

2. (a) Explain the natural rate of unemployment. [10]

(b) Using real-world examples, evaluate the effectiveness of monetary policy in reducing a large deflationary (recessionary) gap. [15]

3. (a) Explain how education programmes and health programmes can promote economic development. [10]

(b) Using real-world examples, discuss the view that the weak institutional framework in many economically least developed countries (ELDCs) represents the most significant barrier to economic growth. [15]

(a) Explain the natural rate of unemployment. [10]

Answers may include:

- Terminology: the natural rate of unemployment (NRU).

The **natural rate of unemployment** is a term used in economics to describe the level of unemployment that persists in an economy when it is operating at full capacity or potential output. It represents the unemployment that arises from normal, structural, and frictional factors in the labor market rather than cyclical factors like economic downturns. Here's a breakdown of key components:

Terminology and Related Concepts:

1. **Frictional Unemployment:**

- Short-term unemployment that occurs when people are transitioning between jobs, entering the workforce, or re-entering the labor market.
- Example: A recent graduate looking for their first job or someone switching careers.

2. **Structural Unemployment:**

- Long-term unemployment caused by changes in the economy, such as technological advancements, globalization, or shifts in industries.
- Example: Factory workers losing jobs due to automation and needing retraining for new roles.

3. **Full Employment:**

- A situation where the actual unemployment rate equals the natural rate of unemployment, implying there is no cyclical unemployment.
- Does not mean zero unemployment, as frictional and structural unemployment still exist.

4. **Cyclical Unemployment:**

- Unemployment caused by economic fluctuations, such as recessions or slowdowns.
- Not part of the natural rate of unemployment since it arises from economic cycles.

5. **Non-Accelerating Inflation Rate of Unemployment (NAIRU):**

- Closely related concept that refers to the unemployment rate at which inflation remains stable. If unemployment falls below this rate, inflation may rise.

6. **Determinants of the Natural Rate:**

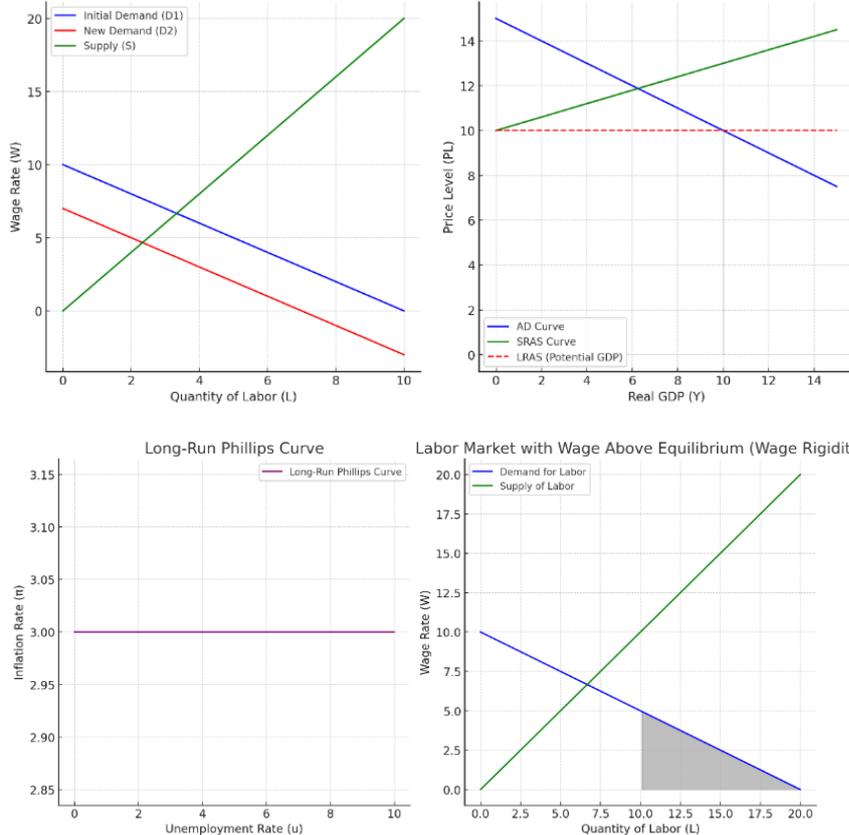
- Labor market policies (e.g., unemployment benefits, minimum wages).
- Demographic changes (e.g., aging population, workforce composition).
- Technological progress and education/training systems.

The natural rate of unemployment is not fixed and can change over time due to shifts in the labor market, policies, and economic conditions. It is a key concept for policymakers, particularly in setting monetary and fiscal policies.

• Explanation: of the NRU as a result of structural, frictional and seasonal unemployment and an explanation of each of these.

• Diagram: showing a decrease in the demand for labour for a particular market or geographical area for structural unemployment; or a business cycle diagram (or AD/AS diagram) showing actual GDP being equal to potential GDP at the NRU, or use of a long-run Phillips curve diagram, or a labour market diagram with the wage above the equilibrium

Decrease in Demand for Labor (Structural Unemployment) Business Cycle: Actual GDP = Potential GDP at NRU



Here are the four requested diagrams:

- Labor Market Diagram Showing a Decrease in Demand for Labor (Structural Unemployment):** This diagram illustrates a decrease in labor demand, shifting the demand curve left, leading to lower wages and employment, reflecting structural unemployment.
- Business Cycle Diagram (AD/AS) Showing Actual GDP Equal to Potential GDP at NRU:** This diagram shows the intersection of the AD, SRAS, and LRAS curves at the potential GDP (LRAS), with no cyclical unemployment.
- Long-Run Phillips Curve Diagram:** The long-run Phillips curve is vertical, indicating that inflation is stable at the natural rate of unemployment (NRU).
- Labor Market Diagram with Wage Above Equilibrium (Wage Rigidity):** This diagram shows how setting wages above the equilibrium wage creates a labor surplus (unemployment) due to wage rigidity.

1. Labor Market Diagram Showing a Decrease in Demand for Labor (Structural Unemployment)

- Axes:**
 - Vertical axis:** Wage rate (W)
 - Horizontal axis:** Quantity of labor (L)
- Steps to draw:**
 - Draw an initial downward-sloping **demand for labor** curve (D1) and an upward-sloping **supply of labor** curve (S).
 - The equilibrium wage and employment are determined where the demand and supply curves intersect.
 - To show a decrease in demand for labor (structural unemployment), shift the **demand curve** to the left (D2).
 - The new equilibrium will be at a lower wage rate and lower level of employment (L2).
- Result:** This shows how a decrease in labor demand leads to structural unemployment, where some workers may not find jobs due to skills mismatch or other factors, even at lower wage levels.

2. Business Cycle Diagram (AD/AS) Showing Actual GDP Equal to Potential GDP at NRU

- Axes:**
 - Vertical axis:** Price level (PL)
 - Horizontal axis:** Real GDP (Y)
- Steps to draw:**
 - Draw the **Aggregate Demand (AD)** curve, which slopes downward from left to right.
 - Draw the **Short-run Aggregate Supply (SRAS)** curve, which slopes upwards.
 - Draw the **Long-run Aggregate Supply (LRAS)** curve as a vertical line at the potential GDP level (Yp).

4. At the equilibrium point, where the AD curve intersects the SRAS curve, place this point at the same level as the LRAS curve to show that the actual GDP (Y) is equal to the potential GDP (Y_p).
5. The Natural Rate of Unemployment (NRU) corresponds to this point, indicating that unemployment is at the natural rate with no cyclical unemployment.

3. Long-Run Phillips Curve Diagram

- **Axes:**
 - **Vertical axis:** Inflation rate (π)
 - **Horizontal axis:** Unemployment rate (u)
- **Steps to draw:**
 1. Draw a **vertical long-run Phillips curve** (LRPC) at the Natural Rate of Unemployment (NRU), which is where inflation is stable and does not change due to fluctuations in unemployment.
 2. Label the point on the curve at the NRU to show that long-term unemployment is constant, and inflation is not influenced by changes in unemployment.

4. Labor Market Diagram with Wage Above Equilibrium (Wage Rigidity)

- **Axes:**
 - **Vertical axis:** Wage rate (W)
 - **Horizontal axis:** Quantity of labor (L)
- **Steps to draw:**
 1. Draw the initial **demand for labor** curve (D) and the **supply of labor** curve (S), showing the equilibrium wage (W_0) and employment level (L_0).
 2. To show a wage above equilibrium (causing unemployment), draw a horizontal line above the equilibrium wage, labeled as the **wage floor (W_1)**.
 3. This creates a situation where the wage is set above the equilibrium, causing the quantity of labor supplied (L_s) to be greater than the quantity of labor demanded (L_d), leading to **unemployment**.

b) Using real-world examples, evaluate the effectiveness of monetary policy in reducing a large deflationary (recessionary) gap. [15]

Answers may include:

- Terminology: monetary policy, deflationary (recessionary) gap.
- Explanation: of how expansionary monetary policy can be used to counter a deflationary gap using the various tools of monetary policy, such as open market operations/quantitative easing, minimum reserve requirements and changes in the central bank's minimum lending rate.
- Diagram: AD/AS diagram to show AD shifting right with the deflationary gap being closed/eliminated.
- Synthesis (evaluate): evaluation of the effectiveness of monetary policy in terms of the limitations, eg limited scope for lowering interest rates when close to zero, low consumer confidence, ineffective in relation to structural unemployment and the possibility of greater inflation; and its strengths, eg short time lags, incremental, flexible and easily reversible; comparison between the effectiveness of monetary and fiscal policy when there is a large recessionary gap.
- Examples: real-world examples of monetary policy being used to counter a deflationary gap.

Examiners should be aware that candidates may take a different approach which, if appropriate, should be reward

Terminology:

- **Monetary Policy:** A set of actions taken by a central bank to influence the supply and cost of money in an economy to achieve specific goals, such as controlling inflation, stabilizing the currency, and fostering economic growth.
 - **Deflationary (Recessionary) Gap:** A situation where the economy is producing below its potential output, causing unemployment to rise and economic output to fall. In this situation, aggregate demand is insufficient to match potential output, leading to deflationary pressures.
 - **Central Bank:** The institution responsible for implementing monetary policy (e.g., Federal Reserve in the U.S., European Central Bank in the EU).
 - **Interest Rates:** The cost of borrowing money, often used as a tool in monetary policy to influence spending and investment.
 - **Quantitative Easing (QE):** A non-traditional monetary policy tool used by central banks when interest rates are near zero, involving large-scale purchases of financial assets to increase the money supply and lower long-term interest rates.
-

Explanation:

Monetary policy can be used to address a deflationary gap through various tools. When an economy faces a recession, central banks typically reduce interest rates to stimulate borrowing, investment, and consumer spending. If interest rates are already near zero, central banks may resort to unconventional methods such as quantitative easing to increase the money supply directly.

Expansionary Monetary Policy typically involves:

1. **Lowering Interest Rates:** By reducing the cost of borrowing, both consumers and businesses are more likely to spend and invest, which boosts aggregate demand.
 2. **Quantitative Easing (QE):** This involves the central bank purchasing government bonds or other financial assets to increase the money supply and lower long-term interest rates, thus encouraging borrowing and spending.
-

Diagram:

In the **AD-AS (Aggregate Demand - Aggregate Supply) model**, a deflationary gap is depicted when the equilibrium output (Y_1) is less than the potential output (Y_p). The government or central bank will aim to shift the AD curve to the right by using expansionary monetary policy.

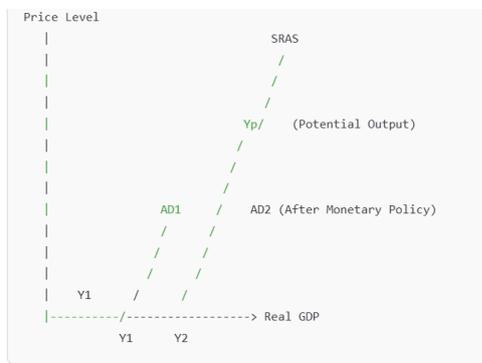
Diagram Explanation:

- **AD Curve (Aggregate Demand)** shifts rightward from AD1 to AD2 as a result of lower interest rates or quantitative easing, stimulating investment and consumption.
 - The economy moves towards potential output, reducing the deflationary gap and mitigating the recession.
-

Synthesis (Evaluation):

While monetary policy can be effective in addressing a deflationary gap, its success depends on various factors:

1. **Liquidity Trap:** In cases where interest rates are already close to zero, monetary policy may lose its effectiveness. A situation called a "liquidity trap" occurs when individuals and businesses prefer holding cash rather than borrowing or spending, regardless of low interest rates. This was evident during Japan's "Lost Decade" in the 1990s, where despite low interest rates and substantial government bond purchases, deflation persisted.
2. **Time Lags:** Monetary policy typically takes time to work through the economy. The effects of lower interest rates or QE may take several months or even years to fully impact aggregate demand and reduce unemployment.
3. **Effectiveness in Different Economic Environments:** In economies with high levels of household debt or during times of global financial uncertainty, monetary policy may be less effective. For example, the global financial crisis of 2007-2008 saw central banks slashing interest rates and implementing QE. While these measures helped stabilize financial markets, they were not sufficient on their own to restore growth in many economies without complementary fiscal policies (e.g., government spending on infrastructure).
4. **Inflationary Pressures:** While monetary policy aims to reduce a deflationary gap, overly aggressive monetary expansion can eventually lead to inflationary pressures. A delicate balance is required to ensure that inflation does not spiral out of control once the economy recovers. For example, after the COVID-19 pandemic, many countries saw inflationary pressures rise despite earlier monetary stimulus measures.



Explanation of the Graph:

1. **Initial Equilibrium:** The economy starts at **Y1**, where aggregate demand (**AD1**) intersects the short-run aggregate supply (**SRAS**) curve, resulting in a deflationary gap because **Y1** is below **Yp** (potential output).
2. **Expansionary Monetary Policy:** The central bank lowers interest rates or uses quantitative easing, shifting the AD curve from **AD1** to **AD2**.
3. **New Equilibrium:** The new AD curve (**AD2**) intersects the SRAS curve at **Y2**, bringing the economy closer to its potential output **Yp**, reducing the deflationary gap.

3. (a) Explain how education programmes and health programmes can promote economic development. [10]

Answers may include:

- Terminology: economic development.
- Explanation: of the benefits of education and health as merit goods with external benefits for society at large which may impact positively on development, eg greater labour productivity and output, lower unemployment, increased participation of women in the labour force, attractiveness for FDI, control of contagious diseases, links between health care and education
- Diagram: any relevant diagram, eg LRAS shifting to the right, a PPC diagram, a positive externalities of consumption diagram, a Lorenz curve diagram or a poverty cycle diagram.

A maximum of [6] should be awarded if only the importance of education programmes or health programmes is explained.

Using real-world examples, discuss the view that the weak institutional framework in many economically least developed countries (ELDCs) represents the most significant barrier to economic growth. [15]

Answers may include:

- Terminology: economically least developed country, economic growth.
- Explanation: of the view in terms of how various aspects of the institutional framework such as poorly-functioning legal system, ineffective/inequitable taxation structure, underdeveloped banking system and lack of property rights may act as a barrier to economic growth.
- Diagram: a diagram is not required for this question, but candidates may use a

LRAS/PPC diagram to illustrate economic growth in the long run and explain that the weak institutional framework is preventing economic growth from happening.

- Synthesis (discuss): a challenge to the view in terms of the relative significance of other economic and social/political barriers.
- Examples: real-world examples of countries facing a weak institutional framework and/or other barriers to economic growth.

A maximum of [12] should be awarded if only weak institutional framework is considered.

N.B. It should be noted that definitions, theory, and examples that have already been given in part (a), and then referred to in part (b), should be rewarded.

Examiners should be aware that candidates may take a different approach which, if appropriate, should be rewarded

2. (a) Explain two economic costs of high unemployment. [10]

(b) Using real-world examples, discuss the view that low unemployment can only be achieved at the expense of higher inflation. [15]

3. (a) Explain how dependence on primary sector production may be a barrier to economic growth. [10]

(b) Using real-world examples, evaluate the view that market-based policies may be ineffective in promoting the economic development of the world's poorest countries. [15]

2. (a) Explain two economic costs of high unemployment. [10]

Answers may include:

- Terminology: unemployment.
- Explanation: of any two economic costs such as a loss of real output; higher spending and lower tax revenues for the government with the possibility of a larger budget deficit/ a smaller budget surplus; a more unequal distribution of income; costs to the government of dealing with social problems caused by unemployment; unemployed people may have difficulty finding work in the future; specific problems related to the type of unemployment, eg structural or cyclical.
- Diagram: any relevant diagram related to the particular cost being explained, eg use of a PPC diagram or an AD/AS diagram.

A maximum of [6] may be awarded if only one cost is explained

(b) Using real-world examples, discuss the view that low unemployment can only be achieved at the expense of higher inflation. [15]

Answers may include:

- Terminology: unemployment, inflation.

- Explanation: of the view in terms of higher AD as unemployment falls and thus higher demand inflation and/or in terms of the short-run Phillips curve relationship.

- Diagram: use of an AD/AS diagram, a short-run Phillips curve diagram and/or a long-run Phillips curve diagram

- Synthesis (discuss): a challenge to the view in terms of the importance of the type of unemployment being tackled, eg structural or cyclical, and the way in which it is tackled, eg through the use of demand-side or supply-side policies; Monetarist/new classical perspectives versus Keynesian perspectives; the possibility of higher inflation and higher unemployment; the possibility of no negative stable relationship between unemployment and inflation using the long-run Phillips curve; consideration of the importance of technological progress; consideration of the word “only”.

- Examples: real-world examples of situations where low unemployment may or may not have coincided with higher inflation; use of empirical evidence.

N.B. It should be noted that definitions, theory and examples that have already been given in part (a), and then referred to in part (b), should be rewarded.

Examiners should be aware that candidates may take a different approach which, if appropriate, should be rewarded.

Section B

Macroeconomics

3. (a) Explain how increased investment by the government in education and training can affect both aggregate demand and aggregate supply. [10]

Answers may include:

- definition of investment, aggregate demand, aggregate supply
- diagrams to show aggregate demand (AD) shifting right and LRAS shifting right
- explanation of how increased investment by the government in education and training can increase AD in the short term by increasing the G component of C+I+G+X-M and increase LRAS in the long term as labour productivity increases
- examples of countries in which the government has increased investment in education and training.

Assessment Criteria

Part (a) 10 marks

| Level | | Marks |
|-------|--|-------|
| 0 | <i>The work does not meet a standard described by the descriptors below.</i> | 0 |
| 1 | <i>There is little understanding of the specific demands of the question.</i> Relevant economic terms are not defined. There is very little knowledge of relevant economic theory. There are significant errors. | 1-3 |
| 2 | <i>There is some understanding of the specific demands of the question.</i> Some relevant economic terms are defined. There is some knowledge of relevant economic theory. There are some errors. | 4-6 |
| 3 | <i>There is understanding of the specific demands of the question.</i> Relevant economic terms are defined. Relevant economic theory is explained and applied. Where appropriate, diagrams are included and applied. Where appropriate, examples are used. There are few errors. | 7-8 |
| 4 | <i>There is clear understanding of the specific demands of the question.</i> Relevant economic terms are clearly defined. Relevant economic theory is clearly explained and applied. Where appropriate, diagrams are included and applied effectively. Where appropriate, examples are used effectively. There are no significant errors. | 9-10 |

- (b) Evaluate the view that inflationary pressures in an economy are best reduced using supply-side policies. [15]

Answers **may** include:

- definition of inflation, inflationary pressures, supply-side policies
- diagram to show the impact of supply-side policies on inflation via the shift of long-run aggregate supply (LRAS) to the right
- explanation of how market based (eg deregulation, anti-monopoly policy, etc) and/or interventionist supply-side policies (eg price controls, subsidies, etc) may reduce inflationary pressures in an economy
- examples of situations where supply-side policies have helped to reduce inflationary pressures
- synthesis and evaluation.

Evaluation may include: the disadvantages of using particular supply-side policies, such as: the impact of market-based policies on equity, not as effective with demand-pull inflation, the impact of interventionist policies on the government budget and the time lags associated with supply-side policies. The advantages of supply-side policies, such as: increased real GDP, increased employment, more effective with cost-push inflation and possible improvement in economic efficiency. Consideration of deflationary monetary and fiscal policies as alternative policies to reduce inflation.

Assessment Criteria

rt (b) 15 marks

| Level | | Marks |
|----------|---|--------------|
| 0 | <i>The work does not meet a standard described by the descriptors below.</i> | 0 |
| 1 | <i>There is little understanding of the specific demands of the question.</i> Relevant economic terms are not defined. There is very little knowledge of relevant economic theory. There are significant errors. | 1–5 |
| 2 | <i>There is some understanding of the specific demands of the question.</i> Some relevant economic terms are defined. There is some knowledge of relevant economic theory. There are some errors. | 6–9 |
| 3 | <i>There is understanding of the specific demands of the question.</i> Relevant economic terms are defined. Relevant economic theory is explained and applied. Where appropriate, diagrams are included and applied. Where appropriate, examples are used. There is an attempt at synthesis or evaluation. There are few errors. | 10–12 |
| 4 | <i>There is clear understanding of the specific demands of the question.</i> Relevant economic terms are clearly defined. Relevant economic theory is clearly explained and applied. Where appropriate, diagrams are included and applied. Where appropriate, examples are used. There is synthesis or evaluation. There are no significant errors. | 13–15 |

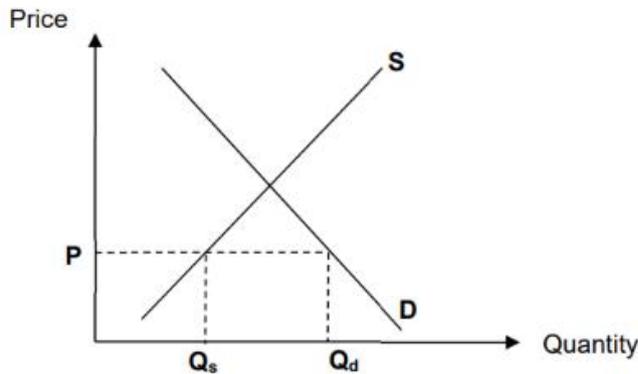
- (b) Using a supply and demand diagram and data from the text, explain how a “disequilibrium in the domestic US tinplate steel market” would occur if there were no imports (paragraph ⑤).

[4]

| Level | | Marks |
|-------|--|-------|
| 0 | <i>The work does not meet a standard described by the descriptors below.</i> | 0 |
| 1 | <i>There is a correct diagram OR an accurate written response.</i> | 1–2 |
| | For drawing a correctly labelled market diagram, with a price below the equilibrium, and an excess demand clearly labelled in some way OR for an explanation that in the domestic market, there is a disequilibrium because there is one of the following: <ul style="list-style-type: none"> • a shortage of 0.9 million tons • demand of 2.1 million tons and supply of only 1.2 million tons • only 57% of domestic demand was met. | |
| 2 | <i>There is a correct diagram AND an accurate written response.</i> | 3–4 |
| | For drawing a correctly labelled market diagram, with a price below the equilibrium, and an excess demand clearly labelled in some way AND for an explanation that in the domestic market, there is a disequilibrium because there is one of the following: <ul style="list-style-type: none"> • a shortage of 0.9 million tons • demand of 2.1 million tons and supply of only 1.2 million tons • only 57% of domestic demand was met. | |

Candidates who incorrectly label diagrams can be awarded a maximum of [3].

For a supply and demand diagram, the vertical axis should be price or *p*. The horizontal axis should be quantity or *q*. A title is not necessary.



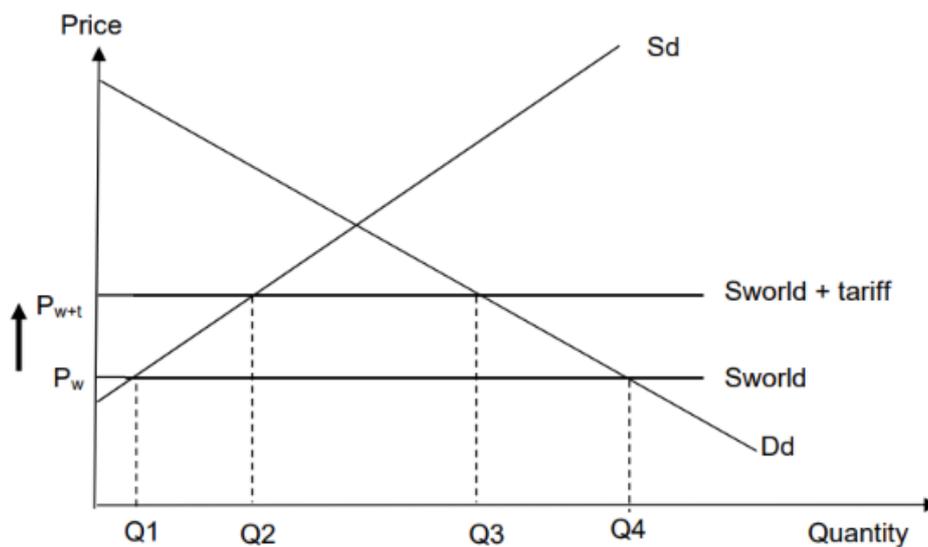
- (c) Using an international trade diagram, explain the effect of a tariff on the imports of tinplate steel (paragraph 1).

[4]

| Level | | Marks |
|-------|---|-------|
| 0 | <i>The work does not meet a standard described by the descriptors below.</i> | 0 |
| 1 | <i>There is a correct diagram OR an accurate written response.</i> | 1–2 |
| | For drawing a correctly labelled trade diagram, with an upward shift of the world supply curve, an increase in price, and a fall in the level of imports OR for an explanation that a tariff will result in an increase in the price of tinplate steel and hence a fall in the quantity of imports due to an increase in the domestic quantity supplied (and/or decrease in quantity demanded). | |
| 2 | <i>There is a correct diagram AND an accurate written response.</i> | 3–4 |
| | For drawing a correctly labelled trade diagram, with an upward shift of the world supply curve, an increase in price, and a fall in the level of imports AND for an explanation that a tariff will result in an increase in the price of tinplate steel and hence a fall in the quantity of imports due to an increase in the domestic quantity supplied (and/or decrease in quantity demanded). | |

Candidates who incorrectly label diagrams can be awarded a maximum of [3].

The use of P and Q on the axes is sufficient for a demand and supply diagram. The world supply curve must be labelled S_w , or S_{world} . A title is not necessary.



- (d) Using information from the text/data and your knowledge of economics, discuss possible economic impacts of the tariff on tinplate steel. [8]

Examiners should be aware that candidates may take a different approach which, if appropriate, should be rewarded.

Do not award beyond level 2 if the answer does not contain reference to the information provided.

| Level | | Marks |
|-------|---|-------|
| 0 | <i>The work does not meet a standard described by the descriptors below.</i> | 0 |
| 1 | <i>Few relevant concepts are recognized.</i> There is basic knowledge/understanding. | 1–2 |
| 2 | <i>Relevant concepts are recognized and developed in reasonable depth.</i> There is clear knowledge/understanding. | 3–5 |
| 3 | <i>Relevant concepts are recognized and developed in reasonable depth.</i> There is some attempt at application/analysis. | 6–8 |
| | There is clear knowledge/understanding. There is effective application/analysis. There is synthesis/evaluation, supported by appropriate theory and evidence. | |

Command term

“Discuss” requires candidates to offer a considered and balanced review that includes a range of arguments, factors, or hypotheses. Opinions or conclusions should be presented clearly and supported by appropriate evidence.

Responses may include:

- definition of tariff
- international trade diagram to explain impact of the requested tariff on consumers, producers, government, importers and efficiency (paragraph 1).

Possible impacts:

- some candidates may question the claims of the CMI, noting that they have a vested interest in tinplate steel being exempted from a tariff (paragraph 1)
- severe economic impacts on the tin can manufacturing industry (paragraph 2)
- job losses and potential structural unemployment in the tin can industry (paragraphs 2 and 4)
- inefficient domestic tinplate steel producers are supported (paragraph 3), causing a misallocation of resources
- the inferior "quality of domestically-produced tinplate steel" (paragraph 3) may result in a decline in quality and higher price of final products
- tariff allows domestic steel tinplate producers to maintain higher revenues / incomes to allow them to compete with higher quality imports (paragraph 3)
- higher input prices for can manufacturers may force closures of some can producers and a consolidation within the tin can industry (paragraph 4)
- tariff will increase input costs for can manufacturers requiring tinplate steel as an input (paragraph 4)
- tin can producers disadvantaged when substitute packaging is not exposed to a tariff (paragraph 4)
- impact on economic growth in communities dependent on tin can manufacturing (paragraph 4)
- impact on low-income households as tariffs are regressive taxes and food is a staple; low income households spend a higher proportion of their income on canned food (paragraph 3)
- trading partners might retaliate by imposing their own protectionist measures
- tariffs provide a source of tax revenue that can be reinvested
- as domestic production can only meet 57% of domestic demand, it might take a substantial increase in price to resolve the shortage (paragraph 3)
- may affect the competitiveness of US exports, which require tin-plate steel as a factor input.