



SUBJECT:	Economics
PAPER NUMBER:	I
DATE:	11 th May 2020
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) Identify the points of efficiency and inefficiency on a production possibility curve. (5)
 - b) Explain the effect of each of the following on the demand for new computers:
 - i) The price of computers falls. (5)
 - ii) Total income in the economy increases. (5)
 - c) Explain and demonstrate graphically:
 - i) the effect of a heavy frost in Florida on the equilibrium price and quantity of oranges. (5)
 - ii) the effect of an improvement in technology in a car producing plant on the equilibrium price and quantity of cars. (5)

(Total: 25 marks)
 2. a) Discuss **TWO** likely effects of government imposing (i) a maximum price and ii) a minimum price. Give **ONE** practical example for each. (8)
 - b) Taxes on particular goods discourage their consumption. Economists say that such taxes 'distort consumer demand'. In terms of elasticity of demand, what sort of goods would you choose to achieve the following objectives?
 - i) collect a large amount of tax revenue,
 - ii) discourage consumption of harmful commodities. Provide a detailed justification for your answers. (12)
 - c) Cross price elasticity of demand between pork and beef is positive. Is this statement true or false? Give an explanation for your answer. (5)
- (Total: 25 marks)**

3. a) What factors determine a consumer's choice of goods? What is the condition that must be satisfied in equilibrium? (5)
- b) What is the relevance of the law of diminishing marginal product to costs of production in the short run? (10)
- c) What do you understand by returns to scale? How do a series of short run average cost curves relate to the long run average cost curve? (10)
- (Total: 25 marks)**
4. a) Show how a perfectly competitive firm and a monopolist maximize profits in the short run. (8)
- b) Compare the long-run equilibrium of monopoly with that of perfect competition. How do output, costs, price and consumer welfare compare? (11)
- c) Provide **TWO** circumstances where monopoly may offer efficiency advantages over competition. (6)
- (Total: 25 marks)**
5. a) What are the similarities and differences between monopolistic competition and perfect competition? (12)
- b) What is oligopolistic interdependence? Why is this non-existent under monopolistic competition? (5)
- c) What do you understand by collusion? Provide **TWO** examples. (8)
- (Total: 25 marks)**
6. a) What is economic profit? (5)
- b) What is the marginal revenue product of labour? What does the firm do when the marginal revenue product of labour is less than its wage? Describe **ONE** factor that increases the marginal revenue product of labour. (12)
- c) 'Unions can raise money and real wages in a particular industry, but the result will be less employment'. Evaluate this statement by referring to the elasticity of demand for labour. (8)
- (Total: 25 marks)**

SECTION B

Answer **TWO** questions from this Section.

7. a) Describe the various methods that can be utilized to measure aggregate GDP. In what way does GDP differ from GNP (or GNI)? (8)
- b) Discuss **FOUR** limitations of using the GDP measure as an indicator for the standard of living of a country's citizens. (8)
- c) Describe **THREE** determinants of long run economic growth and for each determinant provide an example of a policy that can be implemented by policy makers in order to accelerate the process of long run economic growth. (9)
- (Total: 25 marks)**
8. a) What does the slope of the consumption function represent and what is its relation with the income multiplier effect? (8)
- b) Discuss **THREE** determinants of aggregate investment behaviour. (7)
- c) Explain, by utilizing the Keynesian income multiplier model, the difference between a deflationary gap and an inflationary gap. (10)
- (Total: 25 marks)**
9. a) Distinguish between the measurements of money supply known as M1, M2 and M3. (7)
- b) i) Explain, assuming the presence of commercial banks, the process of credit creation.
ii) Describe the impact a decline in the reserve (or liquidity) ratio would have on the overall level of money supply in the economy. (9)
- c) Describe the tools that a Central Bank has at its disposal to undertake monetary policy. (9)
- (Total: 25 marks)**
- 10 a) Explain, using **TWO** examples, the difference between Structural and Frictional unemployment and provide an example of a policy that can be implemented to reduce each type. (7)
- b) Distinguish between demand-pull and cost-push inflation and explain which of these two causes of inflation is associated with the occurrence of stagflation. (10)
- c) Based on your understanding of the Phillips curve relation is it possible for the inflation rate and the unemployment rate to increase simultaneously? Explain why. (8)
- (Total: 25 marks)**

Questions continue on the next page

11. a) Distinguish between merit and public goods and provide **ONE** example for each type of good. (8)
- b) Explain the difference between national debt and a government budget deficit and provide **ONE** explanation as to why a high level of national debt is generally considered undesirable. (8)
- c) Explain, via the application of the aggregate demand and aggregate supply model, how the government could stimulate economic growth without causing an increase in the price level. Provide an example of a policy which can be implemented by the government in order to achieve this goal. (9)
- (Total: 25 marks)**

12. a) Explain the difference between quotas, tariffs and export subsidies. Provide **ONE** explanation as to why the government may wish to implement such policies. (8)
- b) Describe the components of the balance of payments. Explain what the likely impact on the balance of trade of the Maltese economy would be if the Euro had to appreciate against the Chinese Yuan. (8)
- c) Explain the difference between a fixed exchange rate system and a floating (flexible) exchange rate system. Is there a limit to how long a country can sustain a balance of payments deficit under a fixed exchange rate system? (9)
- (Total: 25 marks)**



SUBJECT: **Economics**
 PAPER NUMBER: II
 DATE: 12th May 2020
 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. Suppose that the supply schedule of a traditional Maltese delicacy in a particular month is the following:

Price of One Maltese Delicacy	Quantity of Maltese Delicacies supplied ('000s)
€0.60	2000
€0.55	1900
€0.50	1800
€0.45	1700
€0.40	1600
€0.35	1500
€0.30	1400
€0.25	1300
€0.20	1200
€0.15	1100

Question continues on next page

These traditional Maltese delicacies can only be sold in Malta. The Maltese demand schedule for Maltese delicacies in a particular month is as follows:

Price of One Maltese Delicacy	Quantity of Maltese Delicacies demanded by Maltese ('000s)
€0.60	1000
€0.55	1100
€0.50	1200
€0.45	1300
€0.40	1400
€0.35	1500
€0.30	1600
€0.25	1700
€0.20	1800
€0.15	1900

- a. Plot the demand and the supply curve. Find the market equilibrium price and equilibrium quantity. (6)

Now suppose that traditional Maltese delicacies can be sold in Italy as well. The Italian demand schedule for Maltese delicacies in a particular month is as follows:

Price of One Maltese Delicacy	Quantity of Maltese Delicacies demanded by Italians ('000s)
€0.60	200
€0.55	400
€0.50	600
€0.45	800
€0.40	1000
€0.35	1200
€0.30	1400
€0.25	1600
€0.20	1800
€0.15	2000

- b. What is the demand schedule for traditional Maltese delicacies now that Italians can also buy them? Plot the demand and the supply curves that illustrate the new equilibrium price and quantity of traditional Maltese delicacies. Explain how the equilibrium outcome changes relative to the case where they cannot sell in Italy? (9)
- c. Calculate and interpret the price elasticity of demand for the Maltese market and for the Italian market at each level of output. Briefly discuss the reasons why there may be different elasticities between the Italian and the Maltese market? (11)
- d. Suppose that the Government introduces a profits tax on Maltese bakers selling these Maltese delicacies. Discuss the potential market effects brought about by the imposition of this tax, clearly highlighting market responses between the short- and the long-run. (7)

(Total: 33 marks)

2. Suppose that the labour and capital units required by a local plant manufacturing generic pharmaceutical products are as follows:

Output Unit	Labour Unit	Capital Unit
450	6	60
720	12	60
1581	18	60
2700	24	60
3939	30	60
5184	36	60
6174	42	60
6912	48	60
7479	54	60
7950	60	60
8301	66	60
8550	72	60
8775	80	60

The price of capital is €900 per unit, while the price of labour is €1,050 per unit.

- a. Construct a table for the average and marginal cost curves and plot them. (6)
- b. Construct a table for the total cost, variable cost and fixed cost curves and plot them. (8)
- c. What do you understand by the law of diminishing marginal product? Does the above data conform to the law of diminishing marginal product? Explain your answer using numerical illustrations. (4)

Question continues on the next page

Assume that this factory operates in a perfectly competitive market where the price is €18 per unit of output.

- d. How many units of output will the manufacturer produce? What would the profit be in this case? Is this profit likely to be maintained in the long-run? Explain your answer. (Hint: round to 1 decimal place) (5)
- e. Suppose that the price of the fixed input increases by €50 per unit. What would happen in this case? Explain your answer by means of a diagram. (5)
- f. What would happen if suddenly technology deteriorates and as a result capital becomes less productive? And what if instead labour becomes less productive? Explain your answer. (5)

(Total: 33 marks)

3. The following table contains data on the costs and revenues of a designer manufacturing firm.

Output (units/month)	Price Received per unit (€)	Total Cost
10	81	402
20	72	651
30	63	847
40	54	1116
50	45	1614
60	36	2442
70	27	3700
80	18	5493

- a. Calculate the marginal cost and the marginal revenue for every level of output. (8)
- b. What is the profit-maximising level of output? Confirm your answer using MC and MR, and TC and TR. (6)
- c. Is average profit also maximized at the profit-maximising level of output? Discuss. (6)
- d. Would the firm be maximising its profits if it chooses to maximize revenue? Why? (4)
- e. Some economists argue that profit maximisation is no longer relevant and that firms are seeking to be more socially responsible in their behaviour. What are your views on this statement? Do you think that profit maximisation is still a realistic economic objective for firms? (9)

(Total: 33 marks)

SECTION B

4. According to News Release 205/2019 published on 18 December 2019, the National Statistics Office (NSO) reported that in November 2019, the annual rate of inflation as measured by the Harmonised Index of Consumer Prices (HICP) was 1.3 per cent, down from 1.4 per cent in October 2019.

The Restaurants and Hotels Index had the largest upward impact on annual inflation, while the Furnishings, Household Equipment and Routine Household Maintenance Index had the largest downward impact.

The twelve-month moving average rate for November stood at 1.5 per cent while the monthly inflation rate for the same period stood at -3.0 per cent.

Moreover, it was also reported that in October 2019, the annual rate of change registered by the Maltese HICP All-Items Index was 1.4 per cent, 0.7 percentage points higher than the 0.7 per cent registered for the Euro Area.

Reference: *National Statistics Office (2019). Harmonised Index of Consumer Prices: November 2019.*
https://nso.gov.mt/en/News_Releases/

- a. The National Statistics Office produces two measures of inflation. Name the **TWO** measures of inflation and highlight the differences between the two indices. (8)
- b. When it comes to the Harmonised Index of Consumer Prices, NSO produces three different measures of inflation: the annual rate of inflation, the twelve-month moving average rate and the monthly inflation rate. Briefly explain how these measures are computed. Which measure do you think truly reflects the general price level in Malta, if any? Discuss. (11)
- c. Do you think that there is a relationship between the labour market and the inflation rate in Malta? Discuss. (6)
- d. Inflation could partly be the result of a booming economy. By making reference to the circular flow of income model, discuss the mechanisms behind this relationship. (8)

(Total: 33 marks)

Questions continue on next page

5. The table below summarizes the outlook for the Maltese economy for 2019 and 2020 as projected by the Ministry for Finance, the European Commission and the Central Bank of Malta.

	Central Bank of Malta ^a		European Commission ^b		Ministry for Finance ^c	
	2019	2020	2019	2020	2019	2020
Real Economic Activity (% change)						
GDP	5.1	4.1	5.0	4.2	5.0	4.3
Private consumption expenditure	5.0	4.1	4.2	3.8	4.6	4.0
Government consumption expenditure	10.9	6.3	12.7	3.6	13.5	4.9
Gross fixed capital formation	12.2	3.8	10.0	9.5	11.7	9.7
Exports of goods and services	1.2	1.6	1.7	1.8	1.8	1.6
Imports of goods and services	2.4	1.5	2.6	2.1	2.7	2.0
Contributions to real GDP growth (in percentage pts)						
Final domestic demand	6.3	3.7	5.8	4.2	6.4	4.5
Net exports	-1.1	0.4	-0.7	0.0	-0.7	-0.2
Changes in inventories	0.0	0.0	-0.1	0.0	-0.7	0.0
Labour market (% change)						
Total employment	5.0	4.0	4.0	3.0	4.8	4.1
Unemployment rate (% of labour supply)	3.4	3.5	3.6	3.5	3.5	3.5
Prices (% change)						
HICP	1.5	1.6	1.6	1.7	1.7	1.6

^a Source: Central Bank of Malta Economic Projections 2019-2022 (2019:4). Published in December 2019.

^b Source: European Commission Autumn 2019 Economic Forecasts for Malta. Published in November 2019.

^c Source: Ministry for Finance Draft Budgetary Plan 2020. Published in October 2019.

- Why is it important for these institutions to issue regular forecasts and reviews of the Maltese economy? (6)
- Use the forecasts presented in the table above to briefly comment on the outlook for the Maltese economy for 2019 and 2020. Outline the main reasons for differences in the forecast provided by the three institutions. (10)
- All three institutions expect economic growth to ease in 2020 relative to 2019. Nonetheless, the Central Bank of Malta and the European Commission are expecting the general price level to marginally increase by 0.1 percentage point. On the contrary, the Ministry for Finance is expecting the general price level to marginally decline in 2020 when compared to 2019. What is the relationship between economic growth and the general price level? What might explain the differences in the outlook produced by the three institutions? (6)

- d. The Central Bank of Malta noted that Brexit may derail its baseline forecasts. Looking at two scenarios, one where the UK would have access to a free-trade or customs-union-like agreement with the EU, and another where following unsuccessful negotiations trade would default to WTO rules, the Central Bank estimates that Malta's GDP would decline by around 0.19% and 0.39% in the short-to medium-term. Discuss how Brexit affects the Maltese economy. (7)
- e. The Central Bank noted that political uncertainty is another factor posing a downside risk. Discuss. (4)

(Total: 33 marks)

6. a. In a closed economy with no government, the equilibrium level of income is €200 million. The full employment level of income is €230 million. To reach full employment, an injection of €10 million is required. Determine the
 (i) size of the national income multiplier;
 (ii) the marginal propensity to consume and
 (iii) the marginal propensity to save. (8)
- b. Suppose that the marginal propensity to save increases to 0.4 and that the marginal rate of tax is equal to 0.2. What impact will this have on the marginal propensity to consume and on the multiplier? (6)

Suppose that we introduce government so that the key economic relationships are represented by the following equations:

GDP identity:	$Y = C + I + G$	Equation 1
Consumption function:	$C = 20 + 0.7 (Y - T)$	Equation 2
Tax equation:	$T = tY$	Equation 3
	$I = 80$	Equation 4
	$G = 50$	Equation 5
	$T = 35$	Equation 6
	$t = 0.2$	Equation 7

Where:

- Y = National Income
 C = Consumption Expenditure
 I = Investment Expenditure
 G = Government Final Consumption Expenditure
 T = income tax
 t = marginal tax rate

All variables are measured in millions of euro.

- c. Determine the final expenditures and leakages from the above equations. (5)
- d. Use the above equations to find the equilibrium value of income (Y) and the value of the income multiplier. (10)
- e. Show that in this economy, savings is equal to investment. (4)

(Total: 33 marks)