

**NATIONAL UNIVERSITY OF IRELAND
ST. ANGELA'S COLLEGE, SLIGO
SUMMER EXAMINATION 2012
FIRST UNIVERSITY EXAMINATION FOR THE DEGREE OF
BACHELOR OF APPLIED SCIENCE IN FOOD AND BUSINESS
MANAGEMENT**

**MANAGEMENT PRINCIPLES
1.1.1**

Time Allowed: **2 Hours**

Lecturer: Mr. Michael Hosey
External Examiner: Dr. Christopher Strugnell
Head of Department: Ms. Amanda McCloat

Instructions: **Answer Three questions. All questions carry equal marks.**

1. Management theory has evolved and continues to evolve over time. Discuss.
2. In order to achieve organisational goals and objectives the work of an organisation has to be divided among its member. Please explain how this is achieved in a contemporary company.
3. Outline the main elements of Human Resource Management and present your recommendations to improve the effectiveness of people management.
4. Explain what is meant by the term "macro environment" and its relevance to the management of a food business.
5. Give a brief overview of how the Irish Business sector has developed since the foundation of the state in 1922.

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**NUTRITION, DIET AND HEALTH
1.2.3**

Time Allowed: 3 Hours
Lecturers: Ms. Philomena Flynn
External Examiner: Dr. Christopher Strugnell
Head of Department: Ms. Amanda Mc Cloat

Instructions: Answer Four questions. All questions carry equal marks.

1. Give an account of Carbohydrates in the human diet under the following headings:
 - (a) Structure
 - (b) Classification
 - (c) Sources
 - (d) Functions
2. Discuss the nutritional requirements and dietary needs for the following life cycle groups:
 - (a) Pregnant and lactating women
 - (b) Elderly
3. The Irish food industry is central to the Irish economy.
Discuss this statement with reference to key sectors within the Irish food industry and the role that small food businesses and home enterprises play in contributing to the Irish economy.
4. Give an account of the nutritive value of cereals. Discuss the stages involved in the milling of wheat to produce flours of varying extraction rates and outline the role of cereals in the Irish diet.
5. Discuss the beneficial functions of calcium in the diet, making reference to sources, factors aiding and hindering absorption and deficiencies of calcium.
6. Discuss the impact of marketing/advertising and nutritional awareness on food choice.
7. Milk can be processed in a variety of ways. Outline **five** methods of processing milk, making reference to the effects of each heat treatment on the physical and nutritional qualities of milk.
8. The potential benefits of biotechnology are enormous. Discuss this statement.

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**INTRODUCTORY MICROBIOLOGY
1.2.6**

Time Allowed: **2 Hours**

Lecturers: Ms. Hilary Jordan
External Examiner: Dr. Christopher Strugnell
Head of Department: Ms. Amanda Mc Cloat

Instructions: **Answer Three questions. All questions carry equal marks.**

1. Compare and contrast the structure of a Gram positive and a Gram negative cell wall, using diagrams where appropriate.

2. Give a detailed account of salmonellosis under the following headings:
 - (a) Organism
 - (b) Pathogenicity
 - (c) Symptoms
 - (d) Distribution

3. Outline the factors that influence the growth of a bacterial cell and give a detailed account of any two.

4. Describe the process of reproduction in a bacterial cell. Outline the stages in the growth cycle of a bacterium.

5. Discuss the application of heat as a means of controlling microbial growth.

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ECONOMICS

1.1.4

Time Allowed: 2 Hours

Lecturer: Dr. Brian O' Boyle

External Examiner: Dr. Christopher Strugnell

Head of Department: Ms. Amanda Mc Cloat

Total Marks: 200

Instructions: Section A: 100 Marks
Section B and Section C: 100 Marks

**Answer Six Questions in Total. Answer Three
questions from Section A, One question from
Section B and Two questions from Section C.**

Instructions

You must answer **Three** questions from section A.
Each question is worth 33 marks. Please number each question clearly and correctly.

SECTION A - MICROECONOMICS

Question 1 (33.3 marks)

(a) 5.3 marks

Explain each of the following

- (i) the Law of Demand
- (ii) equilibrium

(b) 28 marks

The monthly demand and supply curves for laptops are given by the following equations:

$$Q_D = 1800 - P$$

$$Q_S = -200 + P$$

(i) 6 marks

Calculate the equilibrium price and quantity of laptops using the equations above.

(ii) 6 marks

Plot the demand and supply curves (using the equations above) and illustrate the equilibrium price and quantity. Ensure that your diagram is drawn to a proper scale.

(iii) 4 marks

If the price increases to €1,200 per month will there be a shortage or a surplus in the market? Illustrate this in your diagram.

(iv) 12 marks

In three separate diagrams illustrate and explain how each of the following events would impact on the market for laptops

- the government subsidises the cost of laptops for university students
- laptop manufacturing moves from a high labour cost economy to a low labour cost economy
- the price of computer software increases dramatically

Question 2 (33.3 marks)

(a) 5.3 marks

Explain each of the following, outlining how they are calculated

- (i) income elasticity of demand
- (ii) price elasticity of supply

(b) 5 marks

What value would you expect the coefficient of income elasticity to be for a luxury good? Explain your answer.

(c) 5 marks

For each pair of goods listed below, which good would you expect to have the more elastic demand? Why?

- (i) cigarettes / holidays to Spain
- (ii) home heating oil over the next month / home heating oil over the next five years
- (iii) beer / Budweiser
- (iv) insulin / aspirin

(d) 15 marks

(i) 11 marks

Jack currently consumes 10 units of good X and 15 units of good Y. The price of good X increases from €5 to €7 and the quantity demanded of good Y falls to 10. Calculate the cross price elasticity of demand.

(ii) 4 marks

Are goods X and Y complements or substitutes? (Your answer should be based on your answer to part (i).

(e) 3 marks

Briefly outline the relationship between price elasticity of demand and total revenue.

Question 3 (33.3 marks)

(a) 4.3 marks

Define (i) a price ceiling and (ii) a price floor.

(b) 12 marks

The government has decided that the free market rental rate for apartments is too high.

(i) Suppose the government imposes a binding price ceiling, a rent control. Use a supply and demand diagram to show the effect of this policy on the rental price of apartments and the quantity of apartments rented. Is there a shortage or surplus in the market?

(ii) Does everyone benefit from the government's policy of rent control? Explain your answer.

(c) 5 marks

Define and illustrate the concepts of (i) consumer surplus and (ii) producer surplus.

(d) 12 marks

Draw a demand and supply diagram with a tax on the sale of a good. Show the quantity sold with and without the tax. Also illustrate the price buyers pay and the price sellers receive with and without the tax. Show consumer surplus, producer surplus, the deadweight loss and government revenue. Explain the occurrence of the deadweight loss.

Question 4 (33.3 marks)

(a) 8 marks

Jack runs a small car trailer factory. He can make one hundred car trailers per year and sell them for €2,500 each. It costs him €150,000 for the raw materials to build the one hundred trailers. He has invested €400,000 in the factory and equipment needed to produce the trailers, €200,000 from his own savings (on which he earned 10 percent interest) and €200,000 borrowed at 10 percent. Jack can work at a competing factory for €70,000 per year.

(i) 2 marks

What is Jack's total revenue for the year?

(ii) 2 marks

What are the explicit costs Jack incurs while producing one hundred trailers?

(iii) 2 marks

What are the total opportunity costs of producing one hundred boats (explicit and implicit)?

(iv) 2 marks

Is it truly profitable for Jack to operate his trailer factory? Explain.

(b) 5.3 marks

Define (i) variable cost (ii) average revenue and (iii) marginal revenue.

(c) 20 marks

The following table describes the production of Aran jumpers at a small factory on the Aran Islands. The firm is currently renting one machine for €100 per day. Each worker is also paid €60 per day. Copy this table into your answer book.

No. of workers	Output per day	Fixed Cost	Variable Cost	Total Cost	Marginal Product	Marginal Cost	Average Total Cost
0	0						
1	4						
2	10						
3	13						
4	15						
5	16						

(i) 12 marks

Fill in each column of the table.

(ii) 4 marks

What pattern do you see in marginal product? How might you explain it?

(iii) 4 marks

Explain the relationship between marginal product and marginal cost.

Question 5 (33.3 marks)

(a) 6 marks

What are the three conditions that characterize a competitive market?

(b) 3.3 marks

If a firm is in a competitive market, what happens to its total revenue if it doubles its output? Why?

(c) 16 marks

The following table contains information about the costs of tennis ball manufacturing at a factory in Germany. All data are per hour. Copy this table into your answer book.

Output	Total Revenue	Total Cost	Profit	Marginal Revenue	Marginal Cost
0		1,000			
1,000		2,000			
2,000		4,000			
3,000		7,000			
4,000		11,000			
5,000		16,000			

(i) 10 marks

Assuming tennis balls are sold for €3, complete the table.

(ii) 3 marks

What is the optimal level of output at this factory? What criteria did you use to determine the optimal level of output?

(iii) 3 marks

Is €3 per tennis ball, a long-run equilibrium price in the market for tennis balls and what will happen to the price in the long run?

(d) 8 marks

(i) 5 marks

What are the main characteristics of a monopoly?

(ii) 3 marks

What are the three sources of barriers to entry that allow a monopoly to remain the sole seller of a product?

Section B: Macroeconomics

Instructions: Answer ONE question from this section.

Question 6 (33.3 marks)

(a) 10 Marks

Using a well-labelled diagram, draw the full circular flow model for an open economy.

(b) 18 Marks

The table shows data drawn from the National Income and Expenditure Accounts.

GDP and GNP 2008 - 2009			
	2008	2009	% Change
GDP at Current Prices	€179,989m	€159,646m	-11.3%
GDP at Constant Prices	€179,989m	€166,345m	-7.6%
GNP at Current Prices	€154,672m	€131,241m	-15.1%
GNP at Constant Prices	€154,672m	€138,161m	-10.7%

- (i) **3 marks**
What is the percentage change in nominal GDP over 2008-2009?
- (ii) **3 marks**
What is the percentage change in real GDP over 2008-2009?
- (iii) **3 marks**
Calculate the implied inflation rate during 2008-2009.
- (iv) **3 marks**
What is the difference between GDP and GNP known as?
- (v) **3 marks**
Calculate the size of this difference in 2008 and 2009.
- (vi) **3 marks**
Discuss the difference between GDP and GNP in Ireland.

(c) 5.3 marks

List two reasons why GNP-per-capita may not be a reliable indicator of the quality of life in a country.

Question 7 (33.3 marks)

(a) 12 marks

- (i) 3 marks**
What does the Consumer price index (CPI) measure?
- (ii) 3 marks**
The CPI for January 2009 was 122.9, and the CPI for January 2010 was 118.1. Calculate the annual inflation rate to January 2010.
- (iii) 3 Marks**
List two possible problems with the accuracy of the Consumer Price Index as a measure of inflation.
- (iv) 3 Marks**
What is the difference between the CPI and the HICP?

(b) 21.3 marks

- (i) 4 Marks**
What is the percentage change in nominal GDP over 2008-2009?
- (ii) 4 Marks**
Explain the difference between nominal interest rates and real interest rates.
- (iii) 4 Marks**
Write down an equation that shows the link between nominal interest rates and real interest rates.
- (iv) 5.3 Marks**
Use this equation to help you calculate the real interest rates in this table:

Year	Nominal interest rate	Real interest rate	Inflation rate
2007	4%		3%
2008	3%		3%
2009	1%		- 3%
2010	1%		0%

(Please copy this table into your answer book)

- (v) 4 Marks**
What is the lowest possible value for the nominal interest rate?

Section C: The Real Economy in the Long Run

Instructions: Answer **Two** questions from this section.

Question 8 (33.3 marks)

- (a) **4 Marks**
Define productivity.
- (b) **10 Marks**
Why is productivity so important to long-run living standards?
- (c) **9 Marks**
List three factors that determine productivity in a country. Discuss one of these factors.
- (d) **10.3 Marks**
Briefly discuss two ways by which the Government might encourage more economic growth.

Question 9 (33.3 marks)

- (a) **6 Marks**
What is meant by investment? Explain how interest rates may affect the level of investment in an economy.
- (b) **12 marks**
Suppose a country decides to save a bigger share of the national income / output. Discuss the impacts that this would have on each of the following consumption, real interest rates, investment, capital stock future income output.
- (c) **15.3 marks**
You are given the following data about a hypothetical closed economy:
Consumption = €70bn; Direct taxes = €28bn; Government purchases = €20bn;
Transfer payments = €12bn; Investment = €20bn
 - (i) **3.3 marks**
Calculate national income (GDP) in this closed economy.
 - (ii) **3 marks**
Calculate personal disposable income.
 - (iii) **3 marks**
Calculate the value of private savings.
 - (iv) **3 marks**
Calculate the value of public savings.

(v) 3 marks

Calculate national savings.

Please show all calculations in your answer, including any savings equations.

Question 10 (33.3 marks)

(a) 3 marks

How is unemployment defined?

(b) 7 marks

List three methods of measuring unemployment in Ireland. Discuss one of these methods.

(c) 7 marks

(i) What is meant by frictional unemployment?

(ii) How might public policy help reduce frictional unemployment?

(d) 16.3 marks

Unemployment insurance benefits are usually paid for 26 weeks in the USA, but have been extended in some states to 99 weeks during the recession. Outline an argument for this extension and outline an argument against this extension of benefits.

Question 11 (33.3 marks)

(a) 3.3 marks

What is the principal function of money?

(b) 6 marks

Discuss how the quantity of money in the economy is measured.

(c) 8 marks

Explain carefully how the “money creation” process works in the commercial banking system.

(d) 4 marks

What factor determines the size of the money multiplier?

(e) 4 marks

Write out the quantity theory of money equation, as used in the classical theory of inflation. Explain the four terms in the equation.

(f) 8 marks

Using the quantity theory of money equation, explain what will happen over the long run in an economy where the money supply is growing at 5% pa, and where real output is growing at 2.5% pa.

Assume a constant velocity of money. Show all calculations.

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**Bachelor of Applied Science
in Food and Business Management**

**Introduction to Marketing
1.1.2**

Name: _____

ID No: _____

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**INTRODUCTION TO MARKETING
1.1.2**

Time Allowed: **2 Hours**

Lecturer: Mr. Ronan McArt
External Examiner: Dr. Christopher Strugnell
Head of Department: Ms. Amanda Mc Cloat

Instructions: **All students must complete Section 1 – 30 Marks.** Circle the answer you have chosen on the examination script. You must return the examination script with your answer book.

Students must answer two questions from Section 2 – 35 Marks each.

Section 1

1. Holidays are an example of which type of product offering?

- a. Physical product
- b. Service
- c. People
- d. Organisation
- e. Idea

2. The view that consumers will favour products that are available at highly affordable prices is consistent with which of the following concepts?

- a. Selling concept
- b. Product concept
- c. Production concept
- d. Marketing concept
- e. Societal marketing concept

3. USP stands for:

- a. unique selling proposition
- b. universal sales promotion
- c. unique service proposition
- d. undifferentiated sales proposal
- e. none of the above

4. Which of the following is not a characteristic of an entrepreneur?

- a. Desire for autonomy
- b. High social independence
- c. High tolerance for ambiguity
- d. Low propensity for risk taking
- e. All of the above are characteristics of an entrepreneur

5. Which of the following is an example of a public the organisation may interact with?

- a. Providers of financial services
- b. Government departments
- c. Media
- d. General public
- e. All of the above

6. Which of the following is a force within the micro-environment?

- a. Political
- b. Economic
- c. Social
- d. Technological
- e. None of the above

7. Which of the following is not a secondary source of information?

- a. Company accounts
- b. Government publications
- c. Census of population
- d. Eurostat
- e. Statistical Report of the Revenue Commissioners
- f. All of the above are secondary sources of information

8. Increases in the cost of living resulting from a general increase in the price level is known as:

- a. Inflation
- b. Interest rate
- c. Tax
- d. Import duty
- e. None of the above

9. Which of the following is not a secondary source of information?

- a. Company accounts
- b. Government publications
- c. Census of population
- d. Eurostat
- e. Statistical Report of the Revenue Commissioners
- f. All of the above are secondary sources of information

10. Which of the following is a geographic variable?

- a. Region
- b. City
- c. Postal district
- d. All of the above
- e. None of the above

11. Which of the following is not a demographic variable?

- a. Age
- b. Gender
- c. Income
- d. Attitudes
- e. All of the above are demographic variables

12. Which of the following is not an example of the aesthetics aspect of culture?

- a. Music
- b. Folklore
- c. Religion
- d. Tradition
- e. All of the above are examples of the aesthetics aspect of culture

13. Mass marketing is also known as:

- a. undifferentiated marketing
- b. differentiated marketing
- c. concentrated marketing
- d. niche marketing
- e. none of the above

14. Which of the following is a form of selective perception?

- a. Selective exposure
- b. Selective distortion
- c. Selective retention
- d. All of the above
- e. None of the above

15. Which of the following is not a possible direction for branding in the twenty-first century?

- a. Cultural branding
- b. Fusion branding
- c. Quaker branding
- d. Positional branding
- e. All of the above are possible directions for branding in the twenty-first century

16. The last group of product adopters are known as:

- a. Innovators
- b. Late majority
- c. Laggards
- d. Early adopters
- e. Early majority

17. Adding new markets with new products developed from new technology is known as:

- a. Diversification
- b. Market extension
- c. Remerchandising
- d. Replacement
- e. Reformulation

18. Demand is considered to be elastic when:

- a. a small change in price hardly changes the quantity demanded
- b. a change in price has no effect on the quantity demanded
- c. customers are price insensitive
- d. a small change in price changes the quantity demanded
- e. all of the above.

19. Consider a retailer who buys computers from a wholesaler. Each computer cost €600, and it is estimated that the cost of selling each computer, in terms of rent, wages and administration is €30 per computer. If the desired return on sales is 25%, the mark-up price would be:

- a. 800
- b. 840
- c. 850
- d. 1000
- e. 2520

20. Which of the following is not part of the promotions mix?

- a. Advertising
- b. Sales promotions
- c. Personal selling
- d. Pricing
- e. All of the above are part of the promotions mix

21. An approach to sales force structuring where each salesperson is assigned a geographical area is known as:

- a. Territorial structure
- b. Product structure
- c. Customer structure
- d. Location structure
- e. Hierarchical structure

22. An attempt to achieve favourable publicity for a product is known as:

- a. sponsorship
- b. sales promotion
- c. advertising
- d. public relations
- e. personal selling

23. Complete the marketing channel. Manufacturer, export agent, importer, _____ customer.

- a. Marketer
- b. Travel agent
- c. Wholesaler
- d. Retailer
- e. None of the above

24. Which of the following can be regarded as a service?

- a. Consultancy
- b. Car
- c. Bar of chocolate
- d. Pair of trainers
- e. Bag of salt

25. TQM stands for:

- a. total quantity management
- b. total quality management
- c. tangible quality material
- d. total quantity material
- e. none of the above

26. Investment by firms in operations in other countries is known as:

- a. international trade
- b. foreign direct investment
- c. capital market flows

- d. none of the above
- e. all of the above

27. A company that establishes its own export division is engaging in:

- a. indirect exporting
- b. foreign direct investment
- c. contract manufacturing
- d. direct exporting
- e. joint venture

28. Which of the following segmentation bases has little relevance in an industrial market?

- a. Industry
- b. Organisational characteristics
- c. Lifestyle
- d. Location of plant
- e. Purchasing

29. According to the BCG matrix a product with a high market share and low growth rate is known as:

- a. Star
- b. Question mark
- c. Cash cow
- d. Dog
- e. Problem child

30. Non-profit organisations use which of the following elements of the promotions mix?

- a. Advertising
- b. Personal selling
- c. Sponsorship
- d. Public relations
- e. All of the above

Section 2

Question 1

Discuss the Product Life Cycle Model and limitations associated with using it. Using an illustration to support your answer discuss in detail each stage of the Product Life Cycle model and the objectives for the marketing firm at each stage. Use company/product examples where appropriate with your answer at each stage.

Question 2

Discuss in detail; segmentation, the 4 bases for segmentation and the benefits to the marketing firm of accurately segmenting the market. Identify one car made by one automaker and one car made by another automaker. What customer segment would each car benefit and why?

Question 3

You currently work in the Marketing department of a Small-to-Medium Enterprise. Your employer does not understand marketing research. List the stages in the marketing research process and describe in as much detail as possible each stage of the process for your employer.

Question 4

What is 'Integrated Marketing Communications' (IMC)? Why would organisations choose to promote in this way? Provide a detailed example of a 360-degree marketing campaign.