INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

13 April 2022 (am)

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.

If you encounter any issues during the examination please contact the Assessment Team on T. 0044 (0) 1865 268 873.

1 Which of the following will lead to a leftward shift in the demand for cars?

A A rise in the price of cars
B A fall in the price of public transport
C A fall in car insurance premiums
D A rise in consumers' incomes.

[1½]

2 Which one of the following is NOT a feature of a capitalist economy?

A The use of the price mechanism to solve the question of what to produce
B A minimal role for government
C State ownership of the most important industries and private ownership of the other industries
D Freedom of entry and exit into various industries.

[1½]

3 The maximum an economy can produce is either 20 units of Good X or 80 units of Good Y, and its production possibility curve is a straight line. The opportunity cost of producing 5 units of Good X is:

A 1/4 of a unit of Good Y.
B 4 units of Good Y.
C 10 units of Good Y.
D 20 units of Good Y.

[1½]

4 Good X is a normal good. Which of the following will NOT shift the demand curve for Good X to the left?

A A fall in consumers' incomes
B A rise in the price of Good X
C A fall in the price of a substitute Good Y
D A rise in the price of a complementary Good Y.

[1½]

5 Which one of the following will shift the supply curve for Good X to the left?

A An increase in labour productivity in the production of Good X
B A fall in price of inputs used to produce Good X
C An increase in real wages for workers producing Good X
D A government subsidy on the production of Good X.

[1½]

6 Good Y has a cross elasticity of demand with respect to Good X of 0.8, and 200 units of Good Y are demanded when Good X costs £1. A rise in the price of Good X to £1.10 will change the demand for Good Y to approximately:

A 208 units.
B 216 units.
C 75 units.
D 50 units.

[1½]

7 A consumer has £200 of income, which is spent entirely on two goods, Good X and Good Y. Good X costs £40 per unit and Good Y costs £40 per unit.

The relevant marginal utilities for the consumer are:

Good X		*Good Y*	
Quantity (in units)	*Marginal utility*	*Quantity (in units)*	*Marginal utility*
1	100	1	70
2	80	2	50
3	50	3	40
4	25	4	30
5	10	5	20

The optimum combination of units of Good X and Good Y for the consumer to purchase is:

A one unit of Good X and four units of Good Y.
B two units of Good X and three units of Good Y.
C three units of Good X and two units of Good Y.
D four units of Good X and one unit of Good Y.

[1½]

8 A consumer has been consuming Good X, which previously had a positive marginal utility, to the point that the consumer now has a zero marginal utility and Good X is a free good. This means that the:

A consumer has reached a point of equilibrium with respect to the consumption of Good X.
B consumer is consuming too much of Good X and should decrease their consumption to obtain positive marginal utility.
C consumer can increase their total utility by reducing consumption of Good X.
D total utility from consuming Good X must be zero.

[1½]

9 During the winter, a profit maximising hotel in a seaside resort should close when average revenue is below:

A average variable cost.
B average fixed cost.
C marginal cost.
D average total cost.

[1½]

10 Which one of the following is NOT a feature of monopolistic competition?

A In the long run, firms make only normal profits.
B Price is equal to marginal cost.
C Price is equal to average revenue.
D An individual firm can raise its price without losing all its customers.

[1½]

11 Which one of the following statements about market structure is TRUE?

A Under monopolistic competition, in the long run, all firms make only normal profits.
B Firms under monopolistic competition produce homogeneous products.
C Under oligopoly, firms make decisions without considering the possible reactions of their competitors.
D Under monopoly, a profit maximising firm with positive marginal costs always produces where the demand is price inelastic.

[1½]

12 Two firms operate in a duopoly, but do not collude. Given the profit pay-off matrix of output options to Firms A and B below, what is the dominant strategy for the firms?

		Firm B	
		High	**Low**
Firm A	**High**	(60, 60)	(20, 90)
	Low	(90, 20)	(40, 40)

[**Note:** Profit pay-offs are '(profit A, profit B)', and 'high' and 'low' refer to the price decision of the firms.]

A Firm A – High; Firm B – Low
B Firm A – High; Firm B – High
C Firm A – Low; Firm B – Low
D Firm A – Low; Firm B – High.

[1½]

13 A firm operates in two markets, Market 1 and Market 2, and price discriminates when profit maximising. In such circumstances, its marginal revenue in Market 1 is equal to the:

A price in Market 2.
B price in Market 1.
C marginal revenue in Market 2.
D average cost in Market 2.

[1½]

14 In a simple closed economy with no government sector, the consumption function relating consumption (C) to income (Y) is given by the expression:

$$C = £80 \text{ million} + 0.75\ Y$$

Planned investment is constant at £50 million.

Which of the following is TRUE?

A The investment multiplier has a value of 5.
B At the equilibrium level of income, consumption will be £470 million.
C The economy is in equilibrium if output is £500 million.
D None of the above.

[1½]

15 Which of the following is most likely to lead to a rise in aggregate demand?

A An increase in the income tax rate
B A decrease in government expenditure
C A decrease in the value of exports
D A decrease in the rate of interest.

[1½]

16 The following transactions take place in a simple closed economy. A company producing Good X sells its output for £2 million. In producing Good X, the company buys raw materials for £800,000, uses £200,000 worth of electricity and has labour costs of £400,000. What is the contribution of the company to the country's Gross Domestic Product (GDP)?

A £2,000,000
B £800,000
C £600,000
D £300,000.

[1½]

17 The marginal propensity to consume is 0.8, the rate of income tax is 25% of all income and government expenditure is £50 million. Which one of the following statements is TRUE?

A The simple closed economy multiplier, ignoring taxes, is 2.
B The simple closed economy multiplier, including taxes, is 5.
C An increase in government expenditure of £10 million will increase the national income by £25 million.
D An increase in government expenditure of £10 million will increase the national income by £10 million.

[1½]

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

	£billions
Consumption (at market prices)	300
Investment (at market prices)	80
Government spending (at market prices)	85
Net exports (at market prices)	–10
Net income from abroad	5
Indirect taxes	60

GDP at basic prices and gross national income at market prices are respectively (in £billions):

A 395, 400.
B 395, 390.
C 455, 460.
D 455, 450.

[1½]

19 If nominal GDP per capita is £30,000 and the GDP deflator is 150, then real GDP is (given the base year index of 100):

A £45,000.
B £30,150.
C £29,850.
D £20,000.

[1½]

20 Which one of the following does NOT form part of the UK GDP:

A Investment income from abroad
B Investment expenditure
C Export revenue
D Government expenditure on employing teachers.

[1½]

21 In a closed economy with no government, planned consumption is £140 million, planned investment is £70 million and total production is £240 million. Actual investment is:

A £40 million.
B £60 million.
C £80 million.
D £100 million.

[1½]

22 If a household's income increases from £20,000 to £25,000 and, as a result, consumption increases from £17,000 to £21,000, what is the household's marginal propensity to save?

A 0.8
B Greater than 0.8
C 0.2
D Less than 0.2

[1½]

23 Given the following aggregate data for Country A, what is the value of leakages (withdrawals) into the circular flow of income?

	(£billions)
Consumption expenditure	300
Tax revenue	200
Exports	200
Imports	150
Government expenditure	250
Investment expenditure	100
Savings	200

A £500 billion
B £550 billion
C £600 billion
D £700 billion.

[1½]

24 If the real rate of interest is 5% and the expected inflation rate is 4%, then the nominal rate of interest is approximately:

A 1%.
B 1.25%.
C 9%.
D 13%.

[1½]

25 The minimum wage is currently above the equilibrium wage. Which one of the following policies will increase voluntary unemployment?

A A reduction in unemployment benefit
B Better dissemination of information about job vacancies
C An extension of job retraining programmes
D A reduction in the minimum wage.

[1½]

26 The conventional Phillips curve indicates that the authorities face a:

A negative relationship between inflation and economic growth.
B positive relationship between inflation and economic growth.
C negative relationship between inflation and unemployment.
D positive relationship between inflation and unemployment.

[1½]

27 Assess the importance of price elasticity of demand when a government is considering whether to add a unit tax to chocolate bars to generate government revenue. [5]

28 Discuss, with the use of an example, why when the overall market is small in size, small firms can remain profitable despite not having economies of scale to compete against larger firms. [5]

29 (i) Outline, with the use of examples, the differences between merit goods and private goods. [3]

(ii) State how these differences may affect the source of provision of the goods in part (i). [2]

[Total 5]

30 Explain, with reference to appropriate behavioural economics concepts, how consumers may make practical decisions when booking a hotel room for a night, which may differ from those predicted by the mainstream economic theory. [5]

31 You are given the following data on a simple closed economy:

C = £40 million + 0.75 Yd
I = £30 million
G = £50 million
T = 0.2 Y

where C is consumer expenditure, Y is national income, Yd is disposable national income, G is government expenditure on goods and services, I is investment expenditure and T is total taxes.

(i) Calculate the equilibrium level of national income. [1]

(ii) Calculate the amount of consumer expenditure at the equilibrium level of national income. [1]

(iii) Calculate the value of the fiscal surplus (+) or deficit (–) at the equilibrium level of the national income. [1]

(iv) Calculate the value of leakages (withdrawals) when the national income is in equilibrium. [1]

(v) Calculate the increase in the national income if investment expenditure is increased by £20 million. [1]

[Total 5]

32 (i) Describe what is meant by the crowding out effect of fiscal policy. [2]

(ii) Explain four mechanisms through which crowding out can occur. [4]

[Total 6]

33 Explain the problems governments face in using the monetary policy to raise or lower aggregate demand. Include reference to 'liquidity trap' in your answer. [5]

34 Assume that a government finances its fiscal deficit and national debt by issuing 10-year government bonds.

Explain how a rise in the average rate of interest on 10-year government bonds, from 4% p.a. to 6% p.a., may impact both the fiscal deficit and the national debt. [5]

35 (i) Discuss the relative merits, for users of a public transport service, of the operator existing as a monopoly rather than being monopolistically competitive. [5]

(ii) Discuss why the cost of exit may influence the type of public transport that firms may select when entering the public transport market. Your answer should refer to buses and trams as examples. [5]

[Total 10]

36 (i) Explain the main objectives of macroeconomic policy in an open economy, together with the reasons governments pursue these objectives. [5]

(ii) Discuss the possible conflicts that the authorities may face when using monetary and fiscal policies to pursue the objectives outlined in part (i). [5]

[Total 10]

END OF PAPER

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

April 2022

Subject CB2 - Business Economics
Core Business

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 Specialist Advanced (SA) and Specialist Principles (SP) subjects, the report may contain more points than the Examiners will expect from a solution that scores full marks.

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
July 2022

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

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

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. The examination paper is designed to assess candidates' knowledge and understanding as well as 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.*

Responses to short answer questions aimed at testing candidates' understanding of economic concepts within a chosen context were answered well. Some answers were confined to a discussion of theory without adequate reference to the context, resulting in no full marks being awarded. Longer answer questions where a deeper analysis was required proved more challenging.

C. Pass Mark

The Pass Mark for this exam was 60
795 candidates presented themselves and 501 candidates passed.

Solutions for Subject CB2 - April 2022

Q1	B	[1½]
Q2	C	[1½]
Q3	D	[1½]
Q4	B	[1½]
Q5	C	[1½]
Q6	B	[1½]
Q7	C	[1½]
Q8	A	[1½]
Q9	A	[1½]
Q10	B	[1½]
Q11	A	[1½]
Q12	C	[1½]
Q13	C	[1½]
Q14	B	[1½]
Q15	D	[1½]
Q16	C	[1½]
Q17	C	[1½]
Q18	All responses/non-responses to be marked correct	[1½]
Q19	D	[1½]
Q20	A	[1½]
Q21	D	[1½]
Q22	C	[1½]
Q23	B	[1½]
Q24	C	[1½]
Q24	D	[1½]
Q26	C	[1½]

For Question 18 due to a typological error the correct answers should have read 395, 460 since this was not one of the options, all candidates were awarded 1½ marks.

The multiple-choice questions were generally answered well. Questions 16 and 17 were found more challenging by candidates.

Q27

The price of a product is raised by less than the amount of the tax and the total revenue raised will be the tax per unit multiplied by the new quantity sold. Chocolate bars are a snack product and have a number of substitutes. As a consumer, if the price rises, due to the imposition of a tax, the consumer may decide to switch to alternative snacks which are not taxed. In such a case, demand would be relatively elastic. Chocolate bars are not a necessity and would not commonly represent a significant proportion of consumer income. However, there are also a number of products which may be substitutes if we consider the snack market as a whole.

Imposing a tax on this particular item may not be successful in raising government revenue if consumers switch to other snack products. To successfully raise revenue, the tax may need to

be imposed on a wider number of snack products so that price rises are across a range of products.

The government would also need to consider, that the demand for low priced chocolate bars may be relatively inelastic and therefore small changes in price may not significantly impact the demand and thus, they may find that it's a successful revenue generating activity. [5]

For this question candidates needed to explain the effect of the tax on price, quantity and revenue in the given context. Marks were allowed for discussion of each effect. Well-argued cases for elastic or inelastic demand were accepted. Some credit was given for a theoretical discussion of elasticity without reference to the context. A discussion of the burden of the tax was not essential.

Q28

Economies of scale are observed when the average total cost declines with increased output.

In small and very niche or specialised areas, such as fine jewellery, dress making or a customised product, the product or service is so specialised that economies of scale can never be realised as the operation is too small. The firm has no need to buy in bulk, ship in large containers, use large machines or operate in stages, which would be beneficial to large manufacturing operations. Small firms offering such products may be able to charge a higher price for a more unique/less common good or service. Customers then use that particular firm for a one-off product and/or for the local service that cannot be easily replicated elsewhere.

For others to compete with them, they too would need to be able to offer such a product and sway loyal customers away from the original firm. Consumers might be more inclined to buy products from small and perhaps local firms to help them survive as it supports the local economy and leads to longer term benefits of greater consumer choice. Smaller firms with specialist products may have more inelastic demand and therefore good pricing power. If, overall, the market is not large, then there may not be significant demand to attract larger firms to that market to compete against the existing small firms. [5]

This question needed to be discussed in the context of an example. Marks were divided between reasons for small firms not being able to exploit the economies of scale and other reasons for small firms making a profit. Stronger candidates were able to provide a good example and carry out a reasonable discussion.

Q29

(i)

Private goods are any goods that are provided by the market and possess the qualities of being rival and excludable. The consumption of the good means that there is less for others and others can be prevented from consuming it if they have not paid for it. Examples of private goods could be owning a car or a coat. A person's use of these goods (or services) means that they are not available for others and someone cannot just help themselves to the item without paying for them/prior agreement.

A merit good is one that society deems to be good for all/everyone's well-being and welfare and as such there may be attempts by the government to actively encourage consumption of that good. Consumers of merit goods can lack incomplete information about the benefits of merit goods leading to under-consumption from a societal viewpoint. There are positive externalities associated with the consumption of merit goods. As such, in a free market merit goods will tend to be under-consumed. Examples would include housing, healthcare, education, cultural activities such as museums, libraries and galleries. [3]

(ii)
Private goods are provided by the market and purchased by their consumer. Merit goods can be provided by the market but may also be provided by the private sector usually at a publicly subsidised price to increase the uptake of the product/service to address inequality concerns or could be directly provided by the government free (which may include voucher provision) and there could even be a compulsion for authorities to provide some merit goods such as education for children. [2]

[Total 5]

The marks for part (i) of this question were equally divided between merit goods and private goods. Most candidates provided correct definitions and good examples. Most candidates answered part (ii) correctly. The marks for this part were also divided equally between the agents providing each type of good.

Q30

Behavioural economics attempts to explain irrational consumer behaviour due to individuals' impulses and biases. This has led to the development of new concepts. In the absence of perfect information, consumers may resort to making decisions that are quick and cost effective using methods explained by the concept of heuristics. One example may be making a best guess based on limited information on a booking website; if the overall review score for the hotel is reasonable and it meets requirements, then they might proceed with booking.

Or if the consumer has previously stayed at a particular hotel and found it a good choice, they may be more likely to rebook. This is an example of trial and error. If it was a good experience, then it's likely to be repeated, if not then it's not likely to be repeated. Bounded rationality may mean that consumers satisfice rather than optimise when making their hotel booking decisions, so if a hotel meets their specifications, they may book it rather than spend extra-time looking to optimise their booking.

Another example might be rule of thumb, a particular choice may be made because other people like the hotel or perhaps it's part of a group of hotels which the consumer has tried before (i.e. a large brand). Very often if someone recommends a brand then people may try other venues within the same group as they have an anticipation of similar good experience, which may not be the case in reality as venues could be quite different.

Another possibility involves the concept of framing, a consumer may decide to book a room in a hotel if it is advertised as a special offer since they are led to think that they will be getting higher quality at a lower than usual price. Alternatively, a hotel may get more bookings if it uses a lower price on the website and then charges a price for additional

essential things such as breakfast, rather than advertising the room at a higher rate including breakfast, even though the latter may be cheaper overall. [5]

For this question 1 mark was awarded for explaining behavioural economics. Candidates could gain 1 mark for offering an example of irrational behaviour together with reference to the relevant behavioural concept where four such examples could gain 4 marks. Most candidates were able to provide a range of examples although quite a few did not make a reference to the relevant behavioural concept and did not gain the marks.

Q31

(i)

Y = 40 + 0.75(1-0.2) Y+ 30 + 50 = £300 million [1]

(ii)

C = 40 + 0.75(1-0.2) 300 = £220 million [1]

(iii)

T - G = 0.2(300) - 50 so there is a fiscal surplus of + £10 million [1]

(iv)

In equilibrium injections equal leakages to leakages are £80 million

Alternatively:

Savings = disposable income -consumption
= £240 million - £220 million = £20 million. Taxes = 0.2 (300) = £60 million
Therefore withdrawals = £20 million + £ 60 million = £80 million. [1]

(v)

1/ [1-0.75(1-0.2)] x £20million
= 2.5 x £20 million
= £50 million [1]

[Total 5]

This question was generally answered well. ½ mark was allowed for each part where method and substitution were correct, but the final answer was incorrect.

The answer in parts (ii), (iii) and (iv) are based on the answer in part (i). However, if, for these parts, the method and calculations were correct but due to carrying the incorrect answer from part (i) an incorrect final answer for these parts was obtained, 1 mark was awarded for each of the parts (ii) (iii) and (iv).

Q32

(i)

Crowding out occurs when increased government expenditure leads to lower private sector consumption and investment, that is, the government expenditure crowds out the private sector. To the extent that crowding out occurs there will be less of a boost to aggregate demand. At one extreme some economists argue there is 100% crowding out while others argue that the crowding out effects are likely to be more limited. [2]

(ii)
If the government has a large fiscal deficit it will have to raise the money by selling bonds onto the financial markets, the more bonds it sells the more it will have to raise the coupon or rate of interest to attract new buyers. The rise in long term interest rates will have an adverse effect on private sector consumption and investment.

The government could also finance its increased expenditures by raising taxes such as income and corporate taxes or indirect taxes such as VAT but if it does so this will have the effect of curtailing private sector consumption and investment.

If the government decides to finance the increased fiscal expenditure by selling bonds and widening the fiscal deficit it is quite possible that economic agents will conclude that the higher fiscal deficits today will mean higher taxes in the future. As such they might save more today so as not to suffer when the higher taxes come in the future.
Large fiscal deficits might upset the financial markets raising long term interest rates and the cost of raising capital.

There may be adverse supply side effects on the economy of increased government taxes to finance increased government expenditure on the labour market which lower the incentive to work and if taxes drive up employers' costs, these would directly reduce labour demand. [1]

In an open economy it is possible that an expansionary fiscal policy by raising the domestic interest rate might lead to a sharp appreciation of the currency which can reduce exports (since they become more costly in terms of the foreign currency) and increase imports (since they become more cheaper in terms of the domestic currency). This will mean a slowing down of aggregate demand so to some extent offsetting the effects of the increased government expenditure.

Resource crowding out occurs when the increased government expenditure takes away scarce resources from the private sector, leading to lower activity by the latter.

[4]

[Total 6]

A simpler definition such as 'crowding out occurs when increased government expenditure leads to lower private sector activity' is sufficient to merit two marks.

In part (i), a simple definition such as 'crowding out occurs when increased government expenditure leads to lower private sector activity' was sufficient to merit two marks. This part was generally answered correctly.

In part (ii), up to four types of crowding out as fully described above could be offered, each carrying 1 mark. Listing a crowding out type carried half a mark. Many candidates offered one or two mechanisms but very few explained four to gain four marks.

Q33

Governments may find both expansionary and contractionary monetary policy to control aggregate demand not as effective as they wish, due to economic agents' expectations and the difficulty in timely application of the policy. A policy undertaken too late and/or where consumers' and firms' expectations work against the policy, is likely not to achieve the desired outcome.

Whereas it is possible for governments to use a hard and prolonged contractionary monetary policy to somewhat reduce lending and suppress aggregate demand eventually, achieving the aims of an expansionary monetary policy can prove to be more challenging. For example, if interest rates are lowered in an attempt to pull the economy out of a recession the policy may not be effective if consumers and firms do not borrow to spend and invest when they expect the recession to persist. The central bank policy rate could be reduced to close to zero, but it could still fail to stimulate the economy. With very low interest rates and high levels of liquidity, borrowing and lending may remain low and the economy may get caught in a 'liquidity trap'. One way that governments try to instil confidence in consumers and firms to encourage spending is by providing forward guidance that interest rates are likely to remain low for a prolonged period of time.

A problem with raising or lowering interest rates is that it may cause economic agents to become fearful about other potential changes in interest rates and the pace at which they will be made, this increased policy and economic uncertainty can then lead to a loss of consumer and business confidence affecting consumption expenditure and investment. The raising of interest rates will also tend, over time, to raise the cost of servicing the national debt which will possibly lead economic agents to save more and invest less in anticipation of higher future taxes. In this manner raising interest rates may have a greater impact on future economic growth.

In an open economy context raising interest rates will tend to lead the domestic currency to appreciate which can have an adverse effect on export volumes and raise import volumes over time leading to a deterioration of the trade and current accounts of the balance of payments. While if interest rates are lowered then this depreciates the currency which can exacerbate an inflation problem.

A significant problem facing governments is that if there is an independent central bank then it may be reluctant to reduce interest rates in times of recession if it is towards the upper levels of its inflation target. [5]

For this question an explanation of liquidity trap carried 1 mark. Three marks were awarded for a discussion of expansionary or contractionary monetary policy. A discussion of both monetary and fiscal changes as a result of the policy carried an extra mark. Most candidates provide a reasonable explanation of liquidity trap. However, very few provided a full explanation of a contractionary or expansionary monetary policy.

Q34

A rise in interest rates from 4% to 6% on government bonds will have both direct and indirect effects. The direct effect of a rise in interest rates is to raise the cost of current government borrowing and so raise the fiscal deficit. In addition, it will raise the cost of financing the national debt to the extent that the debt has been financed by variable interest rates. In addition, a rise in interest rates from 4% to 6% will push up the cost of refinancing the national debt as bonds mature to the extent that the newly issued debt used to repay the existing national debt has a higher interest rate of 6% than the older debt financed at an average of 4%. The indirect effects of a rise in interest payments are also likely to widen the fiscal deficit initially since the interest rate rise will slow down the economy so increasing government expenditure on social security and dampening government tax revenues and widening the fiscal deficit which will in turn ultimately mean an even larger national debt in the future. [5]

For this question one mark was awarded for each of the three direct effects of the rise in interest rates and two marks for the indirect effects such the effect on tax revenue and transfer payments. Definitions of fiscal deficit and national debt, though not required, were given credit.

Most candidates were able to explain some of the indirect effects although very few offered an explanation of the indirect effects.

Q35

(i)

In areas where there are lots of users of public transportation services, the opening up of the market to monopolistic competition may encourage new providers to enter the market. With additional competition, prices should fall, which is beneficial to consumers. They will also have additional choice over the provider they use.

One of the benefits of a monopoly service provider is that they may be able to service some transport routes at a small profit due to overall cost advantages within their portfolio, such as organisational economies of scale or purchasing economies of scale. Firms which operate in a more monopolistically competitive market will only be able to generate normal profits which would limit investment in other routes and may find it difficult to realise cost savings and run routes which would otherwise be unprofitable.

Monopolies have more pricing power and the ability to price discriminate which could either harm or in some cases benefit consumers. Price discrimination is not so simple under conditions of monopolistic competition. On the other hand, monopolies have a greater risk of having X-inefficiency due to lack of competition than monopolistically competitive firms.

Routes which would have fewer passengers as they connect outskirts of a city and/or run at unsociable hours are feasible for monopolies to continue to provide but may be unaffordable for firms operating as monopolistically competitive and could lead to a loss of services overall and a more limited public transportation system for users in the longer term. [5]

(ii)

Entering into a new industry presents what are known as sunk costs, these are costs which cannot be recuperated when exiting a market. A firm entering into the public transport market, can put buses on the road with relative ease and use the existing road network as they wish to. Trams or any other form of transport which requires track to run, would require significant sunk costs if they wished to run an alternative network, with differing pick up and drop off points. This would be a considerable investment and therefore represents a riskier market to enter. Buses can be repurposed for different types of journeys, such as the school market or different areas as they are not fixed due to line networks. A tram in contrast may be much more limited in terms of being able to be sold off should the venture not be successful and therefore the cost of exit may prevent entry. [5]

[Total 10]

In part (i) a discussion of each market structure and valid comparisons needed to be made with reference to public transport. A discussion of each of the structures carried half the marks for this part. The answers to part (i) lacked detail and very few candidates scored the full marks.

In part (ii), two marks were awarded for defining sunk costs (with reference to trams and buses) and comparing the two. The remaining marks were allocated to a discussion of the advantages to the provider, of providing a bus service rather than a tram service. Most answers for this part of the question lacked sufficient detail.

Q36

(i)

There are generally acknowledged to be five key major macroeconomic policy objectives, low and stable inflation, strong but stable economic growth, low levels of unemployment and a sustainable balance of payments position.

One of the major economic objectives is inflation control, governments seek to have a low and stable rate of inflation. It is regarded as important not only to have inflation at a low level but also to make the inflation rate as predictable as possible since unanticipated inflation could cause some of the major economic problems. High inflation will undermine economic competitiveness, raises the cost of government borrowing, undermines economic activity, arbitrarily reduces the real income of those on fixed incomes and redistributes income from fixed rate lenders to fixed rate borrowers. A high and variable inflation rate can make it more difficult for economic agents to distinguish between nominal and real price changes in the economy which makes it harder to make optimal decisions regarding consumption and investment. High inflation can also undermine confidence in the domestic currency.

Another major objective of economic policy is having a high and stable economic growth rate; economic growth is regarded an important means of raising living standards and in helping to finance increased government expenditure on desirable public goods and services.

Keeping a low level of unemployment is another objective of economic policy as unemployment is considered to be a waste of resources, causes social deprivation and worsens the government fiscal position.

Fourthly, governments seek to have a sustainable balance of payments over time (which is sometimes taken to be seeking currency stability over time), this does not mean that the current account balance has to be always in balance, but it means that any deficit needs to be kept to a manageable size. A large balance of payment deficit would result in falling exchange rate which in turn would make imports more expensive and may cause inflation. Fluctuations in the exchange rates would create an uncertain environment for international trade and adversely affect international trade and growth.

A final objective can be financial system stability since a properly functioning and efficient and stable financial system underpins the entire economy and is important for households and firms when making economic decisions. [5]

(ii)
There are numerous conflicts that can occur in attempting to achieve these objectives. For example, stimulating the economy to reduce unemployment leads to increased import expenditure which may lead to deterioration in the balance of payments. Another problem is that attempts to cure unemployment by fiscal and monetary expansion may lead to a rise in the inflation rate of the country as aggregate demand rises. When the government seeks to bring inflation under control this may involve having to pursue tighter fiscal and monetary policies which by lowering investment and infrastructure spending can dampen future economic growth and lead to increased unemployment.

Governments with excessive current account deficits will also find themselves in the position of trying to curb import expenditure. This will involve reducing government expenditure and/or raising taxes and adopting tougher monetary policy by raising interest rates. This in turn will raise unemployment and cause slow economic growth especially in an open economy if the higher interest rates lead to an appreciation of the domestic currency.

If a government increase government expenditure financed by borrowed money, while this can boost short term employment and output, it might lead to higher interest rates and this can appreciate the currency lowering exports and increasing imports so worsening the balance of payments.

It should be noted that many of these conflicts are likely to be more pronounced in the short run than in the longer run. In the long run for instance, the trade-off between inflation and unemployment is less pronounced (and perhaps non-existent). Similarly, some economists argue that if an expansionary fiscal policy is used in an attempt to reduce unemployment it might work in the short run but in the longer run it will mean a higher national debt which will have to be financed by increased taxes and/or cuts in government expenditure in the future. Such policies may also crowd out private sector consumption and investment and potentially adversely affect employment and economic growth in the future. [5]

[Total 10]

In part (i) of this question, a full explanation of why the five objectives are important to the government was required, each carrying one mark. Candidates could gain four marks for offering the first four objectives provided that each explanation was very thorough and detailed. Most candidates offered three objectives for part (i) but most answers lacked detail.

In part (ii) a discussion of the conflict between achieving the objectives in part (i) was required rather than the difficulty of implementing monetary or fiscal policies. For this part, one mark was allocated to discussion of each trade-off with a maximum of four trade-offs. One mark was allocated to a discussion of the short run versus the long run trade-offs. Very few candidates provided a sufficiently detailed discussion for this part.

[Paper Total 100]

END OF EXAMINERS' REPORT