Graduateship in Marketing - Stage 4

LOGISTICS MANAGEMENT

FRIDAY, MAY 7, 2004. TIME: 9.30 am - 12.30 pm

Please answer the question in Section A, and **ONE** question from each of Sections B, C and D.

(If more than the specified number of questions in Sections B, C and D are attempted, delete those questions you do not wish to have marked. Otherwise the examiner will mark the **FIRST** question in Sections B, C and D.)

Section A carries **40%** of the marks. All other questions carry equal marks.

Do NOT repeat questions in the answers, but show clearly the number of the question attempted on the appropriate page of the Answer Book.

(Note: Marks are awarded for the relevant use of contemporary Irish and international examples of marketing practice)

SECTION A (40%)

1.   **Case: Ferle Foods, Inc.**

   (a)   Review the problems with Ferle Foods.

   (b)   Analyse the AT&T account team's response to these problems.

   (c)   Discuss any other possible responses not covered in the AT&T study.

   (d)   Propose a solution that you think Charlie Sims should bring to the meeting.

   (e)   Justify the proposal using information from the case and the AT&T study.

SECTION B (20%)

2.   *"If supply chains are to operate as seamless processes then they require openness, trust and a willingness to share information."*
Martin Christopher.
Discuss the implications of this view for buyer / supplier relationships.

3.   Describe the transition from brand value to customer value.

P.T.O.

4. Demand in a hospital for a particular medication averages at 6 per day. It costs the hospital €400 to place an order. This includes all administrative costs including ordering, delivery charges, receiving, storing and checking the products. It costs 20 cent per day to store each item. The purchase cost is €40 per item for purchases of less than 500 at a time, and €32 for orders of 500 or more. There is a 7 day delivery time and shortages are not allowed.
    What is the best inventory policy?

5. A supermarket has decided to stay open 24 hours a day. The manager has divided the 24-hour day into six 4-hour periods and determined the following minimum personnel requirements for each period.

Time	Personnel Needed
Midnight to 4.00 am	12
4.00 am to 8.00 am	7
8.00 am to Mid-day	22
Mid-day to 4.00 pm	33
4.00 pm to 8.00 pm	60
8.00 pm to Midnight	42

    Personnel must report for work at the beginning of one of the above times and work 8 consecutive hours. If they start at midnight, 4.00 a.m., or 8.00 p.m., they will get paid 30% over the normal rate. The supermarket manager wants to know the number of employees to assign to each 4-hour segment that minimizes total costs.
    Formulate a linear programme for this problem. Do not solve it.

SECTION D (20%)

6. Guthawn Ltd. sells two kinds of mobile phone: EasyCard and DayMainly. Records show that 18 minutes of sales time are used for each EasyCard phone that is sold and 30 minutes of sales time for each DayMainly phone. A total of 60 hours of sales time is available over the next 4-week period. In addition, management planning policies call for minimum sales goals of 50 units each for both EasyCard and DayMainly phones.

    (a) Show the feasible region for Guthawn's problem.

    (b) Assuming that the cmpany makes a €4 profit contribution for each EasyCard phone sold and a €5 profit contribution for each DayMainly phone sold, what is the optimal sales goal for the company over the next 4-week period?

(c) Develop a constraint and show the feasible region if management adds the restriction that Guthawn must sell at least as many DayMainly phones as EasyCard phones.

(d) What is the new optimal solution if the constraint in part (c) is added to the problem?

7. A ladies' fashion shop wishes to purchase the following quantities of spring dresses:

Dress size	I	II	III	IV
Quantity	100	200	450	150

Three manufacturers are willing to supply dresses. The quantities given below are the maximum they are able to supply of any given combination of orders for dresses:

Manufacturer	A	B	C
Total Quantity	150	450	250

The shop expects the profit per dress to vary with the manufacturer as given below.

	Sizes			
	I	II	III	IV
Manufacturer	Euro	Euro	Euro	Euro
A	25	40	50	20
B	30	35	45	15
C	20	25	45	25

(a) Use the transportation technique to solve the problem of how the orders should be placed on the manufacturers by the fashion shop in order to maximise profits.

(b) Explain how you know that no further improvements are possible, showing your workings.

(c) If there are any alternative combinations, show them in detail.