile rental industry.

- (a) Based on the above description, relate the system characteristics of the Wizzard System to its impact on:
- (i) customer relations
 - (ii) competitors
 - (iii) products
 - (iv) suppliers
- (b) What features of the system facilitate or prohibit a sustainable competitive advantage for Avis?

[22 marks]

Section B (Answer any FOUR questions)

- Q3. Discuss the similarities and differences between the traditional systems development life cycle and the systems prototyping methodologies.

[12 marks]

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Q4. What is end-user computing? Discuss some of the policy issues that managers have to address with the recent rise of end-user computing in large organisations.

[12 marks]

Q5. What is a decision support system (DSS)? Why have information services departments generally not developed DSS? How does a DSS differ from an executive information system?

[12 marks]

Q6. Identify and explain briefly the features of a database management system. What is the "logical view of data"? How is it different from the physical view?

[12 marks]

Q7. Discuss the main roles for a modern manager in dealing with information technology in an organization.

[12 marks]

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