MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

UNIVERSITY OF MALTA, MSIDA

MATRICULATION EXAMINATION
ADVANCED LEVEL
MAY 2016

SUBJECT:	ECONOMICS
PAPER NUMBER:	I
DATE:	9th May 2016
TIME:	9.00 a.m. to 12.05 p.m.

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

Section A

1. a) Suppose you decided to attend a school where the tuition fee amounts to €2,000 per year. Applying the concept of opportunity cost, explain your considerations in taking such a decision. (5 marks)

   b) Suppose the government faces a trade-off between spending money on more unemployment benefits and improving transportation facilities. Use a production possibility curve to explain and illustrate this trade-off. (5 marks)

   c) Technological advances have reduced the cost of producing mobile phones. Using supply and demand diagrams, show and discuss the effect of this on:
   (i) the market for mobile phones,
   (ii) the market for software on mobile phones,
   (iii) the market for landline telephones. (9 marks)

   d) Using a supply and demand diagram, explain the effect of government's imposition of a minimum price in the tobacco market. What determines the size of this effect? (6 marks)

2. a) Explain how the market demand curve for a good is derived. What causes the market demand curve to shift? (6 marks)

   b) Given a household's budget line:
   (i) What happens to the relative price and the slope of the household's budget line, if the price of one good changes?
   (ii) What happens to the household's real income and budget line, if a household's income money changes but prices do not change? (7 marks)

   c) To increase marginal utility, you must decrease consumption (everything else held constant). Is this statement correct? Explain why. (6 marks)

   d) Suppose that the marginal utility of good A is four times the marginal utility of good B, but the price of good A is only two times the price of good B. Is this point consumer equilibrium? If not, what will occur? (6 marks)

3. a) Define the price elasticity of demand. Suppose a straight-line downward sloping demand curve shifts rightward. Is the price elasticity of demand higher, lower or the same between any two prices on the new (higher) demand curve? (6 marks)

   b) How might you determine whether mobile phone manufacturers and landline telephone manufacturers are competitors? (6 marks)

   c) A business person reads that the price elasticity of demand for the product they sell is 1.25. If the person wishes to increase revenue should they increase or reduce price? Explain.
(6 marks)

   d) 'If the government wishes to tax certain goods, it should tax goods that have inelastic rather than elastic demand'. What is the rationale for this statement? (7 marks)

4. a) Explain how the marginal product and the average product change as the labour employed increases. (5 marks)

   b) What is the law of diminishing returns? What does the law of diminishing returns imply for the shape of the marginal cost curve? (7 marks)

   c) What does a firm's long-run average cost curve show? How is it related to the firm's short-run average total cost curve? (7 marks)

   d) What are economies and diseconomies of scale? What do they imply for the shape of the long-run average cost curve? (6 marks)

5. a) Why might a firm operating under perfect competition continue to produce in the short-run even though the market price is less than its average total cost? (6 marks)

   b) Describe three key attributes of monopolistic competition. Draw and explain a diagram to show the long-run equilibrium in a monopolistically competitive market. How does this equilibrium differ from that in a perfectly competitive market? (9 marks)

   c) Explain why a monopoly does not have a supply curve.
       (i)   Can a monopolist determine both the price it chooses to charge and the amount it sells?
       (ii) Why or why not? (4 marks)

   d) Draw a demand curve and the corresponding marginal revenue curve for a firm selling in a monopoly and another firm selling in perfect competition. Explain which demand curve is the more elastic. What does this mean for the marginal revenue curve? (6 marks)

6. a) Explain how competitive profit-maximizing firms decide how many workers to hire. Give two examples of events that could shift the demand for labour. (6 marks)

   b) Explain how individuals decide about the labour-leisure trade-off. Give two examples of events that could shift the supply of labour. (6 marks)

   c) Show and discuss the effect of each of the following events on the market for labour in the tablet manufacturing industry:
       i)   The government buys tablets for all students in secondary education;
       ii)   More university students graduate in engineering and computer science;
       iii) Computer firms build new manufacturing factories. (6 marks)

   d) Wages are sometimes pushed above the level that brings supply and demand into balance. Explain the effect of above-equilibrium wages on the labour market. Give two reasons for above-equilibrium wages. (7 marks)

Section B

7. a) Distinguish between real and nominal GDP. Which of the two GDP measures would you utilise in order to assess solely the behaviour of output production? Why?　　(7 marks)
    b) Based on your understanding of the circular flow of income for an open economy, how would a simultaneous increase in savings and a decline in exports of goods and services affect the level of gross national income?　　(9 marks)
    c) Technological progress is considered to be one of the main pillars of economic growth. Identify three policies which can be implemented in order to speed up the pace of technological progress.　　(9 marks)

8. a) Describe how an increase in household wealth would affect the consumption function?　　(7 marks)
    b) Explain, by making use of the appropriate diagram, what would need to occur to both output and employment for an economy to be generating an inflationary gap.　　(8 marks)
    c) How would an increase in investment affect the level of national income? Explain within the context of the multiplier principle. Would this effect be larger or smaller if the marginal propensity to consumer were to increase?　　(10 marks)

9. a) According to the quantity theory of money, what would the ECB need to do in order to increase Nominal GDP?　　(7 marks)
    b) Explain the process of money creation. What would the effect on the overall supply of money be if the reserve ratio were to fall?　　(9 marks)
    c) Explain how the ECB can utilise open market operations in order to lower the equilibrium interest rate in the economy.　　(9 marks)

10. a) Distinguish between inflation, deflation and hyperinflation. Which Consumer Price Index would you assess if you wanted to study the behaviour of inflation across European Countries?　　(7 marks)
    b) Discuss, using examples, two types of unemployment and describe the human costs generally associated with high levels of unemployment.　　(9 marks)
    c) Explain the negative relationship between inflation and unemployment implied by the short run Philips curve. Does this relationship vary as we move from the short run to the long run?　　(9 marks)

11. a) Explain what is implied by a government budget deficit. Does the performance of the economy have any effect on the resultant government budget?　　(8 marks)
    b) Why is an increase in the national debt considered to be undesirable?　　(8 marks)
    c) Explain, by also making use of the appropriate diagram, how the government could stimulate output growth without raising the price level. Provide one example of a policy which can be implemented in order to achieve this goal.　　(9 marks)

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12. a) Explain, by also making use of examples, the difference between tariffs and quotas.

(7 marks)

b) Describe the components of the balance of payments. What must occur for the balance of payments to be in deficit? Can such a deficit be sustained indefinitely? (9 marks)

c) Explain, by including the appropriate diagram, what would happen to the Euro/Dollar exchange rate if the United States had to increase their interest rates. Assume a floating/free market exchange rate system. (9 marks)

SUBJECT:	ECONOMICS
PAPER NUMBER:	II
DATE:	10th May 2016
TIME:	9.00 a.m. to 12.05 p.m.

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 that the data in the table below represents the market demand and supply schedules for commodity X over a range of prices.

Price (€)	Demand (units/ year)	Supply (units/ year)
15	100	70
16	96	76
17	92	82
18	88	88
19	84	94
20	80	100
21	76	106
22	72	112

a. Plot the demand curve and supply curve. Find the market equilibrium price and equilibrium quantity. (5 marks)
b. Calculate total spending on the commodity at each price shown. (5 marks)
c. Suppose the initial price was €19. What would be the percentage change in quantity demanded if price were to be reduced by €1? Would your answer be different if you started at any other price?
(5 marks)
d. Calculate the own-price elasticity of demand for all prices and interpret any changes in elasticity values, if any. (6 marks)
e. Why is knowledge of the own-price elasticity of demand of a product relevant for a company's pricing strategy of that product? (5 marks)
f. Suppose that a tax of €10 per unit is imposed on firms supplying the commodity. Thus, for example, if a firm charges €25 per unit to buyers, the government takes €10 while the firm received €15. Draw the supply curve after the tax is imposed and find the new market equilibrium price and equilibrium quantity. Why is the new equilibrium quantity different from the previous one?

(7 marks)

Total: 33 marks

Question 2

A firm producing picture frames faces the following average cost and average revenue table:

Output	Average Cost (Euro)	Average Revenue (Euro)
1	6.4	24.0
2	6.0	23.0
3	5.9	22.0
4	6.0	21.0
5	6.3	20.0
6	6.8	19.0
7	7.5	18.0
8	8.5	17.0
9	9.7	16.0
10	11.1	15.0

a. Construct a table to show the Total Cost (TC), Marginal Cost (MC), Total Revenue (TR) and Marginal Revenue (MR) at each level of output. (7 marks)
b. Plot the Average Cost (AC), MC, the Average Revenue (AR) and MR figures in a graph. (4 marks)
c. Using MC and MR figures, find the profit-maximising output. (4 marks)
d. Using TR and TC figures, confirm your answer in (c). (4 marks)
e. Under which circumstance/s would it still make sense for a firm which is making losses on each output sold, to still continue in production? (7 marks)
f. "The firm under perfect competition can earn abnormal profits in the short run but only normal profits in the long run." Discuss this statement. (7 marks)

Total: 33 marks

Question 3

A firm in construction is considering the number of workers it needs to employ on a project it needs to start. It faces the following cost and output figures:

Number of workers	Cost of wages to the employer in Euro per hour	Total output per hour (TPP)
1	3	10.0
2	4	22.0
3	5	32.0
4	6	40.0
5	7	45.5
6	8	50.0
7	9	52.0
8	10	52.0

Assume that output sells at Euro 3 per unit.

a. Construct a table to show the Total Cost of Labour (TC_L), the Marginal Cost (MC_L), the Total Revenue Product (TRP_L) and the Marginal Revenue Product (MRP_L). (10 marks)
b. How many workers will the firm employ in order to maximize profits? Explain your answer.
(6 marks)
c. What will its total hourly wage bill be at this level of employment? (3 marks)
d. How much hourly revenue will it earn at this level of employment? (3 marks)
e. Assuming that the firm faces other fixed costs at the rate of Euro 30 per hour, how much hourly profit will it make at the point of equilibrium? (5 marks)
f. Assume that the workers now formed a union which negotiates as one entity on behalf of all workers. What is the maximum hourly wage rate which the firm would accept to offer without incurring an hourly loss? Explain your reasoning. (6 marks)

Total: 33 marks

Section B

Question 4

In October 2015 the European Central Bank (ECB) held its Governing Council meeting in Malta, as a member of the euro zone. At this meeting, the ECB's President commented that falling commodity prices and emerging market concerns were weighing on the euro zone's economic prospects. However, the ECB left interest rates and its money-printing programme unchanged and agreed to review what more it could do to tackle the threat of weak inflation in December 2015. In this regard, in December the ECB commented that it would need to look at expanding monetary stimulus in order to raise inflation closer to its target and boost the euro zone's economic recovery.

Additionally, in a direct call to euro zone governments to add their weight to a still tentative recovery in the region, the ECB President stressed that monetary policy "should not be the only game in town". "Fiscal policies should support the economic recovery, while remaining in compliance with the EU's fiscal rules," the ECB said.

a. What is the role of the European Central Bank, and how does it differ from the role of the Central Bank of Malta? (5 marks)
b. Do falling commodity prices (e.g. oil) affect the euro zone's economy positively or negatively? Provide the reason/s behind your answer. (6 marks)
c. The ECB talks about "emerging market concerns", indicating there might be an economic downturn in countries such as China, India, Brazil and Russia and Africa. How could a downturn in such far-off countries possibly affect the euro zone economy, and subsequently the Maltese economy? Explain. (6 marks)
d. What does the ECB use interest rates and money-printing programmes for? (5 marks)
e. Why does weak inflation pose a threat to an economy, and what ECB inflation target is being referred to in the text above? (6 marks)
f. The ECB statement has argued that monetary policy should be supported by fiscal policies when addressing economic issues. What does this statement mean? (5 marks)

Total: 33 marks

Question 5

In its February 2016 forecast of the Maltese economy, the European Commission (EC) said that, while real GDP growth was forecast to reach 4.9% in 2015, it will be moderating to 3.9% this year and will slide further to 3.4% in 2017. In the euro zone, growth is projected to increase to 1.7 % this year from 1.6% last year and to climb to 1.9% in 2017. Malta currently has one of the highest economic rates of the 28 member states.

According to the EC, Malta's current robust economic growth is boosted by the ongoing construction of the new power plant and the injection of millions of EU funds in the economy last year. Although the economy is predicted to slow down, the cost of goods and services is expected to rise. Inflation is forecast to return to above 2% by 2017 on the back of higher energy inflation. Additionally, according to the forecast, job creation is expected to remain stable while unemployment should remain low.

The EC reported progress in Malta's efforts to curb its deficit and debt levels. This year the deficit is forecast to further decrease to 1.1% of GDP. From 66.9% of GDP in 2014, the debt ratio was also projected to fall further in 2015 to 64% of GDP. Debt is expected to continue its downward path to reach 58.7% by 2017.

a. The European Commission (EC) issues regular forecasts and reviews of the Maltese economy. Why does the EC have such a strong interest in the Maltese economy? (5 marks)
b. In what way does investment in infrastructure (e.g. power plant) affect the GDP of a country? (5 marks)
c. As an economy booms, one would expect inflation to increase. What could explain the declining or quite low Maltese inflation in recent times, despite such a "current robust economic growth"? (6 marks)
d. The EC is predicting stable job creation and low unemployment. If job creation is stable, shouldn't unemployment continue to decline, technically reaching zero? Explain your reasoning. (6 marks)
e. What is the link between Malta's fiscal deficit and debt levels? (6 marks)
f. If Malta is still registering a deficit, how is the debt level falling? (5 marks)

Total: 33 marks

Question 6

In a press release by the National Statistics Office (NSO) on the gainfully occupied population as at August 2015, it was reported that data collected by the Employment & Training Corporation (ETC) showed that registered full-time employment increased by 4.5% when compared to August 2014, while registered part-time employment as a primary job rose by 2.7%. Over the same period of one year, the labour supply (excluding part-timers) increased by 3.2%, reaching 177,262. This was mainly attributed to an increase in the full-time gainfully occupied population and a drop in registered unemployment.

In another NSO press release, it was reported that the registered unemployed decreased by about 1,600 when comparing January 2016 to January 2015. This data was based on registrations at the ETC under the Part I register. The decrease over the same period amongst Part II unemployment register at the ETC was about 70.

Overall, decreases in registered unemployment were recorded among all age groups. Registrants for work decreased irrespective of how long they had been registering. The largest decrease was recorded among persons who had been registering for over one year. The number of persons with a disability who were registering for work also decreased.

The registered unemployment rate in August 2015 stood at 2.8% of the labour supply (excluding part-time employment), and varied from 3.2% among men to 2.0% among women.

a. The labour supply increased because of an "increase in the full-time gainfully occupied population" and "a drop in registered unemployed". Explain why both these two factors affect the labour supply, and give an example of each factor. (6 marks)
b. Why does an unemployed person need to register at the ETC? (5 marks)
c. What are the disadvantages for an economy of increasing unemployment benefits? (5 marks)
d. "The largest decrease was recorded among persons who had been registering for over one year." Why is this decrease particularly positive for any economy? (6 marks)
e. Give an example of a government initiative/ measure that might have led to the reduction in the number of persons with disability registering for work (i.e. by either finding a job or leaving the labour supply). (6 marks)
f. In Malta it is often argued that the labour participation is relatively low compared to our European counterparts because of the lower female participation rate. However, the press release above talks about a very low 2% female registered unemployment rate. Are these two statements contradicting themselves? Why? Why not? (5 marks)

Total: 33 marks