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| SUBJECT: | Economics |
| PAPER NUMBER: | I |
| DATE: | 14 th December 2020 |
| TIME: | 4:00 p.m. to 7:05 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) Whenever economists discuss the factors determining demand or supply of a specific good, they always refer to the 'ceteris paribus' assumption. Explain what is meant by this assumption. (10)
 - c) Can price increases be kept under control by imposing a maximum price for a commodity? Does this result in market disequilibrium? Discuss. (10)
- (Total: 25 marks)**
2. a) Explain what is meant by 'price elasticity of demand'. Interpret hypothetical estimates for price elasticity of demand for a good of your choice. (9)
 - b) Explain what is meant by 'income elasticity of demand'. Support your answer by giving an example. (8)
 - c) Describe **FOUR** determinants of the elasticity of demand for labour with respect to changes in the wage rate. (8)
- (Total: 25 marks)**
3. a) A person consumes two goods, Good A and Good B, and satisfies the marginal-utility-to-price ratio equalization principle. Making use of a numerical example, explain what happens if the price of Good A were to fall. Should the person buy more or less of Good A to restore the equi-marginal principle? (10)
 - b) Explain the difference between 'variable' and 'fixed' costs. (4)
 - c) Why are cost curves U-shaped in the short run? (11)
- (Total: 25 marks)**

4. a) Discuss **FIVE** assumptions underpinning the model of perfect competition. (5)
- b) Can supernormal profits be maintained under perfect competition in the long run? Explain your answer, providing a comparison to the monopoly market structure and using relevant diagrams. (12)
- c) It is argued that 'perfect competition' conditions hardly exist in real life. Does this mean that we need not study market behaviour under perfect competition? Why? (8)
- (Total: 25 marks)**
5. a) Mention **ONE** advantage and **ONE** disadvantage which you expect from a monopolist provider. (4)
- b) Describe a model that lies between the two extremes of perfect competition, where there are many buyers and many sellers and interdependence is not possible. Refer to the relevant diagrams in the short and long run and provide **THREE** examples. (13)
- c) Explain how a firm can act as a price leader in an oligopoly, when no formal collusion exists. (8)
- (Total: 25 marks)**
6. a) What is the condition for profit maximization in each market structure? What happens to production when this condition is not satisfied? (7)
- b) Compare the wage of doctors to that of waiters, referring to the theory of wage determination. (12)
- c) What is a monopsonistic labour market? Provide **ONE** practical example. (6)
- (Total: 25 marks)**

SECTION B

Answer TWO questions from this Section.

7. a) Define GDP and discuss in detail **THREE** limitations of using the GDP measure to assess the level of welfare within a country. (8)
- b) Explain the circular flow of income within the context of the various leakages and injections involved in the generation of national income. What would be the likely impact on national income of a decrease in exports of goods and services. (8)
- c) Describe **TWO** costs and **TWO** benefits associated with the process of long run economic growth. (9)
- (Total: 25 marks)**

8. a) Explain why the Keynesian consumption function has a positive slope and discuss **TWO** factors that can cause the consumption function to shift upwards. (8)
- b) According to the accelerator principle what does the level of investment in an economy primarily depend on? Explain. (7)
- c) Explain, within the context of the Keynesian income multiplier model how an increase in investment would affect the equilibrium level of national income. Would the resulting impact be larger or smaller if the marginal propensity to consume were to increase? Why? (10)
- (Total: 25 marks)**
9. a) What are the main functions of money? (7)
- b) What are the objectives and main instruments of monetary policy? (9)
- c) Explain, by means of the appropriate graphical analysis, what impact would the implementation of expansionary open market operations, by the Central Bank, have on the equilibrium interest rate in the economy. (9)
- (Total: 25 marks)**
10. a) Distinguish between inflation, deflation and hyperinflation. Describe **TWO** economic costs generally associated with persistently high rates of inflation. (7)
- b) Explain, using an example for each, **THREE** types of unemployment and provide **ONE** example of a policy that can be used to alleviate each type. (9)
- c) Explain the relationship between inflation and unemployment implied by the short run Phillips curve. Does this relationship vary in any way as we interchange from the short run to the long run? (9)
- (Total: 25 marks)**
11. a) Why is an increase in the national debt considered undesirable? What likely effect would such an increase have on the overall government budget? (9)
- b) Suppose that government wanted to undertake a contractionary fiscal policy in order to reduce the government budget deficit. Provide **ONE** example of such a policy and explain, utilizing the aggregate demand and aggregate supply model, how such a policy would impact the price level and equilibrium level of output. (9)
- c) What is the government's main motive for implementing supply-side policies? Provide **TWO** examples of such policies. (7)
- (Total: 25 marks)**

Questions continue on next page

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 the main components of the balance of payments. What would be the likely impact on the current account of the Maltese economy in the eventuality of a depreciation of the Euro against the British Pound? (9)
- c) Discuss **TWO** costs and **TWO** benefits associated with the creation of the single European market. (8)

(Total: 25 marks)



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|---------------|--------------------------------|
| SUBJECT: | Economics |
| PAPER NUMBER: | II |
| DATE: | 15 th December 2020 |
| TIME: | 4:00 p.m. to 7:05 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. The following table represents the market demand and supply schedules for electronic kettles over a range of prices.

| Price (€) | Demand (units/year) | Supply (units/year) |
|-----------|---------------------|---------------------|
| 18 | 160 | 115 |
| 19 | 155 | 125 |
| 20 | 150 | 135 |
| 21 | 145 | 145 |
| 22 | 140 | 155 |
| 23 | 135 | 165 |
| 24 | 130 | 175 |
| 25 | 125 | 185 |
| 26 | 120 | 195 |

- Plot the demand and supply curve. Find the market equilibrium price and equilibrium quantity. (6)
- Calculate the own-price elasticity of demand for all price levels and interpret any changes in elasticity values, if any. (8)
- Explain how a company's pricing strategy may be informed by the own-price elasticity of demand for its product. (6)
- Assume that the government imposes a market price of €19.50. Determine the difference between demand and supply, if any, and explain the impact on total market welfare. (8)
- Assume that instead of free competition, government restricts market supply to 140 units. What will the effect on the market be? (5)

(Total: 33 marks)

Questions continue on next page

2. A firm producing hand sanitizers faces the following average cost and average revenue table:

| Output | Average Cost (Euro) | Average Revenue (Euro) |
|--------|---------------------|------------------------|
| 1 | 3.20 | 12.0 |
| 2 | 3.00 | 11.5 |
| 3 | 2.95 | 11.0 |
| 4 | 3.00 | 10.5 |
| 5 | 3.15 | 10.0 |
| 6 | 3.40 | 9.5 |
| 7 | 3.77 | 9.0 |
| 8 | 4.25 | 8.5 |
| 9 | 4.85 | 8.0 |
| 10 | 5.55 | 7.5 |

- 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. (8)
- b. Plot the Average Cost (AC), MC, the Average (AR) and MR figures on a graph. (7)
- c. Why is the gap between Average Revenue (AR) and Marginal Revenue (MR) increasing as output increases? (6)
- d. Using MC and MR figures, find the profit-maximising output. Calculate the profit at this level of output. (5)
- e. Explain why the firm equates marginal revenue with marginal cost in order to maximize profits. (7)

(Total: 33 marks)

3. The following table shows the relationship between the use of labour and capital to produce precast units in a certain factory.

| Output | Labour Unit | Capital Unit |
|--------|-------------|--------------|
| 60 | 6 | 60 |
| 160 | 12 | 60 |
| 352 | 18 | 60 |
| 600 | 24 | 60 |
| 876 | 30 | 60 |
| 1152 | 36 | 60 |
| 1372 | 42 | 60 |
| 1536 | 48 | 60 |
| 1662 | 54 | 60 |
| 1766 | 60 | 60 |
| 1844 | 66 | 60 |
| 1900 | 72 | 60 |
| 1945 | 78 | 60 |

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

- a. Construct a table for the total cost, variable cost and fixed cost curves, and plot them. (9)
- b. Construct a table for the average and marginal cost curves, and plot them. (7)
- 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. (5)

Suppose that precast units sell at €80 per unit.

- d. At what level of output will the firm produce? Is the level of output likely to be maintained over the long-run? Explain your answer. (6)
- e. Suppose that the firm invests in new machinery which reduces its marginal costs. Does this lead to a change in the price it charges or the profit that it makes? Discuss. (6)

(Total: 33 marks)

SECTION B

4. In 2020, the government's budget surplus is set to decline further to 1 per cent of GDP. Despite some moderation, the economic environment remains favourable, which should support strong revenue growth even after accounting for new fiscal measures (e.g. retaining advantages for first-time home buyers and taxing overtime work at a lower rate). On the expenditure side, the government announced a series of social measures focusing on pensioners (e.g. supplementary aid to those over 65 and at risk of poverty), families (e.g. extension of free transport to all students, a grant for every new-born) and benefits for disabled (e.g. a minimum wage for those who cannot work). The growth of public investment is projected to decline partly reflecting a slowdown in implementation of EU-financed projects. Nevertheless, it is expected to remain above the long-term average. Assuming no changes in policies, the surplus is projected to remain unchanged in 2021.

The government debt-to-GDP ratio is forecast to remain on a downward path, declining to some 43 per cent in 2019 and below 40 per cent by the end of 2021.

Reference: European Commission (2019). Autumn 2019 Economic Forecast: A challenging road ahead: Country Forecasts: Malta.
https://ec.europa.eu/economy_finance/forecasts/2019/autumn/ecfin_forecast_autumn_2019_mt_en.pdf

N.B. These forecasts were made prior to the outbreak of Covid-19 and the economic effects caused by restrictive measures aimed at containing the pandemic.

- a. According to the European Commission, the government's budget surplus is set to decline relative to 2019. Yet, the government debt-to-GDP ratio in 2020 is expected to be below that of 2019. Discuss how this could be achieved. (7)
- b. The European Commission noted that despite some moderation, the economic environment remains favourable, which should support strong revenue growth also when accounting for introduced fiscal measures. Discuss the relationship between the economic environment and the government's fiscal position. (7)

Question continues on next page

- c. During the outbreak of COVID-19, the Maltese government announced a series of measures to boost the economy. Briefly discuss some of the measures introduced by government and discuss their likely economic impact. (7)
- d. The above forecasts were not expecting the outbreak of COVID-19 in Malta and it is likely that the government will run a budget deficit in 2020. What would be the likely effects of government running a budget deficit as a means of boosting the economy? (7)
- e. What is the balanced budget multiplier? Explain your answer through an example. (5)
- (Total: 33 marks)**

5. The Central Bank of Malta publishes a wide range of monetary statistics and indicators, including broad measures of money supply, its components and its counterpart assets. The table below highlights the monetary aggregates according to the March 2020 release:

| MONETARY AGGREGATES (€ million) | Feb-20 | Feb-19 |
|--|---------------|---------------|
| Currency issued | 922.7 | 1,165.7 |
| Overnight deposits | 15,767.9 | 15,188.0 |
| Deposits redeemable at notice up to 3 months | 127.9 | 79.7 |
| Deposits with agreed maturity up to 2 years | 3,847.0 | 3,759.7 |
| Marketable instruments | 75.0 | 576.1 |

Reference: Central Bank of Malta (March, 2020). The Contribution of Resident MFIs to Euro Area Monetary Aggregates
<https://www.centralbankmalta.org/monetary-banking-and-financial-markets>

- a. Work out the value of:
- Narrow Money (M1);
 - Intermediate Money (M2);
 - Broad Money (M3). (9)
- b. The ECB has a target rate of inflation of 2%, but individual members of the euro area have persistently recorded different inflation rates. What are the implications of these differentials within the framework of a common monetary policy? (6)
- c. Would you expect the trends in money supply to be related to the trends in GDP? Explain your reasoning. (6)
- d. Would you expect the trends in money supply to be related to the trends in inflation? Explain your reasoning. (6)
- e. Suppose that the ECB had to further decrease interest rates in the coming months. Discuss **THREE** possible economic effects that this could have on the European economy. (6)
- (Total: 33 marks)**

6. The table below shows data on Consumption (C) and Income (Y) for a closed economy. Investment (I) is exogenous and fixed at €80 million per year, respectively.

| Income (€ million) | Consumption (€ million) |
|-----------------------|----------------------------|
| 0 | 200 |
| 140 | 300 |
| 280 | 400 |
| 420 | 500 |
| 560 | 600 |
| 700 | 700 |
| 840 | 800 |
| 980 | 900 |
| 1120 | 1000 |
| 1260 | 1100 |
| 1400 | 1200 |
| 1540 | 1300 |

- Calculate aggregate demand at each level of income and find the equilibrium level of income. (7)
- Using the above data, derive the consumption function. Define autonomous consumption and the marginal propensity to consume and specify the values in this case. (9)
- Calculate the value of the income multiplier coefficient in this economy following an injection of €40 million in the form of investment. (6)
- Using the data provided above, specify the savings function for this economy. (5)
- Discuss the implications of an upward change in the marginal propensity to consume of 0.1 on the marginal propensity to save and on GDP. (6)

(Total: 33 marks)