INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

7 April 2025

Subject CB2 – Business Economics
Core Principles

Time allowed: Three hours and twenty minutes

In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator.

1 What does a point outside the production possibility frontier curve indicate?

A Efficient use of resources
B Inefficient use of resources
C Unattainable production level with current resources
D Maximum production capacity.

[1½]

2 If the price of a substitute for Good X increases, what is likely to happen to the demand and supply for Good X?

A Demand for Good X will increase
B Demand for Good X will decrease
C Supply of Good X will shift to the right
D Supply of Good X will decrease.

[1½]

3 If an 8% rise in the price of cereal causes total revenue from cereal sales to fall by 16%, then demand for cereal is:

A inelastic.
B perfectly elastic.
C elastic.
D unit elastic.

[1½]

4 Which of the following factors can cause the supply curve of Good X to shift to the right?

A Increases in consumer income
B Changes in consumer preferences for Good X
C A rise in the price of inputs required to produce Good X
D Improvements in production technology to produce Good X.

[1½]

5 Which of the following best describes the area representing consumer surplus on a supply and demand graph?

A The area above the supply curve and below the price level
B The area below the demand curve and above the price level
C The area above the demand curve and below the price level
D The area below the supply curve and above the price level.

[1½]

6 Which of the following is an example of a structural barrier to entry?

A High advertising costs
B Economies of scale
C Government regulations
D Brand loyalty.

[1½]

7 A monopoly with positive marginal costs and a linear demand curve will maximise its profits by setting its price in the range where the price elasticity of demand is:

A equal to 1 in absolute value.
B 1 divided by the price in absolute value.
C elastic.
D inelastic.

[1½]

8 Price discrimination involves:

A selling different products at different prices to different consumers.
B charging different prices to different consumers.
C charging a price equal to marginal cost.
D charging a price equal to average cost.

[1½]

9 Barometric price leadership is associated with:

A a firm that is able to ensure all firms in the industry change their prices at the same time.
B the largest and most dominant firm in the industry setting the price for others.
C the firm that sets the lowest price for the industry.
D a firm whose price is matched by others in the industry since it has the best view of the market.

[1½]

10 The market demand curve for street lighting is derived by adding together the individual:

A marginal cost curves horizontally.
B marginal cost curves vertically.
C marginal benefit curves horizontally.
D marginal benefit curves vertically.

[1½]

11 Which of the following is an example of second-degree price discrimination?

A Firms selling products via auction
B Customers using promotional codes to purchase goods at a discount
C Firms abolishing off peak prices for travel
D A monopoly cutting prices to drive out competitors.

[1½]

12 A producer of grain would not experience an increase in supply if:

A the farmer was able to harvest the crop more efficiently.
B the farm was to receive a subsidy from the government for fertiliser.
C wages for farm workers were to rise.
D weather conditions were favourable at harvest season.

[1½]

13 If marginal utility for Good X is zero, then this indicates that:

A total utility for Good X is also zero.
B total utility for Good X is maximised.
C an additional unit of Good X will increase total utility.
D an additional unit of Good X will have no effect on total utility.

[1½]

14 The following table contains output and expenditure data for an economy:

	£ billion
Consumption (at basic prices)	400
Investment (at basic prices)	140
Government spending (at basic prices)	150
Net exports, i.e. X−M (at basic prices)	−40
Net property income from abroad	30
Indirect sales taxes	80
Capital depreciation	20

Gross national income at basic prices and Gross Domestic Product (GDP) at market prices are, respectively:

A 650, 640.
B 680, 730.
C 640, 700.
D 640, 730.

[1½]

15 Which of the following will NOT lead to a fall in money demand?

A A higher rate of interest
B A lower level of real income
C A lower level of economic uncertainty
D A lower level of wealth.

[1½]

16 Which of the following changes is likely to shift the aggregate demand curve for an economy to the right?

A An increase in taxation in the economy
B A rise in interest rates
C A fall in government expenditure
D An increase in the economy's international competitiveness.

[1½]

17 Growth in real GDP would be most likely to arise in which of the following scenarios?

A A reduction in the rate of corporation tax
B Inflation is increasing and productivity is in decline
C Imports are rising, with an appreciation of the exchange rate
D An increase in interest rates, with a fall in exports.

[1½]

18 A negative output gap indicates that:

A there is inflationary pressure building in the economy.
B there is upward pressure on interest rates.
C in equilibrium, the long run aggregate supply is less than short run aggregate supply.
D in equilibrium, the long run aggregate supply is greater than short run aggregate supply.

[1½]

19 Which of the following is a primary goal of supply-side policies?

A Increase government spending
B Reduce exports
C Enhance productivity and efficiency
D Increase interest rates.

[1½]

20 Which of the following would not be included in the real GDP calculation for the UK?

A Membership costs paid to youth clubs
B State benefits paid to households
C Fees charged by a dentist for cosmetic dental treatment
D A US Dodge Charger car built at a manufacturing plant in London.

[1½]

21 Which one of the following could be a potential drawback of deregulation in the water supply industry?

A More competition among suppliers
B Increased cost of production
C Falling water prices
D Adverse environmental impacts.

[1½]

22 If the nominal rate of interest is 9% and the real rate of interest is 3%, the expected rate of inflation would be approximately:

A 3%.
B 6%.
C 9%.
D 12%.

[1½]

23 The government undertakes expenditure equal to $25 billion. If there is a degree of crowding out, then the result is:

A aggregate demand shifts right by less than $25 billion.
B aggregate demand shifts right by more than $25 billion.
C aggregate demand shifts left by less than $25 billion.
D aggregate demand shifts left by more than $25 billion.

[1½]

24 The consumer price index at the end of 2023 was 114.4 and at the end of 2024 it was 120.5. What was the rate of inflation between 2023 and 2024?

A 6.1%
B 5.3%
C 4.6%
D 5.1%.

[1½]

25 The fiscal multiplier is defined as the total change in:

A government expenditure divided by the total change in national income.
B national income multiplied by the total change in government expenditure.
C national income minus the total change in government expenditure.
D national income divided by the total change in government expenditure.

[1½]

26 Which of the following would benefit from a depreciation of the US dollar?

A An American business owner that wishes to build a plant in India
B An American importer of Swiss cheese
C A Japanese exporter of kimonos to the USA
D A Nepalese tour group visiting the USA.

[1½]

27 (i) Discuss why free market and command economies do not necessarily lead to optimal social outcomes. [3]

(ii) Discuss if a mixed economy resolves the challenges identified in part (i). [2]

[Total 5]

28 Explain with the use of examples, how a ship building firm could experience:

(i) diminishing marginal returns. [2]

(ii) economies of scale. [3]

[Total 5]

29 (i) Calculate the profit maximising price and quantity and the maximum profit, given the following information:

$$TR = 100Q - 2Q^2$$

$$TC = 20 + 30Q + 3Q^2$$

where:
TR = total revenue (£)
TC = total cost (£)
Q = quantity produced.

[4]

(ii) State what happens to the profit maximising price and quantity if fixed costs rise by £10. [1]

[Total 5]

30 (i) Describe a negative externality associated with the airline industry and explain how it leads to market inefficiency. [2]

(ii) Describe a positive externality of education and explain how it benefits society beyond the individual receiving the education. [2]

[Total 4]

31 (i) Calculate the money multiplier for each of the following scenarios:

(a) The broad money supply is £100 billion and the narrow money supply is £40 billion.

(b) Deposits are £100 billion, cash held by the public is £20 billion and reserves are £10 billion.

[3]

(ii) Describe how central banks maintain financial stability through their relationships with financial institutions. [3]

[Total 6]

32 Explain why banks have to balance the need for liquidity and profitability and how these aims are achieved. [5]

33 (i) Explain how central banks attempt to achieve economic stability. [3]

(ii) Discuss how inflation targeting can help central banks achieve economic stability. [3]

[Total 6]

34 Describe with examples, challenges that may arise when the government seeks to implement expansionary fiscal policy in order to close a negative output gap in the economy. [5]

35 (i) Discuss the advantages and disadvantages of both fixed and floating exchange rates. [7]

(ii) Discuss why, under a fixed exchange rate, an expansionary monetary policy may not be effective in stimulating economic activity when there is a high mobility of capital flows internationally. [3]

[Total 10]

36 (i) Compare and contrast perfect competition and monopolistic competition in terms of market structure, pricing and efficiency. Discuss the implications of each market structure for consumers and producers. [5]

(ii) Discuss the differences between the law of diminishing returns and the concept of economies of scale and explain how each concept applies to the farming industry. Give examples to illustrate your answer. [5]

[Total 10]

END OF PAPER

Institute and Faculty of Actuaries

EXAMINERS' REPORT

CB2 – Business Economics

Core Principles

April 2025

Introduction

The Examiners' Report is written by the Chief Examiner with the aim of helping candidates, both those who are sitting the examination for the first time and using past papers as a revision aid and also those who have previously failed the subject.

The Examiners are charged by Council with examining the published syllabus. The Examiners have access to the Core Reading, which is designed to interpret the syllabus, and will generally base questions around it but are not required to examine the content of Core Reading specifically or exclusively.

For numerical questions the Examiners' preferred approach to the solution is reproduced in this report; other valid approaches are given appropriate credit. For essay-style questions, particularly the open-ended questions in the later subjects, the report may contain more points than the Examiners will expect from a solution that scores full marks.

For some candidates, this may be their first attempt at a professional qualification examination. The Examiners expect all candidates to have a good level of knowledge and understanding of the topics, and therefore, candidates should revise thoroughly to prepare for closed-book and in-person examinations. In our experience, candidates that are insufficiently prepared are not successful because of lack of knowledge, time management issues, and/or because they do not properly answer the questions.

Many candidates rely on past exam papers and examiner reports in preparing for exams. Great caution must be exercised in doing so because each exam question is unique. As with all professional examinations, it is insufficient to repeat points of principle, formula, or other textbook works. The examinations are designed to test "higher order" thinking including candidates' ability to apply their knowledge to the facts presented in detail, synthesise and analyse their findings, and present conclusions or advice. Successful candidates concentrate on answering the questions asked rather than repeating their knowledge without application.

The report is written based on the legislative and regulatory context pertaining to the date that the examination was set. Candidates should take into account the possibility that circumstances may have changed if using these reports for revision.

Sarah Hutchinson
Chair of the Board of Examiners
June 2025

A. General comments on the *aims of this subject and how it is marked*

1. The aim of the Business Economics subject is to introduce students to the core economic principles and their relevance to the business environment.

2. The subject provides a grounding in the fundamental concepts of micro- and macro-economics as they affect the operation of insurance and other financial systems, both for individuals and their requirements for financial security, and for financial institutions and their ability to provide products that meet individual and institutional clients' needs.

3. The examination paper is designed to assess candidates' knowledge and understanding as well as the application of economic concepts and exploration of the linkages within the wider economy, and the marking scheme duly reflects this aim.

B. Comments on *candidate performance in this diet of the examination*

The performance on the multiple choice section of the paper was not as strong as in previous sessions. In particular, performance on two questions was found not to be as strong as that for other multiple-choice questions. Also, candidates found parts of two short answer questions particularly challenging.

For discursive types of questions attempts at both theoretical and application type of questions were reasonable where the question was basic theory/application. However, where some analysis of the impact of a policy was required, the answers often lacked depth and detail. Similarly, for quantitative type of questions, most answers relied on the most basic formulae/method whereas a formula appropriate to the given information needed to be used.

In some cases the partial/inappropriate answer to a question appeared to stem from the candidate not reading the question carefully. It needs to be emphasised that not paying due attention to what the question is actually asking could result in losing valuable marks.

Also, paying particular attention to the correct numbering of the answers to multiple choice questions is of particular importance as an error in numbering one answer could result in disarray in all the answers and lost marks for the multiple choice section.

C. Pass Mark

The Pass Mark for this exam was 59.
639 presented themselves and 401 passed.

Analysis of the candidates' performance in relation to the questions in the examination paper showed that candidates found parts of two questions particularly challenging. This contributed to lower overall scores than the examination team expected. On review of the candidates' performance on the whole paper, it was evident that the minimally competent candidate was scoring a mark of 59 or more, so the decision was taken to set the pass mark to 59.

Solutions for Subject CB2 – April 2025

Q1	C	[1½]
Q2	A	[1½]
Q3	C	[1½]
Q4	D	[1½]
Q5	B	[1½]
Q6	B	[1½]
Q7	C	[1½]
Q8	B	[1½]
Q9	D	[1½]
Q10	D	[1½]
Q11	B	[1½]
Q12	C	[1½]
Q13	B	[1½]
Q14	B	[1½]
Q15	C	[1½]
Q16	D	[1½]
Q17	A	[1½]
Q18	D	[1½]
Q19	C	[1½]
Q20	B	[1½]
Q21	D	[1½]
Q22	B	[1½]
Q23	A	[1½]
Q24	B	[1½]
Q25	D	[1½]
Q26	D	[1½]
		[Total 39]

Commentary:
Performance on multiple choice questions was not as strong as in previous sessions. Candidates found questions 6 and 10 particularly challenging.

Q27

(i)

Free market economies are free from any state involvement and therefore what is supplied into the market is purely determined by the existing firms in that economy. They decide what to produce and how they wish to produce it. Likewise, the demand in the economy will be determined by what people want, and this will not be controlled by the state, decisions are influenced by the price mechanism. Prices act as a signal, rising in response to shortages or falling in response to surpluses. Higher prices incentivise firms to produce more, and consumers to purchase less. In contrast, lower prices encourage consumers to make purchases but provide less favourable incentives for firms to produce. These adjustments continue until, and shortage or surplus is eliminated.

Some individuals may wish to consume goods or services that have a detrimental effect on themselves or negatively affect others, the free market does not take account of positive and negative externalities.

In addition, the free market will under provide public goods, such as defence, roads and education. Also, free market economies can result in large income inequalities.

Command economies are at the opposite end of the spectrum and are completely controlled by the state. They determined how resources will be used in the economy and who/what is prioritised in terms of productive activities. In such economies, choice will be limited and both firms and individuals will only be able to do what is permitted by the government.

Command economies tend to spend too much of limited resources on specific industries such as defence, security services and excessive bureaucracy. This means that consumers get less choice and there is the risk of state monopolies emerging which can be inefficient since they do not face competition and fail to innovate sufficiently. A command economy may also be prone to corruption with decisions made to benefit the decision makers.

[3]

(ii)

Mixed economies may provide a better outcome as they ensure that markets can, within reason, operate freely and benefit from the gains that free market provide such as competition and efficiency whilst being responsive to the needs and wants of its citizens where market failure arises. However, the state can intervene in key areas to protect and support businesses and individuals or to provide provision where the market is financially unviable. A mixed economy will vary in terms of the level and scope of intervention. The effectiveness of government intervention is questionable and may create instability rather than stability if misjudged/poorly executed. In a mixed economy the government can make sure there is provision of public goods and deal with externalities through the uses of taxes and subsidies.

In a mixed economy the government can stabilize the economy through the use of fiscal and monetary policies to even out the business cycle. The government can

[2]

also tackle the issue of income inequality through the use of taxes and social security to support those out of work or unable to earn a living.

[Total 5]

Commentary:
Most answers covered some aspects of both types of economies although the answers to this question generally lacked sufficient detail. In part (ii) consideration of how to deal with externalities and public goods was needed to gain a good mark. The answers to each part of the question needed to be distinct. Some answers were repetitive and did not gain the relevant marks as marks are awarded for each distinct point.

Q28

(i)

The law of diminishing return applies to the short run when the ship builders have some fixed and some variable costs. A ship builder could experience diminishing marginal returns as in the short run there could be a limit on how much machinery is available to transport parts around the building area, or how many tools are available to tighten bolts, cut/fuse metal. More workers could be added to any project but if there is a limited capacity of tools available, then no matter how many workers are hired, they will still only be able to undertake work at a certain rate once all the equipment is in use. Working shifts could increase overall capacity but this still remains constrained by the availability of heavy tools/equipment.

[2]

(ii)

The ship building firm may be able to benefit from economies of scale in the long run as it could purchase inputs on a large scale and have lots of parts available at the ship building yard. The firm could also invest in cranes and other large machinery which can undertake activity more efficiently, perhaps by being able to bolt several points at a time. Ship building is a large-scale activity, and the firm would likely be able to produce different parts of a ship in stages at various parts of a site and bring them together as they are assembled and perhaps led by specialist teams, where the firm can benefit from specialisation of labour - workers who undertake particular tasks on a regular basis would be more efficient than someone who has to undertake a broader range of activities.

[3]

[Total 5]

Commentary:
Most candidates made a reasonable attempt at this question. However, answers often did not refer to the short run/long run nature of the two concepts. In part (i) a good answer needed to demonstrate an understanding of the concept within the given context and to provide examples of fixed and variable factors in ship building. To gain full marks for part (ii) explaining the concept as applied to the industry and distinct examples of how economies of scale could be achieved in shipbuilding was required.

Q29

(i)

$\Pi = TR - TC = (100Q - 2Q^2) - (20 + 30Q + 3Q^2)$

$= 100Q - 2Q^2 - 20 - 30Q - 3Q^2$

$= 70Q - 5Q^2 - 20$

[1]

Take derivative

$d\Pi / dQ = 70 - 10Q$

Set to zero to solve:

$70 - 10Q = 0$

$Q = 70/10$

$Q = 7$ [1]

$P \times Q = TR$

So $P = 100 - 2Q$

$P = 100 - 2(7) = 100 - 14$

$P = £86$

[1]

To find maximum profit:

$\Pi = 70Q - 5Q2 - 20$

Max profit $= 70(7) - 5(49) - 20$

$= 490 - 245 - 20$

Max profit = 225

[1]

[4]

(ii)

If fixed costs rise by £10, total costs are increased, but this has no impact on the profit maximising price or quantity as fixed costs do not change with the level of output. Marginal costs which are used to determine profit maximisation do not change as they are associated with variable costs.

[1]

[Total 5]

Commentary:
Part (i) of this question was answered fairly well although some answers only calculated the profit maximising quantity and maximum profit in part (i). Where an error in calculating the quantity was carried through to calculating the price or profits no penalty was applied in marking the latter values. *Part (ii) was generally answered well with most candidates gaining the mark.*

Q30

(i)

A significant negative externality associated with airline use is aircraft emissions, which contribute to air pollution and climate change. Emission of greenhouse gases and other pollutants negatively impact air quality and contribute to global warming. The pollution affects public health, leading to increased healthcare costs and reduced quality of life for those living close to airports or flight paths. The costs associated with emissions (e.g., health impacts, environmental damage) are not reflected in the ticket prices. Another problem can be excessive noise which

adversely affects households within the flight path of the airports, this means consumers do not bear the full social cost of their travel. Because the price of flying is artificially low, more people choose to fly than would be the case if the true costs were included. This leads to higher levels of emissions than what would be socially optimal. [2]

(ii)
Education not only benefits the individual by increasing their earning potential and knowledge but also has positive spillover effects on society. Educated individuals are more likely to engage in civic activities, innovate, and contribute to economic growth. Individuals with higher education contribute more to government revenues through higher taxation payments over their lifetime and are also less likely to be unemployed, less likely to commit crime and therefore require lower government expenditure. These societal benefits are not fully captured by the individual receiving the education, leading to underinvestment in education if it is left solely to the market.

[2]
[Total 4]

Commentary:
Answers to part (i) of this question often lacked detail. These mainly focussed on mentioning pollution but did not explain the economic/social cost of this externality nor the wider global impact of pollution. *Most candidates offered a reasonable answer to part (ii) although to gain the full marks more detail was needed which was not offered in most cases.*

Q31
(i)
a) $m = \Delta M_s / \Delta M_b = 100/40 = 2.5$ [1]

b) $m = (1+ c)/ (r + c)$
where $c = C/D = 20/100 = 0.2$
where $r = R/D = 10/100 = 0.1$

$m = 1+0.2/0.2+0.1$
$m = 4$ [2]

[3]

(ii)

A Central Bank acts as a banker to the banks and provides support and guidance to ensure financial stability across the economy. This could include advice on changes in government policy and ensuring that each bank has sufficient liquidity. Banks may need to borrow from the Central Bank in order to achieve this level of liquidity, as such the Central Bank is a lender of last resort. Other ways in which the central bank can promote financial stability include overseeing and regulating commercial banks and other financial institutions to ensure they operate safely and soundly. This includes setting capital requirements, conducting stress tests, and monitoring risk management practices. Central banks also adopt macroprudential policies that aim to mitigate systemic risks and prevent financial imbalances. Central banks use tools such as countercyclical capital buffers and loan-to-value ratios to address vulnerabilities in the financial system. Central banks ensure the smooth functioning of payment systems and other financial market infrastructures. This includes overseeing clearing and settlement systems to reduce the risk of financial contagion. Finally, central banks provide clear and transparent communication about their policies and assessments of financial stability, as well as helping to manage market expectations and reduce uncertainty. These roles collectively help central banks maintain a stable financial environment, which is essential for sustainable economic growth and development. [3]

[Total 6]

Commentary:
Part (i) of this question posed a challenge for the majority of candidates. Most answers attempted to calculate the multiplier in part (b) using the simple formula although the question provided the information required for the more detailed formula. Very few answers scored the full mark for this part. *In part (ii) the question's focus is financial stability and how central banks achieve this through their relationship with financial institutions. Most candidates provided coverage of the lender of last resort and regulation but very few mentioned the management of systemic risk, payment systems etc. Answers could also consider insurance companies and pension funds.*

Q32

Banks need to ensure that they are profitable but also need to ensure that they have a degree of liquidity. These two aims are in conflict as in the pursuit of profit, fewer liquid assets are desired. Providing loans to individuals and firms means that the bank has less liquidity, but it generates profit. In contrast, holding cash is highly liquid but generates no profit.

Therefore, a bank needs to hold an optimal mix of the two. In order to do this, banks will seek to "borrow short" and "lend long". This means that it pays a low rate of interest on current accounts and charges higher rates of interest on loans. The difference between the two is known as a maturity gap and the greater this is, the greater the profitability for the bank. However, banks will also want to have a small maturity gap to aid liquidity as in the event of a bank run it will need to be able to call in its loans.

The liquidity ratio describes the balance between a bank's total liquid assets to its total assets. If the liquidity ratio is very high, this means that the majority of its assets are held as liquid assets (i.e. near cash) but this also means that it will make less profit. If the ratio is low, then most assets are illiquid and they may not have enough assets to satisfy customer needs.

A liquid asset may be thought of as balances with the central bank, a short-term loan (i.e. personal/business loans) and a government bond which would mature in less than one year.

In order to manage the conflict between profitability and liquidity, banks need to hold of mixture of assets and they can use secondary marketing of assets. This entails asset holders selling to another party before the maturity date and reduces the maturity gap whilst maintaining the benefits of liquidity and profitability. An example of secondary marketing would be certificates of deposit; these are issued for short periods of time at a set interest rate and repaid on a set date. In the interim, the holder can sell this on to another party via a broker.

Another option for banks is to use securitisation which is the sale of assets between financial institutions. An example might be a mortgage and these are sold via intermediaries known as special purpose vehicles. These are legal entities which fund the purchases of assets via bonds and these are known as collateralised debt obligations. Banks (the seller) gain cash now and can use this to create loans.

[5]
[Total 5]

Commentary:
Most candidates made a reasonable attempt at answering this question. A good explanation of the trade-off between profitability and liquidity was offered in most cases. However, to gain the full marks, the answer needed to explore the strategies used to manage this trade off; an aspect that was often not covered in sufficient detail. Most answers did not include strategies such as managing maturity structure, securitisation and secondary marketing.

Q33

(i)

Central banks are crucial for economic stability because they manage a country's monetary policy, control inflation, and regulate the money supply. By setting interest rates, they influence borrowing and spending, which helps stabilize the economy. This is achieved by raising interest rates when the economy is growing too fast and lowering interest rates when the economy is at risk of recession. Additionally, central banks act as regulators and lenders of last resort to banks during financial crises, ensuring liquidity and preventing bank runs. They can also stabilise the macroeconomic outcomes by providing exchange rate stability to support the domestic currency when it is weak through using the foreign currency reserves.

[3]

(ii)
Inflation targeting involves central banks setting a specific inflation rate as their goal. By doing so, they provide a clear framework for monetary policy, which helps anchor inflation expectations for workers and employers and participants in financial markets. This predictability reduces uncertainty in the economy, encouraging investment and consumption and therefore economic growth. When inflation is kept within the target range, it promotes price stability, which is essential for sustainable economic growth. It will also help to keep down interest rates on government bonds, which can lead to lower corporate borrowing costs and a better economic growth rate for the economy.

[3]
[Total 6]

Commentary:
This question was generally answered well. Most candidates successfully demonstrated an understanding of the role of central banks in maintaining economic stability and managing inflation by setting a target.

Q34
Magnitude and timing are the key issues. Timing in so far as, it may take some time for the government to assess the information it has at its disposal, then implement the policy and then observe the effects. After which, the economy could be in quite a different economic position. Magnitude concerns the challenge that the policy stimulus and resulting outcome may be difficult to quantify. The government will need to accurately assess how much activity is required and take into consideration how the policy will impact the economy.

For example, the government could increase spending and it will not need to undertake the full amount of expenditure due to the multiplier effect. The size of the multiplier effect may be underestimated and additional stimulus may be required which may not be as problematic as over stimulus. Rather than closing an output gap, expansionary policy could lead to the creation of inflationary pressures if ill-judged. Crowding out may also occur. In increasing its own expenditure, the government may cause a rise in interest rates which would depress private spending on consumption and investment reducing the gains made from the injection in expenditure.

A similar challenge arises with changing taxes. People may not be as responsive as is anticipated. This may be associated with concerns about whether the change is temporary or permanent. If the change is only temporary, tax cuts may have a limited effect on encouraging people to spend. It depends on how broadly that tax affects people so income tax would potentially have quite a large effect but if it were a business tax for example, it may depend on what proportion of firms would be positively affected and then to what degree this change would stimulate activity.

[5]

[Total 5]

Commentary:
This question was generally answered well. Most candidates successfully demonstrated a good understanding of fiscal policy and difficulties present in its implementation. Due credit was given to a detailed answer focusing on government expenditure and/or taxation.

Q35

(i)

Advantages of fixed exchange rates

Fixed exchange rates give greater certainty and encourage increased foreign trade enabling potential for gains from trade to be realised. Fixed exchange rates can also lead to lower inflation when the domestic currency is fixed relative to a low inflation currency. Under fixed exchange rates, interest rates must stay at the world level, so Keynesian crowding out is less likely to occur when there is increased government expenditure. Although the government could just increase money supply which would have the same effect.

Fixed exchange rates may in some circumstances add to political, social and economic harmonisation and promote macroeconomic cooperation between countries.

Disadvantages of fixed exchange rates

If there is a balance of payments deficit problem, then the level of domestic aggregate demand will have to be used to reduce the deficit which can have serious effects in terms of higher unemployment and lost output.

Usually, a balance of payments deficit can be corrected by reducing the value of the domestic currency, which is not an option with fixed exchange rates. In practice, the government may find it difficult to maintain a fixed exchange rate, as there may be a lot of money speculating on the possibility of a devaluation. Fixed exchange rates can be maintained by imposing controls on capital outflows, together with quotas and tariffs, however, these measures are economically inefficient and will lead to a less than optimum allocation of capital, labour, and goods.

Advantages of floating exchange rates

Monetary policy can be conducted independently of other countries without the need for controls on the movement of capital. A floating exchange rate will tend to move to automatically offset a balance of payments deficit or surplus. In addition, there is no need for the central bank to hold large amounts of gold and foreign currencies, as the government need not intervene in foreign exchange markets.

Disadvantages of floating exchange rates

The major disadvantage of floating exchange rates is that they introduce uncertainty into foreign trade transactions. However, traders can hedge the risks by using the forward exchange rate to protect themselves against unexpected

[7]

movements. There is also the risk that speculative bubbles can form in the foreign exchange market, leading to overvalued and undervalued currencies.

(ii)

When exchange rates are fixed an expansionary monetary policy will put downward pressure on interest rates but this will then lead to large capital outflows. In turn, this will then mean that the central bank will have to purchase the domestic currency to prevent a depreciation. The central bank will maintain the fixed exchange rate by using its foreign currency reserves to purchase the domestic currency which has the effect of raising the domestic interest rate back up and reducing the money supply to its original level, this means the monetary policy will not be effective in expanding domestic output under a fixed exchange rate system with high capital mobility. [3]

[Total 10]

Commentary:
Part (i) of this question was answered fairly well, with most candidates succeeding in demonstrating an understanding of the pros and cons of fixed and floating exchange rates although some answers that were presented in bullet points lacked sufficient detail and lost marks. *Part (ii) generally proved a challenge for candidates and very few candidates gained the marks for this part. To gain the full marks, the answer needed to follow the impact of monetary policy through the economy at each stage and on each economic factor as well as examining the linkages to arrive at the conclusion why monetary policy is ineffective with a fixed exchange rate system.*

Q36

(i)

Perfect competition and monopolistic competition are two distinct market structures that describe how firms operate and compete within an industry. Understanding the differences between these market structures is crucial for analysing their impact on pricing, efficiency, and the overall welfare of consumers and producers.

Perfect competition is a market structure characterized by a large number of small firms, homogeneous products, free entry and exit, and perfect information. No single firm has market power, and all firms are price takers. In contrast, monopolistic competition features many firms, but each firm offers a differentiated product. There is free entry and exit, but firms have some degree of market power due to product differentiation.

Firms in perfect competition cannot influence the market price and must accept the equilibrium price determined by the intersection of market supply and demand. Prices are typically lower due to intense competition and the absence of market power. Under monopolistic competition, firms have some control over pricing because of product differentiation. They can charge a premium for their unique products, leading to higher prices compared to perfect competition. However, the presence of close substitutes keeps prices in check.

Perfect competition is considered highly efficient. In the long run, firms produce at the lowest point on their average cost curves, achieving both allocative and productive efficiency. Resources are optimally allocated, and consumer surplus is maximized. Under monopolistic competition, markets may achieve productive efficiency in the long run, they do not achieve allocative efficiency. The presence of product differentiation and market power leads to a deadweight loss, as prices are higher, and output is lower than in perfect competition.

Under perfect competition, consumers benefit from lower prices and a wide availability of homogeneous products. In monopolistic competition, consumers enjoy a variety of differentiated products, which can better meet their preferences, but they may face higher prices.

Firms in perfect competition operate with only normal profits in the long run due to intense competition. Likewise, under monopolistic competition, firms can only earn normal profits due to the freedom of entry into the industry. Under monopolistic competition firms can try to earn excess profits in the short run through product differentiation and brand loyalty, but they must continuously innovate and market their products to maintain their market position.

In sum**,** perfect competition and monopolistic competition have distinct characteristics that influence pricing, efficiency, and the welfare of consumers and producers. Perfect competition leads to lower prices and higher efficiency, benefiting consumers with lower costs. Monopolistic competition, on the other hand, offers product variety and higher profits for firms only in the short run and at the cost of higher prices and some inefficiency. [5]

(ii)

The law of diminishing returns and economies of scale are two fundamental economic concepts that describe different aspects of production efficiency. While both concepts are crucial for understanding how firms operate, they apply differently depending on the context. In the following we apply these concepts to the farming industry.

The law of diminishing returns states that if one factor of production (for example, labour or fertilizer) is increased while other factors such as land and capital are held constant, the additional output (marginal returns) from the variable input will eventually decrease. This principle is particularly relevant in the short run when at least one factor of production is fixed. In the farming industry, the law of diminishing returns can be observed when additional labour or fertilizer is applied to a fixed amount of land. Initially, these variable inputs may significantly increase crop yields. However, beyond a certain point, each additional unit of labour or fertilizer contributes less to overall production. For example, if a farmer continues to add workers to a fixed plot of land, overcrowding may occur, leading to inefficiencies and lower productivity per worker.

Economies of scale refer to the cost advantages that firms experience when production becomes more efficient as the scale of operation increases. This concept is relevant in the long run when all factors of production are variable. Economies of scale result in a lower average cost per unit of output as production

expands. In the farming industry, economies of scale can be achieved through various means, such as investing in advanced machinery, bulk purchasing of seeds and fertilizers, and optimising logistics and distribution. For instance, a large-scale farm can spread the fixed costs of expensive equipment over a larger output, reducing the average cost per unit of produce. Additionally, larger farms may benefit from better access to markets and more favourable financing terms, further enhancing their cost efficiency.

The key difference between the law of diminishing returns and economies of scale lies in their application to production inputs and time frames. The law of diminishing returns focuses on the short-run impact of increasing the variable input or inputs while holding others constant, leading to decreasing marginal returns. In contrast, economies of scale emphasize the long-run benefits of increasing all inputs, resulting in lower long run average costs.

For farmers, understanding these concepts is crucial for making informed decisions about resource allocation and expansion. While adding more labour or inputs to a fixed amount of land may initially boost production, farmers must be aware of the diminishing returns that will eventually set in. On the other hand, investing in larger-scale operations and advanced technologies can lead to significant cost savings and competitive advantages in the long run. [5]

[Total 10]

Commentary:
This question was generally answered well. Most candidates demonstrated a good understanding of most aspects of the two market structures in part (i) and were able to provide a good comparison of the two. However, some answers did not cover the impact on consumers. Also, where perfect competition and monopoly were compared the answer did not gain the mark for the monopolistic competition part of the answer. To gain the full marks for this part, a full explanation of the characteristics of the two market structures was required. Where the answer was presented in brief bullet points, marks were lost. *In part (ii), most candidates demonstrated an understanding of the concepts of diminishing returns and economies of scale. However, the question was concerned about the difference between the two, so the important aspects to mention were the short-run and long-run and the fixed and variable factors, as well as providing distinct examples in farming. Some answers did not explore the differences and lost marks.*

[Paper Total 100]

END OF EXAMINERS' REPORT

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