

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD
UNIVERSITY OF MALTA, MSIDA
MATRICULATION EXAMINATION
ADVANCED LEVEL
MAY 2015

SUBJECT:	ECONOMICS
PAPER NUMBER:	I
DATE:	18 th May 2015
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) Explain, with the help of a production possibility frontier, how the opportunity cost of producing different combinations of goods can be measured. (5 marks)
 - b) Explain, with the help of a diagram, how the price of a product moves to a new equilibrium following an increase in its supply that is greater than an increase in its demand. (5 marks)
 - c) Explain, with the help of a diagram, the effect of reduced price of fuel on the use of public transport. (6 marks)
 - d) Suppose that the government regulates the prices of beef and pork and sets them below their market-clearing levels. Explain why shortages of these goods will develop and what factors will determine the sizes of the shortages. Briefly explain what will happen to the price of chicken. (9 marks)

2.
 - a) Explain the significance of three basic assumptions about people's preferences for one bundle of goods over another which form the basis of consumer theory. (6 marks)
 - b) With the help of a diagram, explain the difference between an individual demand curve and a market demand curve. (5 marks)
 - c) By constructing your own table of figures, define and illustrate the concepts of total utility and marginal utility. When marginal utility starts declining, does total utility also start to decline? (7 marks)
 - d) Explain the equal marginal principle for total utility maximisation and why utility is maximised when it holds. (7 marks)

3.
 - a) Explain the importance of price elasticity of demand for business decision-making. (5 marks)
 - b) With the use of diagrams, illustrate and explain the relationship between total revenue and
 - (i) elastic demand curves
 - (ii) inelastic demand curves. (8 marks)
 - c) With reference to the relevant type of elasticity of demand, explain the terms:
 - (i) inferior good
 - (ii) complementary good. (6 marks)
 - d) Studies have shown that the demand for tobacco tends to be highly price inelastic. Evaluate the view that governments can best reduce smoking by substantially increasing taxes on cigarettes. (6 marks)

4. a) What is the law of diminishing returns? Explain why it is reasonable to believe that the 'law of diminishing returns' is true. (6 marks)
- b) Draw a diagram of the (i) average variable cost curve, (ii) the average total cost curve and (iii) the marginal cost curve. Explain the shapes of these cost curves. (6 marks)
- c) If the firm's average cost curves are U-shaped, why does its average variable cost curve achieve its minimum at a lower level of output than the average total cost curve? (8 marks)
- d) What is the difference between economies of scale and returns to scale? (5 marks)
5. a) Explain, with the help of a diagram, the relationship between the market demand curve and the firm's demand curve in a perfectly competitive market. Why would a competitive firm that incurs losses choose to produce rather than shut down? (6 marks)
- b) Explain the difference between short-run equilibrium and long-run equilibrium in monopolistic competition. (5 marks)
- c) "Perfect competition is a market more desirable than monopolistic competition." Discuss this statement. (6 marks)
- d) Suppose a monopolist is producing at a point at which its marginal cost exceeds its marginal revenue. How should it adjust its output to maximize profit? Would the same adjustment in output be necessary for a competitive firm to maximise its profit if it also incurs a level of marginal cost that is greater than its marginal revenue? (8 marks)
6. a) Demand for labour is said to be 'derived demand'. What is meant by 'derived demand'? Discuss the impact of technology on the demand for labour. (7 marks)
- b) Why might a labour supply curve be backward bending? (6 marks)
- c) Explain how wages are determined in a perfectly competitive labour market. (6 marks)
- d) Some occupations such as economists receive higher wages than other occupations such as waiters. Why do you think this is so? (6 marks)

Section B

7. a) Define GDP and discuss the limitations of this measure within the context of assessing a country's well-being. (9 marks)
- b) Explain, by making use of an appropriate diagram, the different components which together constitute the circular flow of income of an open economy. (8 marks)
- c) Capital formation is one of the main determinates of economic growth. Provide three examples of policies which could be implemented by policy makers in order to stimulate investment and thus increase capital formation. (8 marks)
8. a) Explain, by also using an appropriate diagram, the impact of a higher level of aggregate real disposable income on the level of aggregate consumer spending. (8 marks)
- b) Discuss three factors that can cause the consumption function to shift. (9 marks)
- c) Explain why investment is generally one of the most volatile components of GDP. (8 marks)
9. a) Distinguish between the measurements of money supply known as M1 and M2. (6 marks)
- b) Explain the relationship between the money multiplier and the process of credit creation. Assume the presence of commercial banks. (10 marks)
- c) Explain what would happen to the equilibrium interest rate in the economy if the central bank were to undertake contractionary open market operations. (9 marks)

10. a) Explain the difference between frictional, structural and cyclical unemployment. (6 marks)
b) Describe, utilizing the aggregate demand and aggregate supply model, what would need to occur for an economy to experience a period of stagflation. (10 marks)
c) Distinguish between the short run and the long run Philips curve. (9 marks)
11. a) Explain the difference between the government budget deficit and national government debt. Are the two inter-related in any way? (8 marks)
b) Explain, by also making use of an appropriate diagram, how an expansionary fiscal policy aimed at stimulating the economy, such as higher government spending, may generate an inflationary gap. What is the role of the income multiplier in the generation of the inflationary gap? (10 marks)
c) What is meant by supply side policies? Provide three examples of such policies. (7 marks)
12. a) Distinguish between the law of absolute advantage and the law of comparative advantage. Use examples to aid your explanation. (8 marks)
b) Describe the components of the balance of payments. What must occur for the balance of payments to be in surplus? (8 marks)
c) What would happen to the euro/dollar exchange rate if European investors suddenly deemed American assets as being too risky thus reducing their demand for US assets. Explain your answer within the context of the demand and supply of euro under a floating exchange rate system. (9 marks)

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UNIVERSITY OF MALTA, MSIDA

MATRICULATION EXAMINATION
ADVANCED LEVEL
MAY 2015

SUBJECT: ECONOMICS
PAPER NUMBER: II
DATE: 19th May 2015
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**

The demand schedules for two products are given in the table below:

Price (Euro)	Demand for Product A (units/ year)	Demand for Product B (units/ year)
5.50	435	485
5.30	445	511
5.10	458	537
4.90	473	563
4.70	490	589
4.50	510	615
4.30	532	641
4.10	557	667
3.90	584	693
3.70	613	719

- Sketch the two demand curves for Products A and B. (6 marks)
- Do these two demand curves follow the law of demand? Why or why not? (4 marks)
- Compute the price elasticities of demand for each price level for both products. Comment on your findings. (8 marks)
- By using the data above, comment on the relationship between price elasticity, total revenue and marginal revenue (note: there is no need to work out marginal revenue). (6 marks)
- Explain why a profit-maximising monopolist could sell Product B at any of the price levels above €4.30 but might have a problem selling Product A at any price level. (5 marks)
- You are now told that the two products are substitutes. Would you expect positive or negative cross-price elasticity? Why? (4 marks)

Total: 33 marks

Question 2

A good can be produced in an economy with the following functions:

Market Demand: $P = 100 - 0.5Q$

Marginal Cost: $MC = 4Q + 50$

where Q is quantity and P is price.

- What would the equilibrium quantity and price be under perfect competition? State any assumptions you used to derive your answer. (6 marks)
- Assume instead that the product is to be produced by a monopolist and that the marginal revenue function is given by $MR = 100 - Q$. Find the equilibrium quantity supplied and price. (6 marks)
- Compare the equilibrium quantity and price in part (a) to those in part (b). Comment on the difference between the two, if any. (6 marks)
- What is the relationship between marginal cost and marginal revenue at the profit maximising output of the monopolist? Would this hold under perfect competition? (6 marks)
- Is a monopoly always harmful to economic welfare? Why or why not? (5 marks)
- Give an example of an industry where a natural monopoly is likely to be observed. Explain why. (4 marks)

Total: 33 marks

Question 3

Assume that government decides to protect a local industry from competition by granting a single operator a legal monopoly. The demand and supply functions of the industry are:

$$Q^D = 2250 - 160P \text{ and } Q^S = 160P$$

The table below is based on these functions.

Price (Euro)	Demand (units/ year)	Supply (units/ year)
5.00	1450	800
5.50	1370	880
6.00	1290	960
6.50	1210	1040
7.00	1130	1120
7.50	1050	1200
8.00	970	1280
8.50	890	1360
9.00	810	1440

- Draw both the demand and supply curve on the graph paper provided. (4 marks)
- Determine the equilibrium price and quantity of the market. (5 marks)
- Estimate the total welfare generated by the market in the form of consumers' surplus and producers' surplus. (6 marks)

- d. Assume that now the government imposes a market price of €5.75. Determine the difference between demand and supply, if any, and explain what is likely to happen in the market. (6 marks)
- e. For situation (d) above, estimate the total market welfare by calculating the consumers' surplus and the producers' surplus. (6 marks)
- f. Assume that instead of free competition, government allows a maximum supply of 1000 units. What will the effect on the market be? (6 marks)

Total: 33 marks

Section B

Question 4

Assume that an economy can be represented by:

$$Y = C + I + G$$

$$C = a + b(Y - T)$$

Where Y is aggregate demand
 C is consumption expenditure
 I is investment
 G is government expenditure
 T is taxation

- a. Find the equilibrium income of the economy if $I = 160$, $G = 200$, $T = 0$, $a = 30$ and $b = 0.80$. (5 marks)
- b. Show that in equilibrium (as per question (a) above), savings are equal to investment in this economy. (5 marks)
- c. Assume that government can no longer sustain a fiscal deficit and wishes to raise taxes in a lump sum manner (i.e. not proportional to income) so as to achieve a balanced budget. What will this do to national income Y and consumption C? (5 marks)
- d. Assume instead that government can raise taxes on income according to the function $T = -10 + 0.25Y$. How can government balance the budget in this situation? (5 marks)
- e. Is the income multiplier effect largest in question 4(a), question 4(c) or in question 4(d)? Why? (9 marks)
- f. Is a large income multiplier effect desirable? (4 marks)

Total: 33 marks

Question 5

The Central Bank of Malta's Release of Monetary Statistics (December 2014) has a section on the contribution to euro area monetary aggregates. The following data was provided for Sept 2014:

MONETARY AGGREGATES	Sep-14
Currency issued	810.7
Overnight deposits	7,824.60
Deposits redeemable at notice up to 3 months	113.5
Deposits with agreed maturity up to 2 years	4,783.2
Marketable instruments	121.7

Please turn the page.

- a. Compute the value of:
- (i) Narrow money (M1) (3 marks)
 - (ii) Intermediate money (M2) (3 marks)
 - (iii) Broad money (M3) (3 marks)
- b. Explain what you understand by overnight deposits. (4 marks)
- c. Give two examples of marketable instruments. (4 marks)
- d. What are the functions of the Central Bank of Malta with respect to the money supply? Can it use money supply as a policy tool? (6 marks)
- e. Would you expect the trends in money supply to be similar to trends in GDP? Why or why not? (5 marks)
- f. Would you expect the trends in money supply to be similar to trends in inflation? Why or why not? (5 marks)
- Total: 33 marks

Question 6

In the European Commission's winter forecasts published in 2015, Malta's economy is expected to continue growing supported by an increased participation of the female workforce. The same forecasts expect:

- unemployment to remain below 6%
 - GDP growth to remain strong relative to the rest of the euro area
 - budget deficit to fall below 2% of GDP
 - despite the projected pick-up in import-intensive domestic demand, Malta's current account balance is projected to remain in surplus, benefitting from a depreciation of the euro against other major currencies, which is seen to boost exports of the services sector and a moderate recovery in the electronics sector
 - downside risks are linked to higher-than-expected subsidies to Malta's new public transport service provider.
- a. Why is the increased labour force participation considered to be a key driver of economic growth? (5 marks)
- b. While Malta continues to register an unemployment rate which is below the Eurozone average, it is never forecast to reach a level close to 0%. Why is this the case? (5 marks)
- c. What is the Eurozone fiscal deficit limit? Why should countries watch closely their budget deficit? (5 marks)
- d. In the local context, why is domestic demand often referred to as being "import-intensive"? (5 marks)
- e. How does a depreciation of the euro boost exports of services? What services are likely to increase their contribution to GDP as the euro depreciates? (6 marks)
- f. A number of European countries subsidise their public transport services. What is the rationale behind such a government choice? (7 marks)
- Total: 33 marks