**Victorian Certificate of Education
1997**

INFORMATION PROCESSING AND MANAGEMENT

Common Assessment Task 3: Written examination

Monday 10 November 1997: 3.00 pm to 5.15 pm
Reading time: 3.00 pm to 3.15 pm
Writing time: 3.15 pm to 5.15 pm
Total writing time: 2 hours

QUESTION BOOK

Structure of book

Number of questions	Number of questions to be answered
10	10

Directions to students

Materials
Question book of 4 pages.
One or more script books.

The task
Please ensure that you write your **student number** in the space provided on the front cover of the script book(s).
Read the case study contained in this question book and then answer Questions 1–10.
Answer **all** questions in the script book(s) provided.
Each question is of equal value. Where a question is divided into parts, all parts of the question are of equal value. Students should spend approximately the same time answering each of the ten questions.
All written responses should be in English.

At the end of the task
Place all other used script books inside the front cover of one of the used script books and hand them in.
You may retain this question book.

Case study

Americ Books is a supplier of books to secondary school students. A computer system in the sales area is used to keep details on each book ordered. The student name, school, book number, delivery, amount and method of payment details are recorded and used to ensure that all ordered books are sent out and paid for.

There is a second, separate computer system located in the book returns department. It is used to process requests for refunds from students who have returned books. This system records student name, school, book number, date of return and book condition.

Each of the computer systems produces printed reports. An employee, David Leung, takes the printed reports from each system. He then performs three tasks.

1. He checks whether payment has been received for the books.

2. He calculates the refund to be made, based on the data showing the price and condition of the books.

3. He ranks schools according to the number of books returned from each school.

David suggests that the two existing computer systems should be combined to form a new system. This combined system would continue to use the existing computers, in their present locations, for data input. David believes that it should be possible for the three tasks he performs with the printed reports to be carried out by the new system.

Question 1

Detail the steps required, with the existing system, for David Leung to carry out the manipulation phase of information processing when

a.   he checks whether payment has been received for the books

b.   he ranks schools according to the number of books returned from each school.

Question 2

Describe **three** organisational goals which can be achieved by adopting the new computer system.

Question 3

David has suggested that all of the hardware and software components of the two existing systems have been working reliably for several years. His plan is to develop additional components needed for the new system and join them with the existing components. A systems analyst has advised that it would be difficult to join together these components.

Outline an alternative to David's design strategy.

Question 4

What are the implications for management, staff and customers of the change to the new system?

Question 5

One way of combining data for the new system is to keep sales and returns data separate and to write programs to compare the data. An alternative is to combine the two sets of data into one database.

Which alternative would you choose and why?

Question 6

Assume that the book supplier has decided to employ the services of a company to write software specifically designed for the new system.

Describe **three** important factors to be considered when choosing between software-writing companies.

Question 7

The design of the new computer system requires the purchase of a new printer. There is a range of printers available. How would you test these alternative printers

      i.   against system objectives

     ii.   for stated capabilities

    iii.   for robustness?

Question 8

Management has decided that David Leung will be re-assigned to the role of system manager and will be responsible for the smooth operation of all elements of the new system. Managing Director Janine Pettigrew will now receive the printed report directly from the system.

For each of these individuals, explain what they will need to learn.

TURN OVER

Question 9

Assume that the way data is entered in the system changes from keyboard input to a combination of bar code reader and mouse. When designing supporting documentation for data entry personnel, the following factors need to be considered.

     i.   appropriate content and level of documentation

     ii.   format of the documentation

     iii.   who would be responsible for producing the documentation

For each of these factors, indicate what decisions you would make in relation to the documentation provided. Justify your responses.

Question 10

What would you measure in order to evaluate the efficiency of the new system? Justify your response.

END OF QUESTION BOOK