INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

13 September 2024 (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   A key principle of economics is that human wants ___(i)___ the availability of
___(ii)___. This concept is known as ___(iii)___.

      A   (i) are equal to, (ii) imports, (iii) opportunity cost
      B   (i) exceed, (ii) resources, (iii) scarcity
      C   (i) are less than, (ii) domestic supply, (iii) choice
      D   (i) are equal to, (ii) capital, (iii) scarcity.

                                                                            [1.5]

2   Which of the following is most likely to lead to an outward shift in the production
possibility curve for a country?

      A   A reduction in government spending on hospitals
      B   An increase in import taxes and duties
      C   A reduction in unemployment benefits
      D   An increase in the price level.

                                                                              [1.5]

3   Which one of the following changes will cause the supply curve for a good to shift to
the right?

      A   A rise in the profitability of producing substitute goods
      B   A fall in the price of the good
      C   A fall in the cost of producing the good
      D   The introduction of a new tax on the production of the good.

                                                                              [1.5]

4   Which of the following scenarios leads to no change in total consumer expenditure
when prices increase?

      A   Perfectly elastic demand
      B   Elastic demand
      C   Unit elasticity
      D   Perfectly inelastic demand.

                                                                               [1.5]

5   The endowment effect is associated with people exhibiting which characteristic?

      A   Bounded rationality
      B   Risk-seeking
      C   Loss-aversion
      D   Moral hazard.

                                                                               [1.5]

6   The owner of a business has used all of their own funds to set up the business. Which of the following is associated with an implicit cost incurred by the firm?

A   The utility costs for the office
B   The delivery fees paid to the subcontractors
C   The potential interest on the savings account
D   The rental cost of storage units to hold produce.

[1.5]

7   Which of the following is NOT considered to be a function of money?

A   Unit of account
B   Measure of liquidity
C   Store of value
D   Medium of exchange.

[1.5]

8   The impact of setting the minimum wage above the market equilibrium wage is most likely to be:

A   an excess demand for labour.
B   a shortage in the supply of labour.
C   no effect on labour supply or demand.
D   an increase in unemployment.

[1.5]

9   A paint manufacturer is planning to engage the services of a popular social media influencer to boost sales revenue against its main competitor.

If this initiative is successful the competitor firm's demand curve for paint will:

A   shift to the left and increase in steepness.
B   shift to the right and increase in steepness.
C   shift to the right and decrease in steepness.
D   shift to the left and decrease in steepness.

[1.5]

10   The difference between what an individual is willing to pay and what they actually pay for a good is:

A   marginal utility.
B   consumer surplus.
C   excess demand.
D   consumer excess.

[1.5]

11 An individual likes pears and peaches. Assume that their income doubles and the prices of pears and peaches also doubles. The individual's budget line will:

A   shift outward but not change slope.
B   remain unchanged.
C   shift inward and not change slope.
D   shift outward and become steeper.

[1.5]

12 Which of the following is a feature of second-degree price discrimination?

A   A firm charges consumers different prices according to how much they purchase
B   A firm charges each consumer a price equal to their marginal cost of production
C   Producers face a kinked demand curve
D   All producer surplus is lost.

[1.5]

13 In the short run, a firm should cease production if its price does not cover its:

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

[1.5]

14 A perfectly competitive market is operating in long run equilibrium and a new innovation is implemented that results in a downward shift in the firms' average cost curve. Which of the following is likely to occur as a result of this innovation in the short-run?

A   Industry output will fall
B   Prices will rise
C   Marginal revenue will rise
D   Firms will make excess profit.

[1.5]

15 Which of the following does NOT explain why wages for skilled workers are greater than the wages paid to unskilled workers?

A   Training costs are higher for skilled workers relative to unskilled workers
B   The marginal revenue product of skilled workers is higher than that of unskilled workers
C   The supply of skilled workers is greater than the supply of unskilled workers
D   Skilled workers have accumulated more human capital than unskilled workers.

[1.5]

16   An anticipated increase in the rate of inflation is:

A   costly because it causes redistribution from lenders to borrowers.
B   costly because it reduces the opportunity cost of holding money.
C   not costly because contracts can be readily adjusted.
D   costly because it increases the frequency of withdrawing cash.

[1.5]

17   Which of the following is most likely to be negatively correlated to an increase in real national income in a country?

A   The rate of inflation
B   A deficit on the international trade account
C   The rate of unemployment
D   A surplus in the government budget.

[1.5]

18   In 2022 a household has an annual income of £20,000 and annual spending of £10,000. In 2023 the household income rises to £30,000 and annual spending rises to £12,000. This indicates that for this household the:

A   marginal propensity to consume is 0.2.
B   marginal propensity to save is 0.2.
C   marginal propensity to consume is 0.4.
D   marginal propensity to save is 0.5.

[1.5]

19   Which of the following would NOT be considered a supply side policy?

A   Increases in transfer payments
B   Improvements in infrastructure
C   Increased investment in human and physical capital
D   Business support for new emerging firms.

[1.5]

20   If the price level in 2024 for a country is 180 and the rate of inflation between 2023 and 2024 has been 20%, then the price level in 2023 was:

A   100
B   160
C   150
D   144.

[1.5]

21 A change in consumer preference in favour of savings will lead to ___(i)___ in the marginal propensity to consume and ___(ii)___ in the effect of the multiplier on aggregate demand.

A   (i) a decrease, (ii) an increase
B   (i) an increase, (ii) an increase
C   (i) a decrease, (ii) a decrease
D   (i) an increase, (ii) a decrease.

[1.5]

22 A tightening of monetary policy with a flexible exchange rate and an open economy for a country will tend to lead to:

A   a decrease in the domestic interest rate and an appreciation of the exchange rate.
B   a decrease in the domestic interest rate and a depreciation of the exchange rate.
C   an increase in the domestic interest rate and an appreciation of the exchange rate.
D   an increase in the domestic interest rate and a depreciation of the exchange rate.

[1.5]

23 A cut in the overall rate of income tax in a country will tend to lead to:

A   an increase in aggregate planned expenditure as a result of increased imports.
B   a decrease in aggregate planned expenditure as a result of decreased disposable income.
C   an increase in aggregate planned expenditure as a result of increased disposable income.
D   an increase in aggregate planned expenditure as a result of decreased consumption.

[1.5]

24 In a country with a population of 50 million, there are 30 million employed and 7 million unemployed. Calculate the rate of unemployment to the nearest whole percentage.

A   23%
B   19%
C   14%
D   40%.

[1.5]

25   If the central bank of Country X buys Country X's government bonds in the open market, then the supply curve for money for Country X will:

A   shift to the right and interest rates will rise.
B   shift to the left and interest rates will fall.
C   shift to the left and interest rates will rise.
D   shift to the right and interest rates will fall.

[1.5]

26   Which of the following would NOT increase the government budget deficit?

A   An increase in interest on the government debt
B   An increase in government expenditure on goods and services
C   An increase in the labour participation rate
D   An increase in government transfer payments.

[1.5]

27   Explain why widespread poor weather conditions that adversely affect the supply of a crop that is commonly cultivated, such as wheat, can lead to positive outcomes for all farmers, but a fire affecting one farm's crop would not have the same positive outcome.   [3]

28   (i)   It has been observed that the consumption of a good increases while its price is rising at the same time. Explain the possible reasons for the increase in the consumption of the good and state whether or not this is consistent with the law of demand.   [2]

     (ii)   Good X and Good Y are substitutes for each other in consumption and production. There has been an initial increase in demand for Good X.

            (a)   Outline the short-term changes in price and quantity traded on for Good X and Good Y.

            (b)   Describe the likely long-term changes for Good X and Good Y.
                                                                                      [3]
                                                                              [Total 5]

29 (i) Discuss the type of market failure that may arise in the examples below, suggesting for each an action to address this market failure.

      (a) An individual driving their car during rush hour.

      (b) The sale of an expensive designer watch that is advertised as being genuine in a second-hand market.

[4]

    (ii) Explain, for each item below, whether it is an example of a private or public good:

- a lighthouse
- a mobile phone
- a national fire and rescue service.

[3]
[Total 7]

30 An ice cream manufacturer offers to provide freezers free of charge to retailers on the condition that retailers install only freezers provided by the manufacturer and store only the manufacturer's brand of ice cream in the freezers.

Explain why this may be an effective way for the manufacturer to expand its business, commenting on why this may be considered anti-competitive behaviour. [4]

31 The data below shows the quantity produced and total cost at different price levels for a good produced by Company X. Company X is a monopoly firm for this good.

Price (£)	20	18	16	14	12	10
Quantity	0	1	2	3	4	5
Total cost (£)	20	21	24	30	40	55

    (i) (a) Calculate the price that will maximise the profit and quantity traded for this good.

      (b) State the amount of profit Company X makes at the price calculated in part (i)(a).

      (c) Explain the impact on Company X's profit if fixed costs were to rise by £10 assuming the price calculated in part (i)(a).

[3]

    (ii) Outline, using an example, how a monopoly firm could be more efficient than a number of competitive firms in a market. [2]
[Total 5]

32 The information below represents data for Country Y. Country Y has an open economy:

	Euros
Consumption expenditure	1100
Government expenditure	650
Gross capital formation	400
Net income from abroad	80
Taxes on products	400
Subsidies on products	150
Capital consumption	100
Exports of goods and services	750
Imports of goods and services	850

Calculate the following for Country Y:

(i)   Gross domestic product (GDP) at market prices.   [2]

(ii)   Gross value added.   [1]

(iii)   Net national income.   [1]

[Total 4]

33   (i)   Discuss with the use of an example why, when calculating GDP, we only consider expenditure on final goods and services and not intermediate goods.

[2]

(ii)   Outline, using an example, a productive activity that is NOT included in the measurement of real GDP.   [2]

[Total 4]

34   Explain how disequilibrium unemployment may occur in an economy.   [4]

35 Country X and Country Y both produce lemons and oranges. The table below illustrates the number of oranges that each country can produce in a year, for a given number of lemons:

Country X		Country Y	
Lemons	Oranges	Lemons	Oranges
0	500	0	800
200	400	100	600
400		200	
600		300	
800		400	
1000			

(i)   Complete the table, assuming both countries experience constant opportunity costs.   [2]

(ii)   Calculate, for each country, the opportunity cost of producing lemons and oranges.   [1]

Now assume the countries agreed to trade one lemon for one orange. Prior to trade, Country X consumed 600 lemons and 200 oranges.

(iii) Calculate how many oranges better off Country X could be if they were to engage in trade and still wish to consume 600 lemons.   [2]

[Total 5]

36 (i)   Discuss if reducing income tax and business taxes can have positive effects on the supply side of the economy.   [6]

(ii)   Comment on supply measures other than those discussed in part (i) that could be used to improve the supply side of the economy.   [4]

[Total 10]

37 Describe the stages of a potential product lifecycle for a licensed online trade qualification in catering. This provision has traditionally been delivered in person by training providers in a range of education settings worldwide. Include in your answer reference to price, costs and profit at each stage of the cycle.   [10]
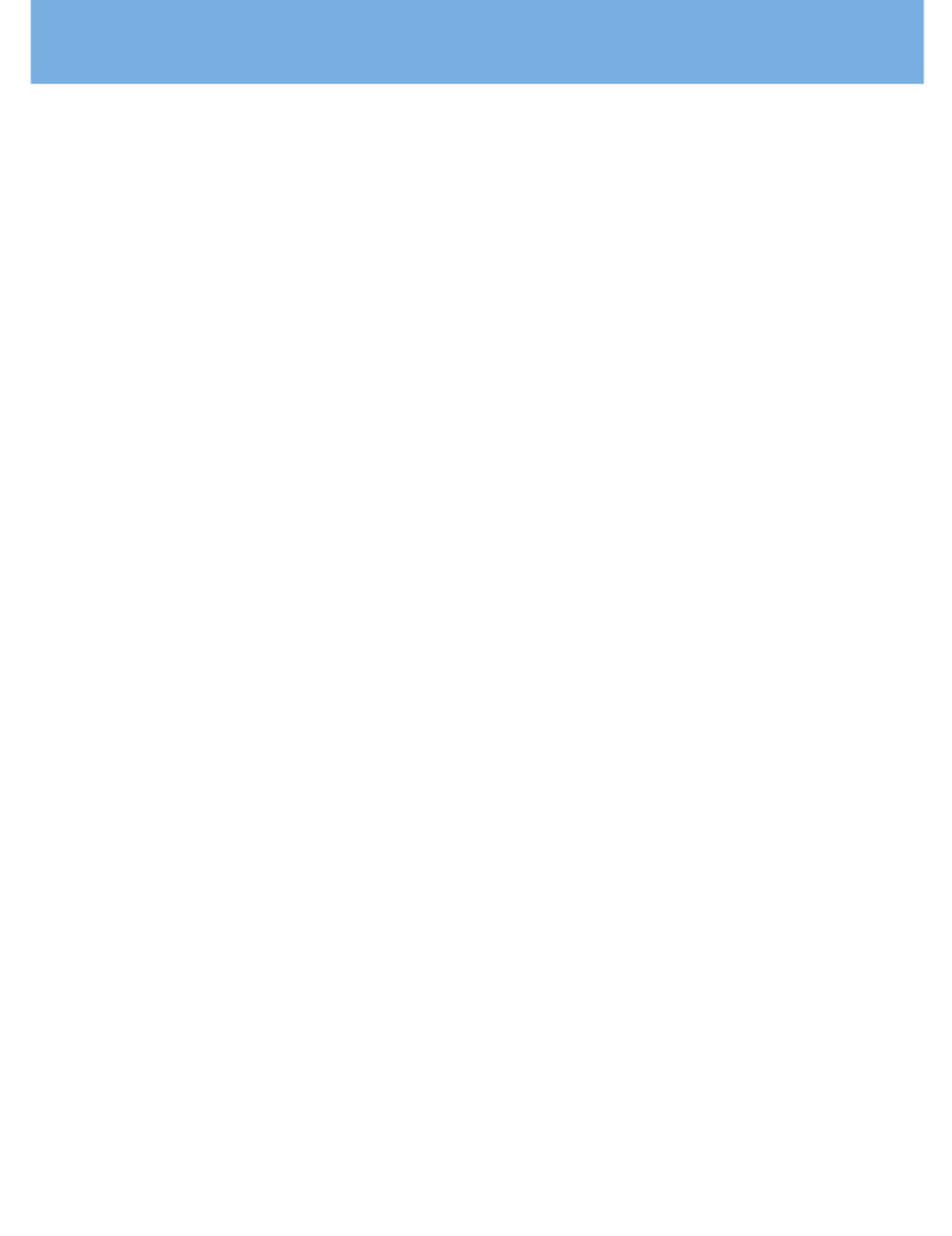
END OF PAPER

EXAMINERS' REPORT

CB2 - Business Economics
Core Principles

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 answering an examination using open books and online. The Examiners expect all candidates to have a good level of knowledge and understanding of the topics and therefore candidates should not be overly dependent on open book materials. In our experience, candidates that spend too long researching answers in their materials will not be successful either because of time management issues or because they do not properly answer the questions.

Many candidates rely on past exam papers and examiner reports. 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 text book 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.

Candidates should note that from the April 2025 exam session, all examinations will continue to be delivered virtually and will have online proctoring. Exams will be closed book and closed web. The ability to refer to past examiner reports and past papers during the exam is not permitted. Candidates attempting to do so will be in breach of the Assessment Regulations and subject to inappropriate conduct investigations. Further details of the new exams can be found on the IFOA website.

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
December 2024

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 in this session was generally strong, in particular in multiple choice answers and some theoretical parts of the questions. For the application type of questions answers often lacked the theory underpinning the outcomes/predictions and discussions often involved general basic observations. Long answer questions required the candidates to demonstrate higher order skills by application of theory within the given context throughout the discussion. Presenting the discussion as a coherent and succinct answer rather than a list of possible outcomes proved a challenge for some candidates. The paper was not as a whole as challenging as in previous sessions.

C. Pass Mark

The Pass Mark for this exam was 65%.
1169 presented themselves and 861 passed.

An analysis of the candidates' performance in relation to the questions in the examination paper, showed that candidates found the multiple choice questions straight forward and this contributed to higher scores than the examining team expected. On review of the candidates' performance on longer questions that require more in depth analysis, it was evident that the minimally competent candidate was scoring a mark of 65 or above and hence the decision was taken to increase the pass mark to 65.

Solutions for Subject CB2 - September 2024

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

[Total 39]

> *Commentary:*
>
> *The multiple-choice questions were generally answered well. Performance in a few multiple-choice questions exceeded expectations resulting in a higher pass mark than usual.*

Q27
Poor weather which largely destroys a crop, can lead to increased revenue for farmers if the crop is highly price inelastic.

If all farmers have lost some of their crops, the overall supply on the market is significantly reduced, the supply curve would shift to the left and prices would rise. If the crop in question is price inelastic (and potentially close to perfectly price inelastic) then demand would remain relatively unchanged. Hence there would be an increase in total revenue.

This would not be the case if it were just a single farm who lost their crop as there are many other suppliers who could continue to supply the market at the prevailing price.   [3]

[Total 3]

Q28
(i)
If the consumption of the good is increasing whilst price is also rising this could result from the demand curve shifting out to the right due to various factors, for example due to incomes rising. This is entirely consistent with the law of demand that predicts a fall in demand resulting from a rise in price, keeping the same all other factors that affect the demand. [2]

(ii)
(a)
If the demand for Good X increases, this would be shown by a rightward shift in demand for Good X leading to an initial rise in price and quantity traded.

Good Y as a substitute would experience an increase in demand, shown by a rightward shift in the demand for Good Y (as they are now cheaper). In the short run, the shift in the demand for Good Y may lead to an increase in both its price and quantity. [2]

(b)
In the long run producers will increase production of Good X to cater for higher demand. The increase in the supply of Good X may lead to a fall in the price of Good X. The fall in the price of Good may (depending on the magnitude of the fall) decrease the demand for Good Y. As The goods are substitutes in production and producers can command higher prices for Good X supply for Good Y falls as shown by a leftward shift in supply. The changes in supply and demand both contribute to a fall in quantity and the effect on price would be dependent on the extent of the shifts. [1]

[Total 5]

Q29

(i)

(a)

This is a negative externality (in consumption) as driving cars during rush hour would add to the congestion and slow other road users down. Road users could be charged a fee (congestion charge) or a city tax such as a carbon emissions tax to curb congestion in busy areas/at busy times and this may reduce road use as it would increase (private) costs for road users. The user would then experience the full social cost of their road use and may choose to use public transport. The driver could also decide to drive at a different time or seek to work from home to avoid traffic.

[2]

(b)

This may represent information asymmetry. As the seller, unlike the buyer, would know the condition of the watch exactly. To overcome this, the seller may provide a certificate of authenticity to prove the watch is not a fake item. They may provide photographs to demonstrate a serial number that could be checked with the manufacturer. They may also provide service records or a receipt as proof that it came from a reputable retailer.

[2]

(ii)

Lighthouses are a public good as they are both non-excludable and non-rival. It is not possible to provide light for some ships and not others out at sea as other ships cannot readily be excluded. Nor does the use of the light mean there is less for others since all ships benefit equally.

A mobile phone is a private good as the user can restrict others from using their phone and therefore using their number/line. The user pays for the service and can choose whether to allow others to use their phone. In terms of the network the phone connects to, there are capacity constraints in principle, but the phone would in general be viewed as a private good.

The fire service is close to being a public good. The service is provided for all and cannot exclude members of the public who have not paid taxes as this would not be checked at the time of an incident. There are some aspects of non-rivalry which are less well defined as the fire service cannot provide support for every household at the same time so there are some limitations in terms of rivalry. It meets the requirement of non-excludable (in principle) but rivalry is an issue. For this one the focus might be on rivalry and if this is the case and the discussion is not specifically indicating public or private this may be suitable.

[3]

[Total 7]

> **Commentary:**
> *This question was generally answered well. To gain the full mark for part (i) (a) an explanation of the social and private costs was expected. Various other measures to reduce the social cost were also accepted. To gain the full mark for part (ii) an explanation of the reasons for the three items qualifying as private or public goods in terms of satisfying the two conditions was needed.*

Q30
This may create a significant barrier to entry and limit the ability of competitors to penetrate the market.

Retailers may prefer to stock your ice-cream if they do not have to pay a fee to use the freezers as it would reduce their costs. By adding the restriction that only your product can be stored in the freezers, competitors' produce cannot be stored in the freezer and space may limit the provision of other freezers and thus other firms' entry into the market.

The strategy may be considered to be anti-competitive behaviour as it effectively enables the manufacturer (of ice cream) to influence what goods the retailer stocks.
It is a type of collusive behaviour as by providing free freezers there is a cost advantage to the retailer. By limiting the retailers' stock of ice cream to their own, the manufacturer creates a discriminatory advantage.

The manufacturer is limiting the ability of other firms to enter the market by restricting their ability to supply goods to retailers and hence the firm could restrict other manufacturers' ability to gain market share. [4]
[Total 4]

Commentary:
Most candidates made a good attempt at this question although some answers lacked focus in explaining the impact of the manufacturer's strategy on the market, consumers and competitors.

Q31
(i)
(a) P = 14 and [½]
   Q = 3 [½]
(b) 12 [1]
(c) The firm's maximising output and price would not be affected but its profit would be lower by the amount of the increase in fixed costs. [1]
(ii)
A monopoly firm will likely have large economies of scale and scope and in such circumstances will be more efficient than a perfectly competitive firm. In so doing, costs will be lower in the monopoly firm. The many firms in a perfectly competitive market produce identical products.

An example could be a firm that produces a large range of different products such as that observed in the home cleaning market. Alternatively, the firm could have substantially lower costs as it could have financial benefits being able to negotiate better finance or deals for its inputs. [2]
[Total 5]

<table>
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Commentary:

Most candidates offered correct values for (a) and (b) in part (i) of this question but (c) proved more of a challenge. In (ii) most answers were confined to strategies of a monopoly firm without comparing it to perfect competition.

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</table>

Q32
(i)
GDP (at market prices) = C+ I + G + (X-M) = 1100 + 400 + 650 + (750 -850) =
2050   [2]
(ii)
GVA = GDP - taxes + subsidies = 2050 - 400 + 150 = 1800   [1]
(iii)
NNY = GNY - capital consumption
GNY (at market prices) = GDP (at market prices) + net income from abroad
GNY = 2050 + 80 = 2130
NNY = 2130 - 100 = 2030   [1]
                                                                                    [Total 4]

<table>
<tr><td>

Commentary:

Only a few candidates answered this question fully and correctly. Where the answer to (i) was incorrect and the incorrect result from (i) was used to calculate the answer to parts (ii) and (iii), credit was given for correct method and formulae.

</td></tr>
</table>

Q33
(i)
Intermediate goods and services are excluded from the calculation of GDP because including these would lead to overcounting. The final sales value of a good is the total of the values contributed by various producers involved in different stages of the production so the value of these intermediate stages would have already been counted.

Using a television as an example, the electronic cables and components that are sold from suppliers to the television manufacturer would be counted and we would then also include the final sale of the television from the retailer to the consumer. This would overstate the amount of value generated in the economy.   [2]
(ii)
Activities that are not included in the measurement of GDP but represent productive activities may include illegal activities. The manufacturer of weapons and drugs that are not sold in legally recognised markets will not be officially recorded and this may be due to illegality or to avoid taxes (depending on the nature of the activity).

Alternative example: Activities undertaken by households such as caring for children or other household members (the elderly), undertaking repairs including garden maintenance, decorating, appliance and car repairs, cleaning, etc would also be productive activities that are not included in the measurement of GDP. These would   [2]

be included if someone was employed to undertake them but not if they are undertaken by the household directly.

[Total 4]

Commentary:

This question was generally answered well although some answers lacked detail. Alternative suggestions as examples, if fully explained, were given credit.

Q34

Disequilibrium unemployment tends to arise when the prevailing wage in the labour market is above the equilibrium real wage. Real-wage unemployment is such an example and could arise from a national minimum wage that is too high. In such a case, there is an excess supply of labour as firms are not willing to hire people at this wage rate and so the market is unable to clear. This is a form of involuntary unemployment. It can also occur in any case where wages are sticky and do not readily fall to clear the market.

Another example may be demand deficient or cyclical unemployment, where unemployment arises as aggregate demand falls in the economy without an adjustment in real wages.

Finally, disequilibrium unemployment may also be associated with strong trade unions, which push wages upward/prevent them from falling to support their members. Linked to this, trade unions may prevent outsiders from entering and securing jobs with firms (who could be hired at a lower wage). This may be referred to as insider: outsider theory.

It may also be the case that (an alternative viewpoint) firms pay much higher wages in order to incentivise workers to be more productive and this limits them from seeking lower paid workers.

[4]

[Total 4]

Commentary:

This question probed an understanding of the difference between equilibrium and disequilibrium unemployment. In answering this question, the circumstances for disequilibrium unemployment arising needed to fully explained. Some answers were confined to a description of the equilibrium unemployment and did not gain the mark.

Q35
(i)

[2]
(1 mark for each column)

X		Y	
Lemons	Oranges	Lemons	Oranges
0	500	0	800
200	400	100	600

400	**300**	200	**400**
600	**200**	300	**200**
800	**100**	400	**0**
1000	**0**	-	-

(ii)
For Country X the opportunity cost of producing Lemons is 1 lemon for ½ orange
and the opportunity cost of producing oranges is 1 orange is 2 lemons.   [½]
For Country Y the opportunity cost of producing lemons is 1 lemon for 2 oranges
and the opportunity cost of producing oranges is 1 orange for ½ lemon.   [½]

(iii)
Country X specialises in lemons and produces 1000 lemons. Country Y will
specialise in oranges and produce 800 oranges.

1 lemon is traded for 1 orange.

Country X will have 600 lemons and can trade 400 of these to Country Y in
exchange for 400 oranges.

They are better off by 200 oranges.   [2]
                                                                         [Total 5]

Commentary:
Parts (i) and (ii) of this question were answered well. The answers to Part (iii) were not as strong. This part generally proved more challenging.

Q36
(i)
An argument for cutting income tax is that it will have substitution and income
effects. The first is that as taxes fall, people may be more incentivised to work more
as they will get to keep more of their earned income. However, in so doing, people
may also be induced to cut their hours of work as they can earn the same amount of
money but have more leisure time. Those with caring responsibilities may not be
induced to work more as additional hours at work may incur additional costs and the
individual may not experience any financial benefit from increasing their working
hours.

Cutting income tax could increase the participation ratio and incentives for moving
into the labour force. This increase in labour supply could help alleviate upward
pressure on wages, as additional slack is created in the market.

If the government reduced taxes on firms, this enables firms to reduce their costs. If
additional funds are then redistributed into investment activities such as R&D which
could support innovation in physical capital or training and development (human
capital) to improve productive capacity then there would be a positive supply side
effect. If the lower tax led firms to increase shareholder dividend payouts then the   [6]

benefits to the supply side of the economy would be much more limited. Lower taxes may also make the economy a more attractive proposition for international firms and increase the level of competition in the economy which may help to drive down costs or increase innovation.

(ii)

Another supply side measure that can be used to improve the smooth running of the economy would include a focus on the employment side of the market. Ensuring that labour is well mobilised so that job seekers are well placed with vacancies is important to minimise the level of unemployment in the economy. This can be both in terms of geographical mobility to place people in the right area/region, and occupationally, to match the skills that people have with the needs of the economy and how it is developing, this can be undertaken through supporting training and development. Another factor associated with the labour market, pertains to the management of trade union powers to prevent/limit their ability to push wages above the real wage level. Collectively proper management of the labour force can create a more flexible and adaptable workforce and employment market, reducing unemployment and increasing human capital accumulation, to develop a more productive and efficient workforce, which may also generate positive spillover effects to further enhance productivity and improve the supply side of the market.

Other interventions related to the supply side of the market can include changes in the welfare system to limit/reduce entitlement to social security benefits, creating a business environment which is more conducive to entrepreneurship and opportunities for activities, such as simplifying processes, regulations and requirements. Additionally, the removal of barriers that may limit competition can be a positive influence on the supply side of the market as firms are not protected and must seek to be innovative in order to survive in the market, this can be at a national level but also at an international level (as posed in the infant industry argument for example).   [4]

[Total 10]

Commentary:
The answers to this question generally lacked detail so very few candidates gained the full mark for this question. In part (ii) the answers needed to explain how the suggested policies increased the supply. Some answers to part (ii) offered demand side policies rather than policies aimed at boosting the supply side.

Q37

Reference should be made to the 4 stages of the lifecycle. Launch, Growth, Maturity and Decline.

Launch - a small number of firms begin to deliver the qualification via online platforms, showcasing videos to present materials to those undertaking the qualification. Costs at this point are likely to be relatively high given sunk costs in the technology to deliver online provision as it would require high quality video content and marketing costs to launch into market.

In geographical regions there may be few competitors initially as there will be barriers to entry in the form of suitable platforms to deliver such online learning, suitable staff

that can deliver training with specialist expertise and also licence availability restrictions to award the qualification are also likely to be barriers to entry.

The market may initially be limited as it is a new product with which potential consumers are unfamiliar. Advertising expenditure to demonstrate to potential students the advantages of obtaining their qualification online is likely to be very high. Prices may need to be low relative to traditional training (in cookery schools/professional kitchens/colleges) as customers may be uncertain about the product's credibility, to entice new customers. With low revenues and very high costs, at both entering the market and product development, profits are highly likely to be negative. Firms that have entered into this market may be moving into this market as a by-product of their existing product portfolio rather than completely new to the industry.

Growth - over time (and this would be expected to be a fairly prolonged period of time given the qualification may take some time to complete) more firms will enter into the market if demand is strong. Online provision has a comparative advantage relative to in- person training in that they do not have physical specialist spaces which may be in high demand, require lengthy travel to, and people can study at a time and place that suits them. Students would not need to travel within the country or overseas to access such training or even in country travel, and this may make such provision appealing. The market has significant potential growth over time if this way of delivering training is accepted by the market (by both students and employers/prospective employers. As demand for online training develops and competition between providers grows through strong aggressive marketing/promotion and global recognition, prices could begin to rise.

Firms who offer a premium product, perhaps in terms of student success pathways into highly prestigious kitchens/restaurants, post study earnings or some other comparable metric, would be able to seek to charge higher prices and differentiate their product as premium, with their price acting as a signal of their quality of their product. With some firms being able to charge higher prices and increasing student numbers, revenue would increase. Profits at this stage would be rising and this could enable further investment into the product such as expanding the range of course offerings or other related products in readiness for maturity.

At this stage, firms would be seeking to establish a strong gain market share and segmentation of the market is likely to occur to attract different segments of the market as provision increases.

Maturity - In this stage, revenues would stabilise for those firms that have been able to secure a significant market share. The market, it is highly likely to be segmented with different types of providers competing in the different segments of the market. At this stage, online provision may be more mainstream, demand may become fairly static/mirror population sizes and be primarily influenced by demographic changes or economic environment changes in terms of job opportunities.

Costs may potentially be falling in some areas of the firm by this point. The initial investment cost should have been possible able to be recouped and costs could be primarily associated with general operational costs. If some firms have been able to establish significant market share, they may now seek to renegotiate contracts, to push their costs down and may have developed in house provision or acquired firms in the supply chain to provide services that the firm needs. Investment costs could be very high if the market is highly competitive as firms in the different segments of the market compete against one another.

Providers will seek to compete on price and product in the various segments of the market, offering alternative courses, additional experiences and add-ons to maintain market share. For those firms that have the greatest market share, premium pricing would need to be maintained to ensure that they are able to maintain their position in offering the best possible product to their respective market. Segmentation could be on the basis of geographical location/specialisation/language provision, pricing, range of expert chefs and so on.

Decline - At this stage, there may be a number of providers who do not have a strong hold on the market and may act in a way that is similar to a monopolistically competitive market, those that are unable to cover their costs or by this point recover the initial investment costs will have to exit the market if they cannot attract sufficient demand to generate revenue to cover the long run costs of the business.

In order to survive, some firms may seek to join other firms to extend their survival in the market, spreading expertise in geographical coverage or the range of courses to spread costs. Firms may also decide to exit particular segments of the market as they may deem that the costs associated with some locations of types of course are too high relative to the revenue generated in those markets. What may be observed at the end of this is a market that is characterised by a few large firms which may dominate in particular areas/regions and/or courses and a range of smaller providers in other markets as is the case with traditional in person training.

[10]
[Total 10]

Commentary:
Most candidates stated the four stages of the life cycle. However, most answers lacked detail, were often formulaic and presented in bullet points and did not discuss the four stages as directly applied to the training course. Marks were gained for discussing all aspects of the four stages directly applied to the online training course.

[Paper Total 100]

END OF EXAMINERS' REPORT