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MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

**ADVANCED MATRICULATION LEVEL
2023 SECOND SESSION**

SUBJECT:	**Economics**
PAPER NUMBER:	I
DATE:	30th August 2023
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

Answer TWO questions from this section.

1. a. How does the production possibility curve illustrate the microeconomic issues of choice and opportunity cost? (5)

    b. What is the difference between a movement and a shift in the demand curve for full fat milk? (10)

    c. Explain and demonstrate graphically:

    i. the effect of an increase in the price of denim fabric on the equilibrium price and quantity of denim jeans; and (5)
    ii. the effect of a change in consumer preferences in favour of health and wellness on the equilibrium price and quantity of gym membership fees. (5)

    (Total: 25 marks)

2. a. What are the potential benefits and drawbacks of price floors and ceilings? (10)

    b. What is the difference between a necessity good and a luxury good? In this respect, how does the nature of the good affect price elasticity of demand? (10)

    c. How can firms use income elasticity of demand to predict consumer demand? (5)

    (Total: 25 marks)

3. a. Which law is explained by marginal utility theory? Provide a definition of this law and give **ONE** practical example. (5)

    b. Name the cost in relation to the type provided in the definition below. Illustrate your answer with the relevant diagram.
    i. The increase in total cost from producing one more unit. (2)
    ii. Total cost less total variable cost. (2)
    iii. Total fixed cost divided by the level of output. (2)
    iv. Total cost less total fixed cost divided by the level of output. (2)
    v. Total cost divided by the level of output. (2)

    c. Distinguish between economies and diseconomies of scale. Mention **TWO** examples for **each** type that occur in real life business situations. (10)

    (Total: 25 marks)

    Please turn the page.

4. a. Outline **THREE** characteristics underlying perfect competition and **THREE** characteristics related to monopolistic competition. (6)

    b. How are profits maximized under perfect competition in the short run? What type of profits can be made? (7)

    c. Can supernormal profits exist in the long run under perfect competition and monopolistic competition? Explain your answer by using relevant diagrams. (12)

    (Total: 25 marks)

5. a. What is price discrimination? In which market structure is it mainly used? Provide **TWO** examples. (10)

    b. What is deadweight loss? (10)

    c. Product differentiation and branding are very important in monopolistic competition, as they are the key to a firm's success. Explain this statement. (5)

    (Total: 25 marks)

6. a. How does normal profit differ from supernormal profit? (7)

    b. What does a price war attempt to achieve in a highly competitive market? Who benefits? Consumers or firms? (10)

    c. Discuss the advantages and disadvantages to consumers when firms decide to cooperate rather than compete under an Oligopoly market structure. (8)

    (Total: 25 marks)

SECTION B

Answer TWO questions from this section.

7. a. Distinguish between Gross Domestic Product (GDP) and Gross National Income (GNI). Can GDP be higher than GNI? (7)

    b. As GDP per capita grows, quality of life also improves. Discuss. (8)

    c. Outline the likely impact on nominal GDP (positive or negative) in the following situations. Explain your reasoning in **each** case:
        i.   A big company in the gaming sector that used to export gaming services to Germany decides to leave Malta to relocate to the UK. (2)
        ii. Maltese oil importers witness an increase in the price of oil due to energy shortages. Volumes imported are assumed to remain the same. (2)
        iii. The reopening of the Chinese economy following the pandemic leads to an increase in Chinese tourists visiting Malta. (2)
        iv. A substantial upward revision to the collective agreement of public officials. (2)
        v.   An increase in Euro zone interest rates set by the European Central Bank and resulting in an increase in bank lending rates. (2)

    (Total: 25 marks)

8. a. How could an increase in investment affect the level of national income? In your answer, make reference to the multiplier. (8)

    b. What is the consumption function? Distinguish between a pivot and a shift of the consumption function. (7)

    c. Briefly describe the expected effect on overall consumption of the following shocks:
        i. a decline in global equity prices, leading to a decrease in household wealth; (2)
        ii. a decrease in net migration as a significant number of migrants previously residing in Malta went back to their home country; (2)
        iii. an increase in remote work; (2)
        iv. an increase in bank interest rates; and (2)
        v. an increase in prices of grain products like bread, cereal and pasta at supermarkets. (2)

(Total: 25 marks)

9. a. What is monetary policy? (8)

    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)

    c. "Inflation is always and everywhere a monetary phenomenon." *Milton Friedman, 1963.* Discuss, referring to the quantity theory of money in your answer. (8)

(Total: 25 marks)

10. a. Do you think that an increase in Government debt is always bad? Mention **TWO** cases when the Government may need to increase its debt. (6)

    b. What is the difference between government budget deficit and government debt? Evaluate the impact of an ageing population on public deficits and public debt. Mention **TWO** remedies to counteract the impacts you mentioned. (12)

    c. The Government notices that economic growth is weak and below potential output, and that inflation is at 1%, which is below the 2% target. You have been approached to provide your advice on what the Government can do to reduce the deflationary gap. Given your knowledge on the tools of fiscal policy, what policy do you deem appropriate? Identify **ONE** potential negative repercussion of the policy you proposed. (7)

(Total: 25 marks)

11. a. Distinguish between frictional, structural, and seasonal unemployment and provide **ONE** example of a policy that the government can implement to reduce **each** of these three types of unemployment. (9)

    b. Explain the relationship between inflation and unemployment as outlined by the Phillips curve. Is it possible for the unemployment rate to increase while inflation is also increasing? (8)

    c. Over the period 2011-2016, the Maltese economy grew by an average of 5.1% compared to the EU-average of 1.1%. A key contributor to this growth was an increase in the working age population, which grew by 5.4% compared to the EU-average, which decreased by 1%. Discuss **TWO** benefits and **TWO** costs associated with higher growth in the working age population. (8)

(Total: 25 marks)

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12. a. Describe the main components of the Balance of Payments. (8)

    b. Mention **THREE** factors that can improve the goods and services account of the balance of payments. (8)

    c. What are the implications of a persistent deficit in the current account for Malta? (9)

(Total: 25 marks)

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SUBJECT:	**Economics**
PAPER NUMBER:	II
DATE:	31st August 2023
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

1. Table 1 represents the market demand and supply schedules for commodity Z over a range of prices.

Table 1

Price (€)	Demand (units/ year)	Supply (Units/year)
20	200	140
21	190	150
22	180	160
23	170	170
24	160	180
25	150	190
26	140	200
27	130	210
28	120	220

a. Plot the demand and supply curves. Find the market equilibrium and equilibrium quantity. (6)

b. Suppose the initial price was €25. What would be the percentage change in quantity demanded if prices were to be reduced by €1? Would your answer be different if you started at any other price? (6)

c. Calculate the own-price elasticity of demand for **all** prices and interpret any changes in elasticity values, if any. Why is knowledge of the own-price elasticity of demand of a product relevant for a company's pricing strategy for that product? (12)

d. Assume that the Government imposes a sales tax of €2 per unit. 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 one in (a) above? (9)

(Total: 33 marks)

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2. A firm producing gaming laptops faces the following average cost and average revenue table:

Table 2

Output	Average Cost (€)	Average Revenue (€)
5	448	1800
10	420	1750
15	413	1700
20	420	1650
25	441	1600
30	476	1550
35	525	1500
40	596.8	1450
45	690	1400
50	800	1350

a. Calculate the total costs (TC), the total revenue (TR), marginal cost (MC) and the marginal revenue (MR) for **all** levels of output. (7)

b. Plot the Average Cost (AC) and the Average Revenue (AR) in one graph and the Marginal Revenue (MR) and the Marginal Cost (MC) in a separate graph. (5)

c. At which level of output should the firm produce to be most profitable? How much profit will the firm earn in this case? Highlight the area of the graph which represents the profit made. (9)

d. Is the profit maximising level of output allocative and productive efficient? Explain your answer and plot the relevant curves on the graph paper provided. (7)

e. If average revenues at **each** level of output fell by 5%, explain what would happen. How would this affect the firm's viability to operate? (5)

(Total: 33 marks)

3. Suppose that the labour and capital units required by a manufacturing firm to produce a given level of output of commodity A are as follows:

Table 3

Output Unit	Labour Unit	Capital Unit
1800	24	240
2880	48	240
6328	72	240
10800	96	240
15760	120	240
20736	144	240
24696	168	240
27648	192	240
29920	216	240
31800	240	240

The price of capital is €3600 per unit, while the price of labour is €4200 per unit.

a. Construct a table showing the total cost, the variable cost and the fixed cost at **each** level of output. Use your calculations to plot the total cost, variable cost and fixed cost curves. (9)

b. Compute and plot the average and the marginal cost. (7)

Suppose that commodity A sells for €72 per unit of output.

c. At what level of output will the firm produce? What would be the firm's total profit? (5)

d. In what type of market structure does the firm operate? Is the level of output deduced in part (c) likely to be maintained over the long run? Explain your answer. (6)

e. Suppose that this firm invents a new technology which reduces its marginal costs. What happens to its output? Does this lead to a change in the price it charges or the profit it makes? Explain your answer. (6)

(Total: 33 marks)

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SECTION B

4. The Maltese economy grew strongly by 6.9% in 2022, driven by domestic demand and export of services, benefiting from the further recovery in tourism. Growth is forecast to moderate to 3.9% in 2023, as high inflation affects household disposable incomes and consumption. GDP growth is then set to reach 4.1% in 2024, supported by continuing net migration flows. Sizeable government measures helped to keep energy prices unchanged in Malta. They are expected to remain in place also in 2023 and 2024. As a result, the general government deficit stood at 5.8% in 2022, among the highest in the EU. It is expected to gradually decrease in 2023 and 2024. Thanks to robust GDP growth, public debt is forecast to remain below 60% of GDP.

Table 4

Indicators	2022	2023	2024
GDP growth (%, yoy)	6.9	3.9	4.1
Inflation (%, yoy)	6.1	5.4	2.8
Unemployment (%)	2.9	2.9	2.9
General government balance (% of GDP)	-5.8	-5.1	-4.5
Gross public debt (% of GDP)	53.4	54.8	56.1
Current account balance (% of GDP)	1.6	3.8	4.1

Reference: European Commission (2022), Autumn 2022 Economic Forecast for Malta.

a. In being part of the European Union, there are fiscal rules which Malta must adhere to. Given the above figures in Table 4, is Malta in line with these rules? Explain your answer. (8)

b. "…Thanks to robust GDP growth, public debt is forecast to remain below 60% of GDP." Why is the European Commission crediting GDP growth to the fact that public debt is projected to remain below the 60% of GDP threshold over the forecast horizon? Are there other ways which countries can use to reduce their public debt to GDP ratio? Discuss. (9)

c. What could theoretically explain the Commission's projection that gross public debt as a ratio to GDP is set to increase over these two years relative to 2022? Explain your answer. (6)

d. "…Growth is forecast to moderate to 3.9% in 2023, as high inflation affects household disposable incomes and consumption. GDP growth is then set to reach 4.1% in 2024, supported by continuing net migration flows."
    Explain why and how:
    i.   high inflation affects household disposable income, consumption, and GDP; and (5)
    ii. net migration flow is expected to support the Maltese economy. (5)

(Total: 33 marks)

5. According to the National Statistics Office (NSO), in April 2023, the annual inflation rate as measured by the Harmonised Index of Consumer Prices (HICP) was 6.4 per cent, down from 7.1 per cent in March 2023.

   The highest annual inflation rates in April 2023 were recorded in Food and non-alcoholic beverages (11.4 per cent), and Furnishings, household equipment and routine household maintenance (8.3 per cent). On the other hand, the lowest annual inflation rates were registered in Clothing and footwear (0.5 per cent) and Communication (1.3 per cent).

   The twelve-month moving average rate for April 2023 stood at 6.9 per cent.

   Reference: National Statistics Office (2022), Retail Price Index: November 2022. NSO News Release 233/2022 was published on 21 December 2022.

   a. The National Statistics Office produces two measures of inflation, the Harmonised Index of Consumer Prices (HICP) and the Retail Price Index (RPI). What reasons could explain potential differences between the two indices? Which measure is regarded to be a better measure of domestic inflation and why? Which measure is better suited for comparing Malta's inflation rate developments with those in other EU countries? (11)

   b. From the above data is Malta in line with the price stability as defined by the European Central Bank? Explain. (8)

   c. Briefly review the measures taken by the Government of Malta to address inflation. Also, identify the measures taken by the European Central Bank to address Euro zone inflation. Have the above measures been successful? Explain. (8)

   d. Will the recent hikes in inflation affect Malta's competitiveness? Explain your reasoning. (6)

   (Total: 33 marks)

   Please turn the page.

6. Table 5 below shows data on Consumption (C) and Income (Y) for a closed economy without government. Investment (I) is exogenous and fixed at €160 million per year.

Table 5

Income (€ million)	Consumption (€ million)
0	400
280	600
560	800
840	1000
1120	1200
1400	1400
1680	1600
1960	1800
2240	2000
2520	2200
2800	2400
3080	2600

a. Calculate aggregate demand at **each** level of income and find the equilibrium level of income. (10)

b. Using the data provided in Table 5 above, derive the consumption function. What is the marginal propensity to consume, and what value does it take in this case? (8)

c. Discuss the implication of a downward change in the marginal propensity to consume of 0.2, on the marginal propensity to save and on GDP. (6)

d. Calculate the value of the income multiplier coefficient in this economy following an injection of €80 million in the form of investment. What would be the change in equilibrium income? (9)

(Total: 33 marks)