Graduateship in Marketing - Stage 4

LOGISTICS MANAGEMENT

THURSDAY, MAY 12, 2011. 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 the question in your answer, 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/or international examples of marketing practice)

SECTION A (40%)

1. **Case Study: FedEx, The US Express Parcel Carrier.**

   (a) What is the business model of the express delivery service providers? In what ways does it differ from traditional logistics providers?

   (b) Compare and contrast the business models of the dominant players in the global express delivery industry, namely FedEx, TNT, DHL and UPS. Why do you think they have been successful in creating a niche for themselves?

   (c) What initiatives did UPS, DHL and TNT undertake to transform themselves as a 'one-stop shop' for all the corporate customer requirements? Would this new positioning enable these companies to accelerate growth? If yes, how? If no, why not?

   (d) "In spite of such moves by its competitors, FedEx has limited itself to the small package and light freight markets..." Analyse the reasons behind FedEx's conservative business approach. In your view, has FedEx done the right thing? Give reasons to support your answer.

P.T.O.

SECTION B (20%)

2. *"Despite the efforts of Efficient Consumer Response (ECR) Europe, ECR principles have not been implemented as widely or as quickly as its early advocates had hoped "* Martin Christopher 2003.
Discuss the four pillars of ECR.

3. In the light of managing marketing logistics, what are the distinguishing characteristics of the responsive organisation?

SECTION C (20%)

4. A Fast Food Restaurant uses 5,200 packages of mustard per year. The ordering cost is €26. The carrying cost per package per year is 25% of the unit price. The discount price is given below:

Order Quantity	Price per unit €
1 – 100	8.50
101 – 300	8.20
301 – 750	8.00
751+	7.50

Assume instantaneous delivery. Find:
(a) Economic Order Quantity (EOQ);
(b) Optimum Total Cost (TC);
(c) Number of orders per year; and
(d) Time in days between orders.

5. A retail shop has conducted a study on the shop by collecting data from 25 hours randomly selected over the past month on the demand per hour for one department. The data are shown summarised below:

Demand	70	80	90	100	110	Total
Number of Hours	2	5	8	7	3	25

Current shop policy is to employ only one assistant in this department. A researcher has collected data by observation and the results showed that the assistant could not handle any more than 90 customers an hour. The company has started to look at the number of customers who leave the shop without service due to long queues or long waiting times for help.

(a) Use the following five random numbers between 00 and 99 to simulate five hours of demand for the retail shop: 85 48 71 56 90. How many items does the simulation indicate will be lost due to a shortage of staff?

(b) What does the simulation indicate would be the average number of customer services for the five hour evening? How does this compare with an expected daily demand as calculated using a probability distribution based on the above data?

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

SECTION D (20%)

6. Four different orders can be processed by any of the employees in the table below. The manager of this department can only assign one order at a time to each one of the employees in his/her department. Determine the allocation of orders to persons that will result in minimum processing time. What is the minimum time to complete all the orders?

	Processing times (minutes)			
Order	Paul	John	Jack	Mary
A	50	60	80	70
B	100	120	110	70
C	100	80	130	60
D	80	70	40	30

7. Consider a logistics project with the following data on precedence relationships, durations, and costs:

Activity	**Immediate Predecessor(s)**	**Normal Time (Days)**	**Normal Cost (€)**	**Crash Time (Days)**	**Crash Cost (€)**
A	-	6	120	4	170
B	-	4	120	2	220
C	A	3	195	2	270
D	A	4	320	2	520
E	B,C	7	700	4	1075
F	D,E	5	650	2	1100
G	E	10	1600	6	2300

F and G are the terminal activities of the project.

(a) Find the critical path
(b) Find the project completion time and the corresponding cost.
(c) The project must be completed in 22 days. Find which activities to crash and by how much, to yield the minimum project cost.