



Graduateship in Marketing - Stage 4

LOGISTICS MANAGEMENT

FRIDAY, AUGUST 18, 2006. 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 Study: Rainbow Products

- (a) Evaluate Rainbow's situation.
- (b) Discuss the possible changes Rainbow should consider over the next five years.
- (c) Propose and justify an appropriate schedule of action for Rainbow.
- (d) Include a supporting report showing your projected cost savings.

SECTION B (20%)

2. "Customers in all markets, industrial or consumer, are increasingly time-sensitive."

Martin Christopher

Discuss the concept of strategic lead-time management.

3. Describe with illustrations what is meant by 'Quick Response' logistics.

P.T.O.

SECTION C (20%)

4. Demand for tins of a typical brand of paint in a DIY store is usually about 200 units a year. Ordering costs are €50 per order and the basic unit price is €10. Carrying costs are 30% p.a.

(a) Determine the optimum number of tins of paint that the DIY store should order at a time and the number of orders per year.

(b) Discounts are available as follows:

120 to 139 less 1.0%

140 to 149 less 1.5%

150 and over less 2.0%

What is the most economical quantity to order?

(c) Discuss whether it would be advisable to apply the same policy to cheaper and to more expensive paints.

5. A car hire company has collected data on the demand for cars over the past 25 days. The data are shown summarised below:

Rental Demand	7	8	9	10	11	
Number of days	2	5	8	7	3	Total = 25

Because the customers drop cars at other locations the car hire company has only nine cars available currently.

(a) Use the following five random numbers to simulate five days of demand for the car hire company: 15 48 71 56 90. How many rentals does the simulation indicate will be lost due to a shortage of cars?

(b) What does the simulation indicate would be the average number of cars rented for the five days? How does this compare with the expected daily demand as calculated using the probability distribution?

(c) Discuss the procedure you have used, its weaknesses if any, and how to resolve them.

SECTION D (20%)

6. An advertising agency plans to buy advertising time for a company on both radio and television. The company considers radio and television equally effective, but only wants to advertise at peak times. With a current monthly budget of €6,800 for this type of advertising, the company wants to reach the largest group of listeners possible.

The following table supplies the pertinent information for both radio and television.

	Radio	Television
Number of listeners	150,000	600,000
Cost per minute	€240	€1,800

- (a) Determine the mix of radio and television advertising expenditure which would help the company reach the maximum number of listeners.
- (b) It has been suggested that at least one third of the budget should be allocated to each medium. What would be the consequence in terms of the optimum mix and the numbers of listeners reached?
- (c) An alternative policy to that suggested in (b) is that at least twice as much time be spent on radio advertising as on television. Evaluate the consequences of this policy.
- (d) What would be the effect of combining the policies outlined in (b) and (c)?

P.T.O.

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			
Manufacturer	I	I	III	IV	
	€	€	€	€	
A	25	40	50	20	
B	30	35	45	15	
C	20	25	45	25	

- 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.
- Explain how you know that no further improvements are possible, showing your workings.
- If there are any alternative combinations, show them in detail.