



SUBJECT:	Economics
PAPER NUMBER:	I
DATE:	26 th April 2018
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) 'Chocolate consumption is soaring as people in developing countries are getting wealthier. Cocoa farmers are ramping up production to keep the chocolate flowing but the price of cocoa keeps rising.'

Source: The Wall Street Journal, February 13, 2014.

How does the Production Possibility Frontier illustrate:

- i) the limits to cocoa production? (2)
- ii) the trade-off that is necessary to increase cocoa production? (2)
- iii) the effect of increased chocolate consumption on the marginal cost of producing cocoa? (4)

- b) Using supply and demand diagrams, explain the effect on the demand curve, the supply curve, the equilibrium price and the equilibrium quantity of each of the following cases:

- i) The market for newspapers (assuming it is not available online for free). (3)
Case 1: The salaries of journalists go up.
Case 2: There is a big news event, which is reported in the newspaper. (3)
- ii) The market for Sloman economics textbook.
Case 1: Your lecturer makes it required reading for all of his or her students.
Case 2: Printing costs for textbooks are lowered by the use of synthetic paper.
- iii) The market for donuts. (3)
Case 1: People realize how fattening donuts are.
Case 2: People have less time to prepare themselves a healthier dessert.

- c) Suppose that rent controls which have been imposed in a particular city in the past are now being abolished. As a result of the elimination of rent controls, market rents will prevail. Assume that all rental units are identical and so are offered at the same rent.

- i) Use a diagram to show the effect on the rental market of the elimination of rent controls. What will happen to the quantity of supplied rental housing? What would the expected impact be on the quality of rental housing? (4)
- ii) Suppose that to address the plight of residents who may be unable to pay the market rent, an income-supplement will be paid to all low-income households equal to the difference between the old controlled rent and the new market rent. Use a diagram to show the effect of the income-supplement policy on the market. What effect does it have on the market rent and quantity of rental housing supplied in comparison to your answers to part (i) above? (4)

(Total: 25 marks)

2. a) Suppose that Gabriel buys five new textbooks during his first year at university at a cost of €80 each. Used books cost only €50 each. When the bookstore announces that the price of new books will be increased to €88 each and the price of used books will be increased to €55 each, Gabriel’s father offers him €40 extra.
- i) How do these changes affect Gabriel’s budget line, if at all? Complement your explanation with a diagram with new books on the vertical axis. (6)
 - ii) If, instead, the price of used books falls from €50 to €40, how is the budget line affected? (4)
- b) The following questions concern consumer choice and utility.
- i) ‘Marginal utility increases if consumption decreases (everything else held constant)’. Is this statement correct? Explain your answer. (4)
 - ii) Explain how consumers allocate their limited incomes among the billions of goods and services that exist. (4)
- c) What is the relationship between the individual demand curves and the market demand curve for a good? How would marginal utility and market demand be affected by a rise in the price of a complementary good? (7)

(Total: 25 marks)

3. a) A recent study determined the following elasticities for the latest Samsung smartphone:

Price elasticity of Demand: -1.5

Income elasticity of demand: 3

The supply of Samsung smart phones is elastic. Based on this information, are the following statements true or false? Explain your reasoning.

- i) A 10 per cent increase in the price of a Samsung smartphone will reduce the quantity demanded by 15 per cent. (5)
- ii) An increase in consumer income will increase the quantity of Samsung smartphones sold. (5)

- b) Consider the cross-price elasticities of demand for the following goods. For example, the cross price elasticity of demand for phones with respect to batteries is -0.34.

Good	Cross-price elasticities of demand
Phones and batteries	-0.34
Kellogs and Nestle cereal	+0.63
Butter and margarine	+1.54
Butter and bread	-0.75

- i) Explain the sign of each of the cross-price elasticities. What does it imply about the relationship between the two goods in question? (4)
 - ii) Compare the absolute values of the cross-price elasticities and explain their magnitudes. Why is the cross-price elasticity of Kellogs and Nestle cereal less than the cross-price elasticity of butter and margarine? (6)
- c) Nicolette usually pays a price between €5 and €7 per gallon for ice cream. Over that range of prices, her monthly total expenditure on ice cream increases as the price decreases. What does this imply about her price elasticity of demand for ice cream? (5)

(Total: 25 marks)

4. a) Roughly sketch on the booklet (not on the graph paper), the average product curve and the marginal product curve. Explain how it is possible for a firm to experience simultaneously an increasing average physical product but a diminishing marginal physical product. (6)
- b) i) Explain how the total product of labour curve and the marginal product of labour curve are affected when productivity growth is positive and therefore each worker produces more output. Illustrate your answer with a diagram. (4)
 ii) Explain how the marginal cost curve and the average total cost curve are affected when productivity growth is positive and therefore each worker produces more output. Illustrate your answer with a diagram. (4)
 iii) Why would a company invest in training to improve the productivity of its workers even if labour costs are increasing over time? (4)
- c) In the following cases, do you think the price elasticity of supply is perfectly elastic or perfectly inelastic? Use diagrams to illustrate your answer.
 i) Last summer, an increase in demand for luxury cruises led to a sharp increase in the sales price of a cabin on the luxurious Royal Caribbean Cruise. (3)
 ii) The price of a kilowatt of electricity is the same during periods of high electricity demand as during periods of low electricity demand. (4)

(Total: 25 marks)

5. a) Evaluate and state whether each of the following statements is true. Explain the reasoning for your answer.
 i) A profit-maximizing firm in a perfectly competitive industry should select the output level at which the difference between the market price and marginal cost is greatest. (4)
 ii) An increase in fixed cost lowers the profit-maximizing quantity of output produced in the short run. (4)
- b) Draw a diagram to analyse the profit-maximising level of output and price for a monopolist that operates a rail service. How is the monopolist's profit affected if the demand curve becomes less elastic (steeper MR curve)? (7)
- c) 'In the long run, there is no difference between monopolistic competition and perfect competition.' With the help of a diagram, discuss whether this statement is true, false or ambiguous with respect to the following:
 i) The price charged to consumers. (2)
 ii) The average total cost of production. (2)
 iii) The efficiency of the market outcome. (2)
 iv) The typical firm's profit in the long-run. (6)

(Total: 25 marks)

6. a) Using diagrams, explain how each of the following will affect the demand for labour for a competitive firm:
 i) A fall in the demand for a firm's product. (3)
 ii) Adoption of working practices that improve labour productivity. (3)
 iii) An increase in the wage rate. (3)
- b) A recent proposal to remedy the shortage of primary school teachers is to increase the wage rate. Under what conditions would you expect this proposal to be effective at reducing the shortage? (8)
- c) Discuss **FOUR** determinants of the elasticity of demand for labour with respect to changes in the wage rate. (8)

(Total: 25 marks)

SECTION B

Answer **TWO** questions from this Section.

7. a) Describe the various components which together constitute the circular flow of income of an open economy. (8)
- b) Define GDP and discuss whether this measure of aggregate economic activity is a good indicator of the level of standard of living within a country. (8)
- c) Discuss the main costs and benefits associated with the process of economic growth. (9)
- (Total: 25 marks)**
8. a) What does the slope of the consumption function represent and what is its relation to the income multiplier effect? (8)
- b) Explain, by making reference to the accelerator principle, why investment is generally the most volatile component of aggregate expenditure. (8)
- c) Explain how a contractionary fiscal policy, such as a decrease in government spending, could generate a deflationary gap. (9)
- (Total: 25 marks)**
9. a) Describe the **THREE** main motives for holding money. (7)
- b) Explain the process of credit creation. What are the implications of a decline in the reserve (or liquidity) ratio on the process of credit creation? (9)
- c) Explain, with the aid of the appropriate diagram, what the impact on the equilibrium interest rate would be if the Central Bank implements expansionary open market operations. (9)
- (Total: 25 marks)**
- 10 a) Distinguish between inflation, deflation and hyperinflation. What are the economic costs generally associated with persistently high rates of inflation? (8)
- b) Explain the difference between demand pull and cost-push inflation. Which of these two causes of inflation is associated with the occurrence of stagflation? (9)
- c) Based on your understanding of the Phillips curve is it possible for the unemployment rate and the rate of inflation to decline simultaneously? Explain. (8)
- (Total: 25 marks)**
- 11.a) Distinguish between structural and frictional unemployment and provide **ONE** example of a policy that the government can undertake in order to reduce each type of unemployment. (7)
- b) Explain the difference between national debt and a government budget deficit. Why is a high level of national debt viewed as a burden? (9)
- c) Explain, utilizing the aggregate demand and aggregate supply model, the impact on the economy of a successful supply-side tax reduction. Provide **TWO** further examples of supply side policies. (9)
- (Total: 25 marks)**

- 12.a) Explain, by making use of examples, the difference between the law of absolute advantage and the law of comparative advantage. (8)
- b) Describe **THREE** methods that can be implemented by the government in order to restrict trade, and provide an explanation as to why the respective authorities would want to implement such policies. (8)
- c) Describe the components of the balance of payments. Explain what the likely impact would be on the balance of trade of the Maltese Economy if the British pound had to depreciate against the Euro. (9)

(Total: 25 marks)

SUBJECT:	Economics
PAPER NUMBER:	II
DATE:	27 th April 2018
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 data in the table below represents the market demand and supply schedules for Maltese bread over a range of prices.

Price (€ cents)	Demand (units/year)	Supply (units/year)
20	300	50
40	250	100
60	200	150
80	150	200
100	100	250
120	50	300

- Plot the demand curve and the supply curve. Find the market equilibrium price and equilibrium quantity. (6)
- Calculate and interpret the price elasticity of demand at each output level. (6)
- Mention **FOUR** factors that influence the supply of Maltese bread. (4)
- Suppose that the Government introduces a subsidy of €0.20 per unit of local produce to help local producers to remain competitive with foreign produce. Draw the supply curve after the introduction of the subsidy and find the new equilibrium price and equilibrium quantity. (8)
- Discuss the market effects brought about by the introduction of the subsidy on the producer surplus, on the consumer surplus and on the total economic welfare. (9)

(Total: 33 marks)

2. Suppose that the labour and capital units required by a manufacturing firm to produce a given level of output of a cleaning product are as follows:

Output Unit	Labour Unit	Capital Unit
225	3	30
360	6	30
791	9	30
1350	12	30
1970	15	30
2592	18	30
3087	21	30
3456	24	30
3740	27	30
3975	30	30
4151	33	30
4275	36	30
4388	39	30

- a. The price of capital is €450 per unit while the price of labour is €525 per unit.
- Construct a table showing the total cost, the variable cost and the fixed cost at every level of output. Use your calculations to plot the total cost, variable cost and fixed cost curves. (9)
 - Compute and plot the average and the marginal cost. (7)
- b. Suppose that the cleaning product sells for €9.00 per unit of output.
- At what level of output will the firm produce? What would the firm's total profit be? (5)
 - In what type of market structure does the firm operate? Is the level of output deduced in part (b) (i) likely to be maintained over the long-run? Explain your answer. (6)
 - 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)

3. Consider the following table which represents the cost and revenue situation of a firm. Q represents the firm's quantity of sales, P represents the price per unit and TC represents the firm's total costs.

Q	P	TC
1	26	33
2	26	54
3	26	69
4	26	84
5	26	100
6	26	126
7	26	161
8	26	216

- Calculate the marginal cost and the marginal revenue for every level of output. (10)
- What is the profit-maximising level of output? Confirm your answer using MC and MR, and TR and TC. (9)
- In what type of market structure does the firm operate? Give reasons for your answer. (6)
- Is the profit-maximising level of output the same as the revenue-maximising level of output? Why? Explain your answer. (4)
- Is the firm operating in the short-run or in the long-run? Give reasons and explain your answer. (4)

(Total: 33 marks)

SECTION B

4. According to a news release published by the National Statistics Office (NSO) on 11th January 2018, data collected by Jobsplus for June 2017 showed that registered full-time employment increased by 5.5 per cent while registered part-time employment as a primary job increased by 1.0 per cent when compared to the same corresponding period month in 2016. Over the same period, the labour supply increased by 4.9 per cent, reaching 193,810. This was mainly attributed to an increase in full-time gainfully occupied population and a drop in registered unemployment.

Furthermore, according to another news release by the NSO published on 25th January 2018, the number of persons registering under Part I of the unemployment register decreased by 702 persons while those registering under Part II decreased by 43 persons when comparing December 2017 to December 2016.

Overall, decreases in registered unemployment were recorded among all age groups. Registrants for work decreased when compared to December 2016, irrespective of how long they had been registering for work. The only increase was recorded among females registering for over one year. The largest decrease in registrants was recorded among persons who had been registering for less than 21 weeks.

Passage continues on next page

The registered unemployment rate in June 2017 stood at 1.3 per cent of the labour supply, (excluding part-time employment) and varied from 1.4 per cent among men to 1.0 per cent among women.

Also, according to the Labour Force Survey published by the NSO, during the third quarter of 2017, the unemployment rate stood at 4.0 per cent with the largest share of unemployed persons recorded among persons aged 25 and over.

Reference: National Statistics Office (2018), Gainfully Occupied Population: May-June 2017

Reference: National Statistics Office (2018), Registered Unemployed: December 2017

Reference: National Statistics Office (2017), Labour Force Survey: Q3/2017

- a. What role does Jobsplus play in the economy? Why do unemployed persons register at Jobsplus? (8)
- b. Is there any difference between NSO's Labour Force Survey and Jobsplus's Gainfully Occupied Population? Explain your answer. (6)
- c. The labour supply increased by 4.9 per cent in June 2017 relative to the same comparable period a year earlier. Define the term 'labour supply' and discuss how increases in full-time gainfully occupied population and decreases in registered unemployment affect labour supply. (8)
- d. Is it possible to have zero unemployment? Explain your answer. (5)
- e. In Malta, wage appreciation has remained relatively moderate despite historically low unemployment rates. This seems to contradict economic theory. Outline **ONE** potential factor that could possibly explain this phenomena. (6)

(Total: 33 marks)

5. In its autumn forecast for the Maltese economy for 2017, the Ministry for Finance said that it expected GDP to grow by 5.9 per cent, and that this growth will be largely driven by the external side of the economy. It also expects:
 - employment growth to remain strong and to increase by 4.0 per cent in 2017;
 - an unemployment rate close to 4.0 per cent;
 - subdued acceleration in prices of 1.3 per cent;
 - compensation per employee to increase by 2.0 per cent;
 - labour productivity per person employed to increase by 1.9 per cent;
 - a budget surplus of 0.8 per cent of GDP;
 - a public debt to GDP ratio of 54.9 per cent.

The Ministry identified BREXIT as one of the main macroeconomic risks that may hinder Malta's growth prospects in the short-term.

Reference: Ministry for Finance (October, 2017). Malta: Draft Budgetary Plan 2018.

- a. The Maltese Government publishes forecasts for the Maltese economy on a bi-annual basis. Why is it important for the Ministry for Finance to regularly monitor and assess current and expected developments in the Maltese economy? (5)
- b. The Ministry for Finance expects real GDP growth to be driven by the external side of the economy. What do you understand by the external side of the economy? Mention **TWO** factors which could lead to a higher contribution from the external side of the economy. (6)

- c. In 2017, compensation per employee is expected to increase by 2.0 per cent while labour productivity per person employed is expected to increase by 1.9 per cent. Should wage increases follow productivity developments, and if yes, why? (5)
- d. Data released by the National Statistics Office of Malta on 6th December 2017 reports that economic activity during the first three quarters of 2017 expanded by 7.2 per cent, far exceeding the Euro Area average of 2.3 per cent. Despite that, for the first time in four years, HICP inflation in Malta stood below that registered in the Euro Area where prices increased by 1.5 per cent. What could explain the lower inflation despite higher economic growth in Malta relative to the Euro Area? (6)
- e. As a member of the Euro Area, is Malta expected to keep its government finances within a certain limit? Given that the government achieved a surplus in its public finances, does this mean that there are no further rules to follow? (7)
- f. In the Draft Budgetary Plan, the Maltese Government noted that one factor that may hinder Malta's growth prospects in the short-term is BREXIT. Nevertheless, the Maltese economy could also experience positive effects from Brexit. Discuss. (4)

(Total: 33 marks)

6. The table below shows data on Consumption (C) and Income (Y) for a closed economy without government. Investment (I) is exogenous and fixed at €40 million per year.

Income (€ million)	Consumption (€ million)
0	100
70	150
140	200
210	250
280	300
350	350
420	400
490	450
560	500
630	550
700	600
770	650

- a. Calculate aggregate demand at each level of income and find the equilibrium level of income. (9)
- b. Suppose that investment increases by €20 million. What would be the change in equilibrium income? (5)
- c. Calculate the value of the income multiplier coefficient in this economy following an injection of €20 million in the form of investment. (6)
- d. Using the data provided above, derive the consumption function. What is the marginal propensity to consume and what value does it take in this case? (9)
- e. Using the data provided above, specify the savings function of this economy. (4)

(Total: 33 marks)