

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

UNIVERSITY OF MALTA, MSIDA

MATRICULATION EXAMINATION
ADVANCED LEVEL
SEPTEMBER 2014

SUBJECT:	ECONOMICS
PAPER NUMBER:	I
DATE:	2 nd September 2014
TIME:	9.00 a.m. to 12.00 noon

Answer **FOUR** questions. **TWO** from **each** Section. All questions carry equal marks. This paper carries 60% of the global mark.

Section A

1. a) Discuss (separately) the concept of opportunity cost for individuals and for society as a whole. Describe the questions any resource allocation mechanism must answer. Explain how prices are determined in a market system. How and why may equilibrium price and quantity change in a competitive market? (11 marks)
- b) Assuming there is no outside intervention, explain why the price in a free market will not remain above or below equilibrium for long. If government decides to intervene in the market by imposing a minimum price, how does the market equilibrium change? Why may government want to intervene in this way? (6 marks)
- c) Consider the market for child care centres. Explain, theoretically, the implications on the market equilibrium of these two changes occurring simultaneously:
 - (i) an increase in the number of women working outside home, and
 - (ii) an increase in the number of firms attracted to the business of child care provision. (8 marks)
2. a) Define a consumer's budget constraint. What variables are assumed constant along a budget line? How is the budget constraint affected if this assumption no longer holds and any of these variables change? Illustrate your explanation with diagrams. (9 marks)
- b) With the aid of diagrams, explain the Law of Diminishing Marginal Utility. Could marginal utility be negative? Give an example. (8 marks)
- c) What condition will be satisfied when a consumer has chosen the combination of goods that maximises utility subject to a budget constraint? What happens if this condition is not satisfied? (8 marks)
3. a) What is the difference between the price elasticity of demand along a straight-line demand curve and the slope of that demand curve? What factors determine the size of the price elasticity of demand for a good? Specifically, how does each factor influence elasticity? (12 marks)
- b) Explain why price elasticity is virtually always negative while an income elasticity can be positive or negative. (6 marks)
- c) Explain the ways in which the cross-price elasticity helps us to distinguish between substitutes and complements among related goods and how closely the two goods are related. (7 marks)

4. a) With the aid of a diagram, explain the difference between the total output of a firm and the marginal product of labour at that firm. How are they related? Explain why the marginal product of labour first increases and then decreases as more and more workers are employed. (7 marks)
- b) Explain why the short-run average variable cost curve and average total cost curve typically have a U shape. Is it possible that long-run total cost (LRTC) can ever be greater than short-run total cost (SRTC)? Give reasons. (10 marks)
- c) Explain how the long-run average total cost curve is shaped for a firm that experiences diseconomies of scale over low levels of output, constant returns to scale over intermediate levels of output, and economies of scale over high output levels. Is this pattern of costs what one expects for a firm? Give reasons. (8 marks)
5. a) Explain the three characteristics that typify a perfectly competitive market. Why is the demand curve facing a perfectly competitive firm infinitely elastic? Is it profitable to enter a market in which a perfectly competitive industry presently in long-run equilibrium operates? (12 marks)
- b) What are the main factors that explain the existence of a monopoly? Why might the decision to shut down be different for a monopoly than for a perfectly competitive firm? (7 marks)
- c) Explain the features that a monopolistically competitive market shares with a perfectly competitive market. Are there any similarities between a monopolistically competitive market and a monopoly market? (6 marks)
6. a) What is market failure? Externalities and public goods are two examples of market failure. Describe two other main causes of market failure. (6 marks)
- b) What is an externality? Give one example each of a positive and a negative externality. What are the effects of positive and negative externalities in the absence of government intervention? (12 marks)
- c) What is a pure public good? How is a pure public good different from a private good? Is there any similarity between a public good and a positive externality? (7 marks)

Section B

1. a) What is the difference between GDP and GNP? What must occur for the value of GNP to be larger than that of GDP? (6 marks)
- b) What is the likely impact on national income of an increase in both export expenditure and investment? Discuss your answer within the context of the circular flow of income for an open economy. (9 marks)
- c) Discuss the costs and benefits associated with the process of economic growth. (10 marks)
2. a) Describe the main functions of money. (8 marks)
- b) Explain the process of credit creation. What are the implications of a large liquidity (reserve) ratio on the process of credit creation? (9 marks)
- c) Explain the important insight that can be obtained from the quantity theory of money with respect to the analysis of inflation. (8 marks)

3. a) Distinguish between inflation and stagflation. Describe the economic costs that persistently high rates of inflation are likely to generate. (8 marks)
- b) By making use of an appropriate diagram, explain the impact of a supply side shock, such as an increase in oil prices, on the equilibrium level of prices and output in the economy. (8 marks)
- c) Explain how demand side policies and supply side policies differ in their approach to tackle inflation. Describe two types of demand side policies and two types of supply side policies. Provide one example for each type of policy. (9 marks)
4. a) Explain two types of unemployment and provide one example of a policy that can be used to alleviate each type. (6 marks)
- b) What are the implications on output and employment of a deflationary gap? What policies could be implemented to close this deflationary gap? (9 marks)
- c) Describe the nature of the relationship between inflation and unemployment implied by the Philips curve. (10 marks)
5. a) Discuss the underlying relationship between the government budget deficit and the level of government debt. (8 marks)
- b) "The size of the budget deficit or surplus is influenced by the state of the economy." Discuss. (8 marks)
- c) Explain how the issue of crowding out limits the effectiveness of discretionary fiscal policy. Describe one factor that can influence the extent of crowding out which takes place. (9 marks)
6. a) Explain the meaning of terms of trade. Which factors can cause a change in the terms of trade? (6 marks)
- b) Describe in detail the three main components of the balance of payments. (10 marks)
- c) Discuss the benefits and costs associated with the creation of the single European market. (9 marks)

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SEPTEMBER 2014

SUBJECT: ECONOMICS
PAPER NUMBER: II
DATE: 3rd September 2014
TIME: 9.00 a.m. to 12.00 noon

Answer **THREE** questions, at least **ONE** from Section A and **ONE** from Section B. All questions carry equal marks. This paper carries 40% of the global mark.

Section A

Question 1

Suppose a firm hiring from a competitive labour market has the marginal revenue product schedule as given in the first two columns of the table below:

Labour	Marginal Revenue Product	Wage Rate	Total Labour Cost	Marginal Labour Cost
0	0			
1	20	6		
2	24			
3	28			
4	24			
5	28			
6	12			
7	6			

- (a) If this firm can hire labour competitively at a wage of €6, how many workers will it hire? Why? (5 marks)

Alternatively, suppose the firm must pay €6 to hire the first worker and must increase the wage rate by €2 to attract each successive worker, as shown in the third column of the table above.

- (b) On your booklets copy and fill in the third column of the table above. (3 marks)
(c) What is the total labour cost at each level of employment? What is the marginal labour cost at each level of employment? On your booklets copy and fill in the last two columns defined as Total Labour Cost and Marginal Labour Cost. (6 marks)
(d) What level of employment maximises this firm's profit? (6 marks)
(e) What wage rate will the firm pay to attract the profit-maximising number of workers? Compare this outcome with that in question (a). (7 marks)
(f) Why does the marginal revenue product differ between workers in different jobs? (6 marks)

Total: 33 marks

Question 2

Suppose a price-discriminating monopoly has segregated its market into two submarkets and can prevent resale between the two. Assume that its marginal cost is constant and equal to its average total cost of €8. The firm's demand schedule for the first group is given by the first two columns of the following table.

Output	Price	Total Revenue	MR
0	24		
1	22		
2	20		
3	18		
4	16		
5	14		
6	12		
7	10		
8	8		

- (a) Find the firm's total revenue schedule for this submarket and use this data to determine the marginal revenue schedule in this submarket. (6 marks)
- (b) What output level and price will maximise the firm's profit in this submarket? (5 marks)

The firm's demand schedule for the second group is given by the first two columns of the following table.

Output	Price	Total Revenue	MR
0	33		
1	30		
2	27		
3	24		
4	21		
5	18		
6	15		
7	12		
8	9		

- (c) Find the firm's total and marginal revenue schedules in this second submarket. What output level and price will maximise the firm's profit in this submarket? (7 marks)
- (d) Based on these prices, which submarket has the more elastic demand? (7 marks)
- (e) What is this firm's total economic profit? (8 marks)

Total: 33 marks

Question 3

A competitive firm's short-run cost information is shown in the table below.

Output	Marginal Cost	Average Variable Cost	Average Total Cost
0			
1	8	8	17
2	7	7.5	12
3	6	7	10
4	5	6.5	8.75
5	6	6.4	8.2
6	7	6.5	8
7	8	6.71	8
8	9	7	8.13
9	10	7.33	8.33
10	11	7.7	8.6

- (a) Using the information presented in the table above, explain how much the firm would produce if the market price is €5.25. (6 marks)

Price	Quantity Supplied, This Firm	Quantity Supplied, 2000 Firms	Quantity Demanded
€5.25			20,000
€6.25			18,000
€7.25			16,000
€8.25			14,000
€9.25			12,000
€10.25			10,000

- (b) On your booklet fill in the next (third) column to determine the market supply in this industry, assuming there are 2000 identical firms in the industry. (5 marks)

Further suppose that the market demand schedule for this industry is given by the last column in the table.

- (c) What is the equilibrium quantity in this market? (5 marks)
 (d) What is the equilibrium price in this market? (5 marks)
 (e) What are the resulting output, revenue, cost, and profit of the typical firm? (4 x 3 marks)

Total: 33 marks

Section B**Question 4**

An economy is currently in equilibrium. The following figures refer to elements in its national income accounts.

	€billions
Consumption (total)	90
Investment	8
Government expenditure	12
Imports	15
Exports	11

- (a) What is the current equilibrium level of national income? (5 marks)
- (b) What is the level of injections? What is the level of withdrawals? (5 marks)
- (c) Assuming that tax revenues are €1 billion, how much is the level of saving? (5 marks)
- (d) If GDP now rose to €140 billion and, as a result, the consumption of domestically produced goods rose to €100 billion, what is the value of the multiplier? (5 marks)
- (e) On the basis of your answer in (d) above and given an initial level of national income of €70 billion, now assume that spending on exports rises by €5 billion, spending on investment rises by €2 billion, whilst government expenditure falls by €3 billion. By how much will national income change? (6 marks)
- (f) Given this new level of national income, assume that full employment is achieved at a national income of €100 billion. Is there an inflationary or a deflationary gap? What is the size of this gap and how can it be closed? (7 marks)

Total: 33 marks

Question 5

According to the National Statistics Office, in 2013 expenditure on social security benefits (excluding health) rose by 4.1%, mostly resulting from increases in pensions in respect of retirement, social assistance and children's allowance. An increase in outlay was recorded for both contributory benefits and non-contributory benefits. This outlay on social security benefits made up 11.3% of the GDP.

According to Eurostat, in 2009 social protection expenditure (now including health care expenditure) represented 28.4% of the EU27's GDP. If one had to include healthcare expenditure, Malta's social protection benefits would amount to about 20% of GDP. In 2009, in the Eurozone, expenditure on social protection as a percentage of GDP rose by 2.7 percentage points.

- (a) Give two examples of contributory benefits, and two examples of non-contributory benefits. (4 marks)
- (b) Why does the Government need to step in to provide such benefits? (6 marks)
- (c) Describe the likely effect of the following trends on social security expenditure and GDP:
- an ageing population (4 marks)
 - the increased take-up of individual private pension plans (4 marks)
 - improved health care technologies (4 marks)
- (d) What are the likely causes of the increase in the proportion of social protection expenditure to GDP in the Eurozone during the economic crisis? (6 marks)
- (e) Would you expect developed countries to have a higher ratio of expenditure on social protection to GDP? (5 marks)

Total: 33 marks

Question 6

According to various economic analysts, major economies in Asia and Europe finished the first quarter of 2014 on a weak note, with key manufacturing surveys fuelling expectations policymakers may be forced to act in coming months to prop up faltering growth.

Surveys showed that China's vast manufacturing industry contracted for the third month in a row, increasing the pressure on the Chinese authorities to stimulate the economy. In the Euro area manufacturing surveys tend to confirm that the recovery is taking place only gradually, with one survey showing that factories were once more cutting prices.

Eurozone inflation fell to just 0.5% in February 2014, its lowest since November 2009 and well below the European Central Bank's target of just below 2 per cent. The ECB is expected to keep monetary policy unchanged in the short term despite calls for it to act to support growth. According to European Commission officials, prolonged low inflation would make it harder to correct imbalances in the Eurozone.

According to Eurostat, unemployment in the Euro area declined slightly in February 2014, although it remained at 11.9%.

- (a) Why would factories need to further cut prices? (4 marks)
- (b) Why does the ECB set an inflation target? (4 marks)
- (c) What could happen to economic growth if inflation is deemed too high? (6 marks)
- (d) Are there any negative effects on unemployment and economic growth if inflation is too low? (7 marks)
- (e) What monetary policy tools could the ECB use to support growth? (6 marks)
- (f) What could authorities do to stimulate an economy? (6 marks)