

Student Name:



## 2023 VCE ECONOMICS UNITS 3 and 4

### Practice Examination - A

#### Solutions

<i>Section</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
A	15	15
B	3	65
		<b>TOTAL: 80</b>

- Students are permitted to bring into the SAC room: pens, pencils, highlighters, erasers, sharpeners, rulers and one scientific calculator.
- Students are NOT permitted to bring into the SAC room: blank sheets of paper and/or white out liquid/tape.

#### Materials supplied

- Question and Answer Book of 19 pages.

#### Instructions

- Write your name and your teacher's name in the space provided on the front page of this Question and Answer Book.
- Answer all questions in the spaces provided.

**Students are not permitted to bring mobile phones and/or any other unauthorized electronic devices into the SAC room.**

## Section A – Multiple Choice Questions

### Question 1

Which of the following is not likely to be a consequence of failing to achieve the goal of strong and sustainable economic growth?

- A. High levels of unemployment.
- B. High levels of inflation.
- C. High levels of consumer confidence.**
- D. High levels of environmental degradation.

### Question 2

	Millions
Aged 15 and over	100
Unemployed	8
Employed	62
Underemployed	12
Studying full time	5

Referring to the table above for the hypothetical economy of Footyville. The labour force participation rate is:

- A. 82%
- B. 79%
- C. 70%**
- D. 62%

### Question 3

Which of the following is not a strength of monetary policy to affect the goal of low inflation?

- A. Relatively short impact lag**
- B. Relatively short implementation lag
- C. Free of political bias
- D. Ability to reduce discretionary incomes of borrowers.

### Question 4

Expenditure by a supermarket on locally produced breakfast cereal for resale is an example of:

- A. Private Consumption expenditure**
- B. Private Investment expenditure.
- C. Export expenditure.
- D. Import expenditure.

### Question 5

Aggregate supply policies can complement aggregate demand policies in promoting non-inflationary economic growth over time by:

- A. Increasing demand inflationary pressures in the short run
- B. Increasing the productive capacity of the economy in the long run.**
- C. Increasing structural unemployment in the short run.
- D. Increasing levels of government debt in the long run.

### Question 6

Andrew worked as a sales assistant at a local surf-shop. Unfortunately, he's recently been made redundant to cut costs due to a significant drop in sales impacting on the profitability of the business. The type of unemployment experienced by Andrew is:

- A. Structural.
- B. Seasonal.
- C. Temporary.
- D. Cyclical.**

### Question 7

Australia's significant increase in skilled migration in 2022/23 aims to:

- A. Increase demand pressure in Australia's rental market.
- B. Increase the quantity and quality of Australia's labour force.**
- C. Improve Australia's labour productivity.
- D. Place downward pressure on Real Unit Labour Costs.

### Question 8

Which of the following is not a characteristic of a perfectly competitive market?

- A. Many buyers and sellers.
- B. The existence of zero opportunity costs for buyers.**
- C. Low or non-existent barriers to entry and exit of the market.
- D. Homogeneous good or service.

### Question 9

A negative short-term impact of the policy of trade liberalisation could be:

- A. Increased inflation as a greater quantity of foreign sellers compete with Australian producers.
- B. Increased structural unemployment as Australian firms that are not internationally competitive are forced to downsize.**
- C. Increased cyclical unemployment as Australian firms replace labour with capital to improve their level of international competitiveness.
- D. Increased dynamic efficiency of the Australian economy as resources move towards Australia's most internationally competitive industries.

### Question 10

	Year 1	Year 2
Export Price Index	100	100
Import Price Index	100	80

Referring to the above data for the hypothetical economy of Rockville. The terms of trade in Year 2 is:

- A. 80
- B. 100
- C. 125**
- D. 200

### Question 11

The Australian Government receives interest income on US Treasury Bonds. Which sub-account of the Australia's current account would the transaction be recorded in?

- A. Balance of merchandise trade
- B. Net Services
- C. Net Primary Incomes**
- D. Net Secondary Incomes

### Question 12

Which of the following is not a method that can be used by the Australian Government to finance an underlying cash deficit?

- A. Increase income tax rates.**
- B. Sell Australian Government Securities to Australian investors.
- C. Sell Australian Government Securities to overseas investors.
- D. Sell Australian Government Securities to Australian and overseas investors.

### Question 13

Research and development can assist in improving Australia's aggregate supply by:

- A. improving the skills of workers in Australia's labour force.
- B. improving the competitiveness of Australia's taxation system.
- C. improving the dynamic efficiency of Australia's tradables sector.
- D. improving the productive efficiency of Australia's manufacturing industries.**

#### Question 14

The type of market failure that can exist in health insurance market, whereby buyers have more knowledge than sellers is referred to as:

- A. Opportunity cost.
- B. Negative externalities.
- C. Information asymmetry.**
- D. Positive externalities.

#### Question 15

The price elasticity of demand for cigarettes is often described as inelastic because:

- A. For a given increase in price there is a proportionately smaller reduction in quantity demanded.**
- B. For a given increase in price there is a proportionately larger reduction in quantity demanded.
- C. For a given increase in price there is a proportionately smaller reduction in quantity supplied.
- D. For a given increase in price there is a proportionately larger reduction in quantity supplied.

## Section B – Written Responses

### Question 1 (12 marks)

- a. Explain two reasons why a demand curve is downward sloping.

3 marks

#### Marking guide

1 mark for explaining one reason.

1 mark for explaining the second reason.

1 mark for referencing law of demand (i.e., quantity demanded declines as the price rises and vice versa)

#### Sample response

*One key reason for the downward slope of the demand curve is the substitution effect. The more the price of a good increases, the greater the chance consumers will seek out a good that can be substituted for the good in this market, and the more a price for a good decrease, the greater the chance that consumers will look to substitute that good for another good in another market. Another key reason is the income effect, the more the price of a good goes up, the greater the proportion of a consumer's income is required to purchase the good and the less likely that consumer is to make the purchase. In both instances, this dictates that as the price rises for a good, the quantity demanded will decrease and the reverse is true leading to the demand curve sloping downward as dictated by the law of demand.*

**Supplies of fresh potatoes may be down by up to 40% in 2022 as floods in New South Wales and Victoria and overseas droughts have crippled supply. In addition, rising transport and fertilizer costs have further hurt the viability of Australia's potato farming industry.**

*Note - This is a fictional statement.*

- b. With reference to the above statement, describe how a non-price supply factor has impacted on the market for potatoes.

2 marks

#### Marking guide

1 mark for describing the non-price supply factor.

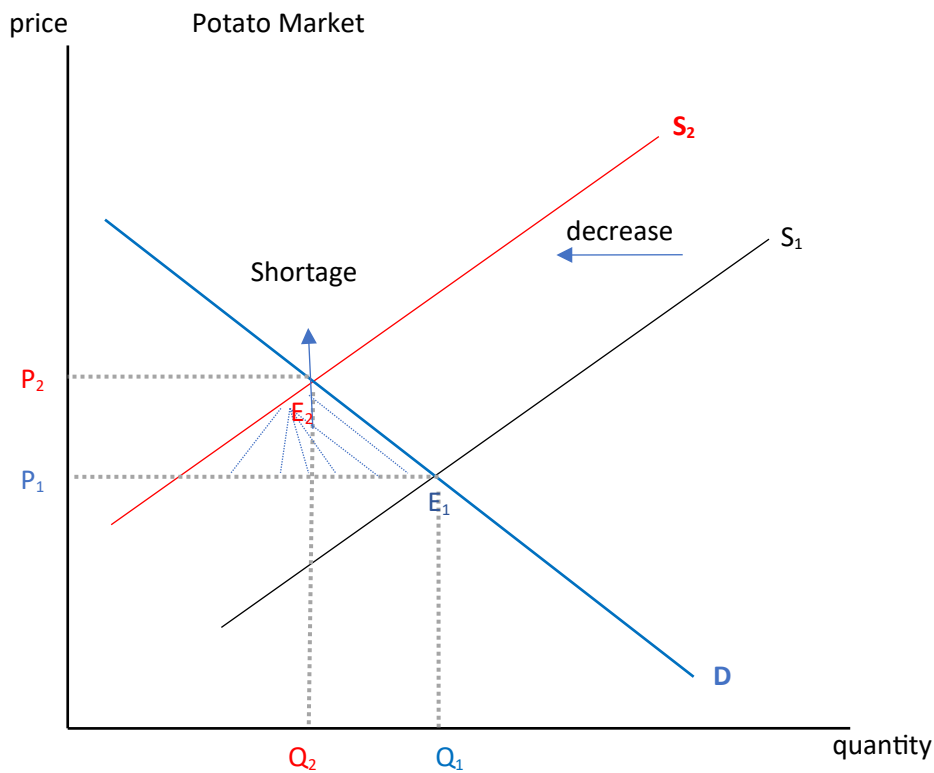
1 mark for describing how this impacts supply in the market.

#### Sample response

*Due to climatic conditions, domestic growers of potatoes ability to supply a quantity of potatoes at any given price has declined with the floods having a negative impact on potato farms, and international growers due to droughts negatively impacting their farms. As a result, this will contribute to the quantity of potatoes supplied at any given price to decrease, decreasing the supply of potatoes in the market by a significant amount of up to 40% in 2022, really testing the viability of Australia's potato farming industry.*

- c. Construct a fully labelled demand and supply diagram demonstrating the change in the non-price supply factor for potatoes described in **part b**.

3 marks



**Marking guide**

- 1 mark for correctly labelling axis Price and Quantity, P1 and P2, and Q1 and Q2
- 1 mark for correctly labelling the curves D, S1 and S2 and the new equilibrium.
- 1 mark for correctly labelling shortage, and movements along the demand and supply curve.

d. Analyse how a change in the non-price supply factor from **part b** impacts upon equilibrium price and quantity in the potato market.

4 marks

**Marking guide**

- 1 mark for outlining how supply changes including a shift in the supply curve.
- 1 mark for reference to the shortage forming if the price were to remain the same.
- 1 mark for referencing how demand will contract and supply expand in response to the change in price and a new equilibrium form.
- 1 mark for complexity in the analysis, for example, a reference to how the likely low elasticity of supply would contribute large change in price, given the expected 40% change in supply.

**Sample response**

*Due to climatic conditions, the supply of potatoes decreased leading to a shift on the supply curve to the left, from S1 to S2. In the event the prices remain the same, a shortage will place upward pressure on the price leading to a contraction in demand along with an expansion in supply, with a new equilibrium forming in the market at a lower quantity (Q2), however, higher price (P2). Due to the fact that there is a long production period for potatoes, the price elasticity of supply would be low ensuring that at the new equilibrium, the fact*

*that there is potentially a 40% drop in the quantity of potatoes available could lead to a significant increase in price.*

### **Question 2 (33 marks)**

- a. Outline the Australian Government's goal of low and stable inflation.

2 marks

#### **Marking guide**

1 mark for a basic outline that does not include the full key details.

2 marks for a detailed outline including reference to "headline inflation" and "medium term."

#### **Sample response**

*The goal of low and stable inflation requires the headline inflation rate to be between 2 to 3% over the medium term.*

- b. Outline one aggregate demand and one aggregate supply factor that could have contributed to inflation over the past two years.

4 marks

#### **Marking guide**

1 mark for identifying an aggregate demand factor and providing a basic outline.

1 mark for providing a detailed outline.

1 mark for identifying an aggregate supply factor and providing a basic outline.

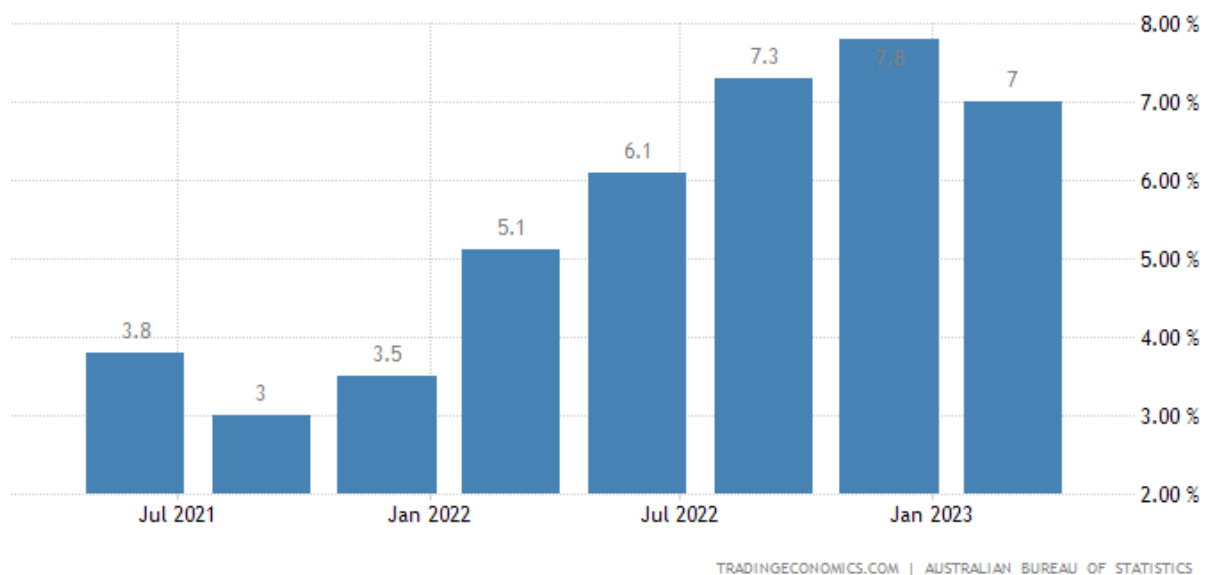
1 mark for providing a detailed outline.

#### **Sample response**

Over the past two years, inflation has risen steadily from below 4% to a high just below 8%. A key contributing factor from the demand side of the economy could be levels of economic growth overseas as our major trading partners have emerged from lockdowns associated with the CoVid pandemic. As a result, this will have led to an increase in consumption of Australia's key exports, boosting levels of net exports and placing upward pressure on aggregate demand, increasing economic activity, and pushing the economy closer to its productive capacity and creating demand inflationary pressures. At the same time, the war in the Ukraine has placed upward pressure on the price of oil, placing upward pressure on petrol prices a key component of many production processes, increasing the cost of production. Rising cost of production reduces the productive capacity of the Australian economy, as each unit of production becomes more expensive to produce placing upward pressure on cost inflation. In both instances this will have contributed to a rise in the general level of prices in the Australian economy over the last two years.



**Figure 1 - Australia's Annual Consumer Price Index (March 2021 – March 2023)**



Source: <https://tradingeconomics.com/australia/inflation-cpi> accessed 4/6/23

- c. Evaluate the extent to which the Australian government has achieved its goal of low and stable inflation in the past two years. Include reference to figure 1 in your response.

4 marks

**Marking guide**

- 1 mark for referencing figure 1, must be in the form of data from the graph.
- 1 mark for a basic assessment pointing toward having not achieved the goal.
- 1 mark for a detailed assessment pointing toward having not achieved the goal.
- 1 mark for an assessment point ward having achieved the goal / or not being able to make an assessment due to the time period.

**Sample response**

*Over the two-year period represented in figure 1, the inflation rate has increased from a low of 3% to a high of approximately 7.8% before coming down to 7%. Clearly this is above the 2 to 3% range of headline inflation, which would indicate that the goal of low and stable inflation has not been achieved. Whilst the 3% low not long after July 2021 was within this range, the rate has steadily increased through the period with a reversal in the trend to 7%. One factor that does need to take into account when determining whether the goal has been achieved or not considering the level of headline inflation over the medium term, which is usually approximately 5 to 7 years. In the absence of data prior to July 2021, and the underlying inflation rate which would provide some indication of what the headline rate is likely to be in the future, it is difficult to make a full assessment of whether the goal has been achieved. Overall, the previous two years indicate the goal has not been achieved, but the recent reversal in the trend is a positive sign.*

- d. Explain one consequence of not achieving the Australian Government's goal of low and stable inflation.

3 marks

**Marking guide**

- 1 mark for identifying one consequence.
- 1 mark for explaining what the consequence is/involves.
- 1 mark for linking the consequence to the goal, including a definition of the goal.

### **Sample response**

*One consequence of not achieving the Australian Government's goal of low and stable inflation is the impact that this can have on Australia's international competitiveness, the ability of Australia producers to compete with international rivals in domestic and international markets. Currently Australia's inflation rate sits well above the goal of 2 to 3% headline inflation over the medium term, and as a result our exports are potentially more expensive in foreign currency terms in international markets negatively impacting on their attractiveness to foreign consumers, in addition, goods and services imported from overseas might be cheaper in Australian dollar terms due to lower rates of inflation in the producers economy, negatively impact on domestically produced goods and services attractiveness to Australian consumers leading to imports being purchased ahead of locally produced items.*

- e. Explain how conventional monetary policy is used by the Reserve Bank of Australia (RBA) to influence interest rates in Australia.

4 marks

### **Marking guide**

- 1 mark for a display of understanding of conventional monetary policy
- 1 mark for explaining the process of influencing the cash rate.
- 1 mark for providing a link between the cash rate and market interest rates.
- 1 mark for referencing the RBA's approach over the last 14 months.

### **Sample response**

*Conventional monetary policy involves the Reserve Bank of Australia meeting 11 times a year to consider the economic climate and make decisions as to whether they should be loosening, tightening or leaving monetary policy unchanged by changing the cash rate. The RBA alters the cash rate through open market operations in the overnight money market, a market in which all commercial banks in Australia are required to have an exchange settlement account to facilitate transactions between the banks. The supply of money in this market is fixed and the RBA manipulates this supply to manipulate the cash rate by buying or selling commonwealth government securities, or rate that the banks borrow and lend from each other in the overnight money market to maintain a positive balance in their account as required by law. Any change in the cash rate influences the commercial bank's ability to lend at given interest rates, thus any change in the cash rate is reflected in the market interest rates offered by banks. For example, over the last 14 months the RBA has been increasing the cash rate by selling CGS in the overnight money markets which has reduced the supply or liquidity in the market placing upward pressure on the cash rate. In turn, banks have been increasing their interest rates, which mortgage rates increasing from below 2% to above 6% in the same period.*

- f. Explain how the asset prices and wealth channel and the cash flow channel were used by the RBA to influence aggregate demand and inflation in 2023.

6 marks

### **Marking guide**

- 1 mark for outlining what the asset price and wealth channel involves.
- 1 mark for explaining how the channel operates/works to impact on aggregate demand.
- 1 mark for the link to inflation (note: the questions does not state "goal", so there is no expectation that the goal of low and stable be included in the explanation)
- 1 mark for outlining what the cash flow channel involves.
- 1 mark for explaining how the channel operates/works to impact on aggregate demand.
- 1 mark for the link to inflation via demand inflationary pressures (note: the questions does not state "goal", so there is no expectation that the goal of low and stable be included in the explanation, however there should be a reference to "demand inflation")

A student may structure the response with a conclusion that links to inflation, so mentioning the link to inflation only once. This is acceptable as the link requirement is fulfilled.

**Sample response**

During 2023, the RBA increased the cash rate on many occasions. As a result, this would have led to a fall in demand for assets such as housing and shares, resulting in negative growth of the price of these assets and household wealth. Consumers respond to the reduction in their wealth through decisions on spending on discretionary items, preferring to eat at home instead of out at restaurants and wearing old clothing instead of purchasing new clothing. This places downward pressure on private consumption expenditure, and subsequently aggregate demand. In addition, those households with variable rate home loans will experience an increase in their interest rates and an increase in proportion of their income that is required to service their loan. This leaves a smaller proportion of their disposable income available for spending on discretionary items, placing downward pressure on private consumption expenditure, the same impact occurs on businesses with variable rate loans, reducing the most volatile component of aggregate demand, private investment expenditure and subsequently aggregate demand. In both instances, this moves levels of economic activity away from the economies' productive capacity, reducing demand inflationary pressures in the economy resulting in prices rising slowly and disinflation.

- g. Outline one automatic stabiliser and one discretionary stabiliser from the past two years and explain its impact on aggregate demand.

4 marks

**Marking guide**

- 1 mark for identifying one automatic stabiliser and providing an outline.
- 1 mark for linking the operation of the automatic stabiliser to aggregate demand.
- 1 mark for identifying one discretionary stabiliser and providing an outline.
- 1 mark for linking the operation of the discretionary stabiliser to aggregate demand.

**Sample response**

Over the last two years, a fall in the level of unemployment has led to an increase in the levels of personal income tax paid by the government, as more individuals become employed and strong levels of economic activity and subsequent wage growth see others move up into the higher tax brackets. This will place downward pressure on wage growth, leading to the same downward pressure on private consumption expenditure, avoiding what would be large increases in the absence of the increase in the proportion of tax taken from the employed, ensuring any growth in aggregate demand is not excessive. At the same time, the government has increased amounts invested in childcare, including increasing the child care subsidy, making it more affordable for families and incentivising both parents to re-enter the workforce boosting levels of household income, placing upward pressure on disposable income, increasing spending on discretionary items such as new clothes, increasing levels of aggregate demand.

- h. Analyse the strengths and weaknesses of budgetary policy in achieving the Australian government's goal of low and stable inflation.

6 marks

**Marking guide**

- 1 mark for identifying and outlining one strength.
- 1 mark for identifying and outlining another strength.
- 1 mark for the analysis of how this enhances how the operation of budgetary policy will assist in achieving the goal.

1 mark for identifying and outlining one weakness.

1 mark for identifying and outlining another weakness.

1 mark for the analyse of how this enhances how the operation of budgetary policy will assist in achieving the goal.

*Due to the reference to strengths and weaknesses, plural, in the question. There is an expectation of a minimum of two of each for full marks.*

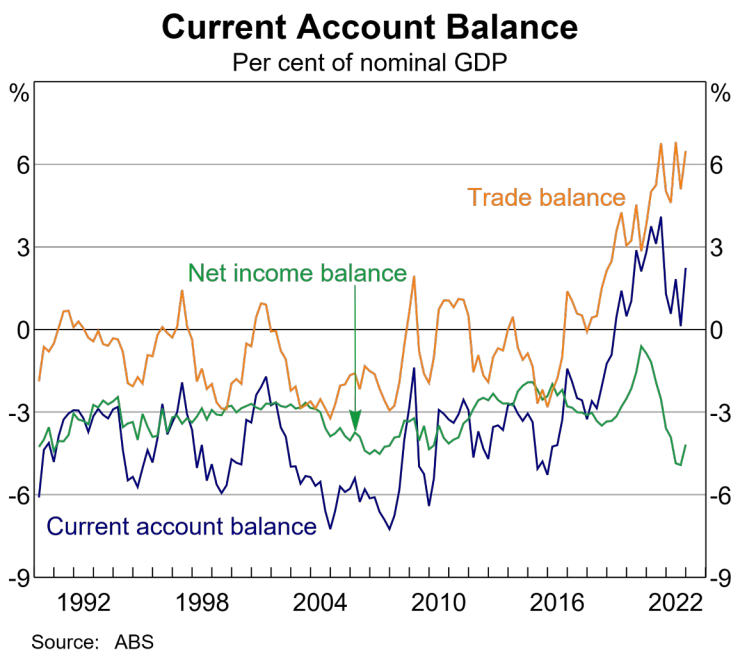
**Sample response**

*One strength of budgetary policy is that it can impact lag is short on levels of aggregate demand through the operation of automatic stabilisers. As levels of unemployment change, the levels of personal income tax (a leakage from the economy) and welfare payments (an injection into the economy) adjust without any decisions required by the government, placing the required upward or downward pressure on aggregate demand and subsequently contributing to budgetary policy effectively containing demand inflationary pressures.*

*A second strength of budgetary policy is that it can be targeted at specific sectors, ensuring areas of the economy receive required support and others don't, avoiding unnecessary inflationary pressures, pushing headline inflation above the 2 to 3% range over the medium term required to achieve the goal. One weakness of budgetary policy is the potential political bias, particularly in the current high inflation environment. To control inflationary pressures, the government is required to make some potentially unpopular decisions which could negatively impact on their ability to get voted in again in the next election, this could result in them not implementing the appropriate policies and leaving growth in inflationary pressures in the economy unchecked. In addition, the Federal Budget must go through a parliamentary process in order for it to be implemented and this can create a lag that may hinder the required measures so that a timely intervention occurs in aggregate demand to control demand inflationary pressures, further jeopardizing the chances of achieving the goal of low and stable inflation.*

**Question 3 (8 marks)**

**Figure 1 - Australia's Current Account Balance**



Source: <https://www.rba.gov.au/chart-pack/balance-payments.html> accessed 4/6/23

- a. Describe what is measured by the current account balance of Australia's balance of payments.

**Marking guide**

1 mark for identifying what is measured by the current account balance from a general perspective.

1 mark for providing a detailed description of what is measured through reference to types of transaction and the subaccounts they are recorded in.

**Sample response**

*The Current Account balance of Australia's balance of payments is a record of all transactions between Australia and the rest of the world that are current in nature, i.e., they do not create any future obligation for the nation such as having to make a repayment on a loan. It comprises of four subaccounts, the Balance of Merchandise Trade, Net Services, Net Primary Income and Net Secondary Income. Transactions that result in funds flowing out of Australia are recorded as a debit in one of the four subaccounts in the Current Account, and funds flowing into Australia are recorded as a credit. For example, the sale of iron ore to China results in funds flowing into Australia, which would be recorded as a Credit to the Balance of Merchandise Trade subaccount. The payment of interest to a foreign lender would result in funds flowing out of Australia, and would be recorded as a Debit to the Net Primary Income subaccount. When the total value of credits exceed the total value of debits, a Current Account Surplus results, and when debits exceed credits, a Current Account Deficit results.*

- b. With reference to figure 1, describe the trend in Australia's current account balance over the past 5 years. 2 marks

**Marking guide**

1 mark for reference to the graph

1 mark for the overall trend and outlier

(For full marks, a student must provide an outlier, a reversal or acceleration of the trend over the period)

**Sample response**

*5 years ago, the Current Account balance was a Current Account Deficit, at approximately negative 3% of GDP. Since this time, the trend in the balance has been upward with moving into a Current Account Surplus, primarily due to a trade surplus developing with the value of our exports exceeding the value of our imports. During 2021, there was a large reversal in this trend with the balance falling from approximately 4% of GDP to almost 0% of GDP.*

- c. Explain one cyclical and one structural cause of the trend described in part b. 4 marks

**Marking guide**

1 mark for the explanation of a cyclical factor including a display of understanding of cyclical factors in general.

1 mark for the link between the cyclical factor and the trend identified in part b.

1 mark for explaining a structural factor including a display of understanding of structural factors.

1 mark for the link between the structural factor and the trend identified in part b.

**Sample response**

*Cyclical factors that impact on the Current Account balance usually relate to changes in levels of economic activity driven by aggregate demand factors. One such factor would be levels of global economic growth, due to the levels of economic growth in our major trading partners over the last 5 years, particularly in China*

*and the resulting demand for our key exports such as iron ore, coal and natural gas, this has resulting in an ever-increasing value of credits to the Balance of Merchandise Trade subaccount as our trade surplus has increased as a percentage of GDP, contributing to the increasing trend of the Current Account balance. Structural factors that impact the Current Account Balance relates to changes in the structure of the Australian economy and are generally driven by aggregate supply-side factors or our savings-investment imbalance. Over the 5 year period, particularly the years covering Covid, the household savings ratio was rising, leading to a drop in the levels of borrowings from overseas sources; as a result, this reduced the value of debits to the net primary income account, contributing to the increasing trend in the Current Account balance from a Deficit to a Surplus.*

#### **Question 4 (12 marks)**

- a. Explain how investment in training and education and infrastructure can positively impact upon Australia's productive capacity, aggregate supply and achievement of the goal of strong and sustainable economic growth.

6 marks

#### **Marking guide**

1 mark for explaining the nature of spending on training and education with reference to an example from the Federal Budget to support.

1 mark for explaining how spending on training and education operations impacts on the economy, including reference to the AS factor impacted (e.g., quality and quantity of factors of production)

1 mark for explaining the nature of spending on infrastructure with reference to an example from the Federal Budget to support.

1 mark for explaining how spending on infrastructure operations impacts on the economy, including reference to the AS factor impacted (e.g., quality and quantity of factors of production)

1 mark link to productive capacity and aggregate supply (can be individually after each type of spending or as a conclusion after explaining both types of spending).

1 mark for defining/describing the goal of strong and sustainable economic growth in the response.

#### **Sample response**

*Spending on training and education, for example, in the 2023/24 Federal Budget, the government announced it will fund a further 300,000 TAFE and vocational education training places to become fee-free, which will incentivise individuals to re-skill or up-skill in areas of need by the economy, increasing the quantity and quality of skilled labour available to producers in the Australian economy in key sectors addressing the labour and skill shortages that exist in the labour market. Spending on infrastructure, for example, in the 2023/24 Federal Budget the government announced there would be an independent strategic review to ensure that the \$120 billion pipeline over 10 years is fit for purpose and the Government's investment is focused on projects that will improve long term productivity and supply chains within the economy. This spending will improve levels of output within the economy from any given level of inputs by improving the infrastructure available to producers and reducing the existence of infrastructure bottlenecks in the form of inadequate road and rail links around the nation, boosting the most needed productivity growth. In both instances, this will increase the productive capacity of the economy, boosting the volume of goods and services producers are willing and able to produce over a given period of time (aggregate supply). This will enable producers to offer goods and services at lower prices without sacrificing profits, leading to economic growth moving toward the 3 to 3.5% real GDP range that is consistent with strong employment growth, however, without creating excessive inflationary pressures in the economy ensuring the growth experienced is sustainable.*

- b. Analyse the impact of an environmental policy on aggregate supply and living standards over time.

6 marks

### **Marking guide**

1 mark for identifying an environmental policy.

1 mark for explaining how the policy operates to impact on the economy.

1 mark for analysing the impact of the policy on aggregate supply in the short term.

1 mark for linking the short-term impact on AS to living standards.

1 mark for analysing the impact of the policy on the aggregate supply in the long term.

1 mark for linking the long-term impact on AS to living standards.

### **Sample response**

*An example of an environmental policy is an emissions trading scheme, which involves the government placing a price on carbon emissions through a process of issuing permits to producers that allows them to emit a limited amount into the atmosphere. This is a market-based solution to the climate crisis, as producers that do not utilise all their permits are free to sell these to other producers who have used their permits but require more to cover their emissions, thus placing a price on carbon. Over time, the government reduces the number of permits available, placing upward pressure on the price of emissions and incentivising producers to reduce their emissions by finding alternate methods of production, including sourcing renewable energy. In the short term, this can create some pain in the economy by increasing the costs of production, reducing producers' ability to produce, reducing aggregate supply and creating cost inflationary pressures reducing households' access to goods and services (material living standards) as prices of goods and services increase at a rate faster than disposable income leading to negative real wage growth. This can create financial pressures for households, creating stress that reduces their quality of life and non-material living standards. However, in the longer term, producers adjust their methods of production and investment in cleaner production processes and energy generation leads to a reduction in the costs of production and a reduction in the negative impact of carbon emissions on the environment reducing the instances of extreme weather events and the associated costly damage inflicted on infrastructure. Both contribute to an increase in producers' willingness and ability to produce, boosting aggregate supply whilst at the same time reducing cost inflationary pressures improving households access to goods and services (material living standards), and the improved environmental conditions improve the quality of life or non-material living standards of households in the longer term making the earlier pain worth it.*