**Inflation / deflation**

Explain how demand-pull and cost-push inflation occurs

Explain how stagflation occurs

Is inflation contributed by internal or external factors?

Is exchange rate management the best solution to curb inflation in Singapore?

**Essay Question 1**

**Discuss why governments are concerned to keep up the rate of inflation at a low level. (13)** *(What are the advantages of low rate inflation?)*

**Introduction**

 Inflation is a situation where there is a sustained and inordinate increase in the general price level when there is excess demand without or with an inadequate increase in supply. As the occurrence of high rate of inflation may bring about adverse effects on the economy but a mild rate of inflation may be beneficial to the economy, it is natural for the government to seek maintain the rate of inflation at a low rate.

**Main Body**

 One such benefit of low rate of inflation is the positive stimulation it has on the level of investment and employment. When price level increases at a low rate, it will mean an increase in the total revenue, provided that the demand for goods is; inelastic. This implies that profitability will increase and induce producers to produce more and hence, there will be an increase in investment and subsequently increase the level of employment.

 Low rate inflation will also help to prevent extensive unequal distribution of income since a large proportion of the population is fixed income earners. Fixed income earners will not be marginalized by the effects of excessive inflation and thus erode their purchasing in favour of those who are receiving their income pegged to price movement

 Low rate of inflation will also mean that the purchasing power of the people is maintained and this will also mean that their ability and willingness to save is maintained. Consequently, there will be a considerable level of saving, enabling the economy a constant source of fund for investment.

 Low rate of inflation can also help to prevent excessive rise in cost of livings enabling the workers to maintain their purchasing power and standard of living. The trade union will less likely to ask for excessive wage increase, which help to stabilize our cost of production.

 Without excessive price change, there will be lesser wastage of resources since speculative activities are minimized. Investors with source of fund will not direct their investment on goods with speculative appreciation but instead on goods with production activities that will enhance the economic development of the economy.

 Externally, a low rate of inflation is also beneficial, as it will help the country maintain its international competitiveness as an exporter and as a country for foreign investment. Lower rate price increase will mean that the cost of production can be maintained at considerable level, easily counteract by a rise in productivity. It will also mean the cost of business operation is kept low and competitive.

 Low rate of inflation will enable the nation to maintain its export price and hence ensure that export demand will grow. At the same time, import expenditure will not rise excessive since local goods are still reasonably low and attractive to the -consumers. This will mean that a deficit balance of trade will not surface.

 Without high rate of inflation, there will be no need of a corresponding contractionary monetary policy to curb inflation. This means that increase interest rate will not rise creating the influx of hot money and instability to the foreign exchange market. This will lead to excessive speculation dampening the economic development to the economy.

**Conclusion**

 In conclusion, the occurrence of high rate of inflation is not desirable and the government will seek to maintain the inflation at a low rate as It has certain beneficial effect of the economy.

**(a) Explain why maintaining price stability is an important macroeconomic objective of a government. [10]**

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| Price stability (low rate of inflation) is one of the government’s macroeconomic objectives along with low unemployment rates, sustained economic growth and favourable balance of trade. Low inflation rate means a low rate of increase in the general price level usually between 1-3% annually. Having price stability in an economy helps to promote investment and export competitiveness thus leading to a more sustained economic growth. In addition, price stability also helps to maintain the standard of living in the economy. Hence, maintaining price stability is an important macroeconomic objective of a government. Maintaining price stability helps a government to achieve potential economic growth. Low or stable inflation means that there would not be major fluctuation in prices of both factors of productions and goods resulting in certainty for producers. Producers will be more willing to take the risk involved with investments as their returns would be more predictable. With mild inflation, prices of the final goods will increase leading to higher profits for firms as factor costs are unlikely to rise as fast in the short term. When returns from investments rise, firms will be encouraged to increase their output leading to an increase in employment and national income. In the long run, with greater investments, there will also be an increase in the productive capacity of the country. Hence, low inflation allows the economy to achieve greater potential economic growth rate.Price stability improves the export competitiveness of an economy which has a positive impact on actual growth, employment and balance of trade. Low inflation rates cause domestically produced goods of a country to be relatively more price competitive in the global market and this will increase the demand by foreigners leading to a rise in export earnings for the country. At the same time, locals will find these goods relatively cheaper than foreign imports and switch away from imported goods leading to a fall in import expenditure. With an increase in (X-M), there will be an increase in the output of domestically produced goods encouraging firms to hire more workers and thus increasing the economic growth and reducing unemployment in the country. The higher export earnings and lower import expenditure will also lead to improvement in the balance of trade.Price stability prevents unintended redistribution of income in an economy. High and rising inflation results in redistribution of income as some people will be made better off while others are made worse off. For examples, fixed income earners who receive incomes fixed in nominal terms such as wage earners will find the real value of their incomes being eroded by inflation unless such incomes can be adjusted for price increases. High and rising inflation also causes an unintended redistribution of income from creditors to debtors as the real value of debt payment falls. Thus, a government aims to maintain price stability as it prevents an unintended redistribution of income. Price stability is an objective of the government because it directly affects the health of the economy. High inflation would be very disruptive for the producers and consumers engaging in any economic activities. Thus, governments should use appropriate policies to ensure that inflation is low and stable.  |

**(b) Assess whether monetary policy centred on exchange rate is considered to be the most appropriate policy in maintaining price stability in Singapore. [15]**

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| Singapore uses monetary policy centred on exchange rate to manage inflation. Being a small and open economy largely reliant on foreign direct investment (FDI) & trade for its growth. Singapore is a price-taker and does not have any influence over global prices. Hence, inflation in Singapore can be caused by domestic and external factors. Whether or not monetary policy centred on exchange rate is the most appropriate policy in maintaining price stability in Singapore depends on several factors. Gradual appreciation of the Singapore Dollar (monetary policy centred on exchange rate) is the most appropriate policy in maintaining low inflation in Singapore in view of the nature of Singapore economy. As a small and open economy that imports a large amount of our necessities and raw materials (oil / food / inputs), gradual appreciation of the Singapore dollar can reduce the effects of imported inflation. As Singapore dollar appreciates, imports become cheaper in terms of domestic currency, reducing imported cost of production. Assuming firms pass on cost savings to consumers by reducing prices, the AS curve shifts downwards to alleviate cost push inflation as seen in Fig 1 where a downward shift of AS from AS2 to AS1 will reduce general price levels from P2 to P1.Fig 1Fig 2Hence, an appreciation of the Singapore dollar will curb imported cost push inflation due to an increase in import prices of factors of production as well as finished goods and services, helping in maintaining low inflation in Singapore. Currency appreciation can also help dampen the rise in AD to control demand pull inflation as an appreciation of currency causes exports to be more expensive in foreign currencies, causing quantity demanded for exports to fall and imports to be cheaper in domestic currencies, causing quantity demanded for imports to rise. Assume that demand for Singapore exports and demand for imports in Singapore are both price elastic (PEDx >1 and PEDM >1), the appreciation of currency will cause net exports (X-M) to fall, resulting in a fall in AD, controlling the overheating effects in our economy. In Fig 2 above, a fall in AD from AD4 to AD3 can reduce the general price levels from P4 to P3. Hence, an appreciation of the Singapore Dollar may cause exports to fall and hence reducing demand pull inflation resulting from an excessive AD from exports.  |
| On the other hand, an appreciation of the Singapore dollar is not useful in tackling cost push inflation attributed to higher domestic costs arising from high labour cost and rental. Although a higher exchange rate will work to dampen external demand for Singapore’s goods and services, which may help ease domestic demand for labour and land and ease rising domestic costs. However, these secondary effects would take much longer to come through the system. Hence, whether or not monetary policy centred on exchange rate is considered to be the most appropriate policy in maintaining price stability in Singapore depends on the cause of inflation. If inflation arises from rising domestic costs, the Singapore government would have to consider short-term supply-side measures to ease domestic cost-push inflation. Given Singapore dependence on external trade for its economic growth, a fall in exports due to an appreciation of the Singapore dollar will have significant impact on its economic growth. Hence, to curb demand pull inflation resulting from an excessive AD, supply side policies to increase productivity and productive capacity of the economy is applied instead. Supply-side policies like education, training, subsidies and tax incentives to encourage Research & Development allow the economy to shift the AS curve to the right by increasing the quantity and quality of resources. With an increase in AS, Singapore can better meet the rising demands of the country (rise in AD), yet managing high inflation. These lead to outward shifts in the AS curve as rising labour productivity increases the productive capacity of the economy as shown in Fig 3. This means reduced likelihood of demand-pull inflation since when AS shifts from AS1 to AS2, an increase in AD from AD0 to AD1 only increases GPL from P1 to P1.2.Fig 3But education and training take time to have an effect, for example, it will take several years before improvements in education result in higher labour productivity. Moreover, subsidies or tax incentives on R&D are costly, R&D takes a long time to take effect and it is often difficult to predict a definite outcome. That said, supply side policies are important policies to use to help the economy maintain price stability as it boosts competitiveness and attracts FDI, and without increasing AS and focusing only on exchange rate policies to manage AD, the economy will not achieve sustained non-inflationary economic growth.To sum up, whether or not monetary policy centred on exchange rate is considered to be the most appropriate policy in maintaining price stability in Singapore depends on the cause of inflation and the context of the economy. For Singapore’s economy, a gradual appreciation of the Singapore dollar might be the most appropriate policy if inflation experienced is largely caused by external factors. In the event inflation is identified to be caused by both external & domestic triggers, the approach taken will be a combination of monetary policy centred on exchange rate and short-term supply side policies to maintain price stability. For a long-term approach in maintaining price stability, long run supply side policies to raise productive capacity will be required as a stronger SGD can dampen growth and raise unemployment. |

**Essay Question 2**

1. **Explain the causes that might have led countries to face the twin ills of recession and inflation. [10]**

**Question analysis**

* Note these nuances in question:
	+ ‘Twin’ suggests that both recession and inflation occur concurrently.
	+ ‘Causes’ suggests the need to bring in both demand and supply side factors/shocks.
* Although rising short run costs generate pressures for national income to fall (recession) and general price level to rise (inflation), a comprehensive answer will bring in the decline in aggregate demand (AD) as another cause for the twin ills in question.
* A comprehensive answer will identify that since the fall in AD lowers general price level (deflation), the concurrence of both recession and inflation suggests that higher costs (leftward shift of SRAS curve) have stronger impact on the economy than fall in AD (leftwards shift of AD).

**Suggested answer**

**Unpacking the economic terms in question and framing answer**

* Define recession: a fall in real gross domestic product (GDP) over six months (2 quarters), Real GDP refers to the output of goods and services produced within a country.
* Define inflation: a rise in the general price level over a period, indicated by negative change in the consumer price index (CPI) which measures the change in the price of a basket of goods and services purchased by typical households in the country.
* The twin macroeconomic problems can be caused by the conditions of rising costs and falling AD. In the diagram below, rising cost condition is shown by the leftward shift of the short run aggregate supply curve (SRAS) and falling AD is shown by the leftward shift of AD curve.

SRAS2

GPL

Y2

Y1

P2

P1

0

Real GDP

AD2

SRAS1

AD1

**Explaining possible reasons for rising short run costs**

* Rising costs can be due to both domestic and foreign factors. Rising costs lead to inflation (rising GPL) and falling national income (recession). This is cost push inflation.
* Possible reasons:
	+ Domestic wage levels rising to a larger extent than productivity increase 🢥higher unit labour cost (per unit of output) 🢥firms raising prices to protect their profit margins.
	+ Depreciation of domestic currency 🢥higher import prices in domestic currency 🢥higher domestic costs 🢥firms raising prices.
	+ Shortages in input markets (domestic/foreign sources) 🢥higher domestic costs.
	+ For 2020-2021, COVID-19 pandemic has caused
		- shortages in markets for raw materials, agricultural produce, and other intermediate goods such as industrial components due to lockdowns and production shutdowns,
		- higher cross-border shipping and transportation costs due to delays and more health safety checks and regulations.

**Explaining possible reasons for falling AD**

* Falling AD has the effect of causing recession and negative inflation.
* Falling AD 🢥 surplus condition in markets for goods and services 🢥firms adding on to inventories and begin to reduce production 🢥at the macro level, country’s domestic output (GDP) declines and economy goes into recession. General price level declines too.
* Possible reasons for falling AD:
	+ Very weak consumption and investment sentiments due to weakening macroeconomic performance.
	+ Falling exports due to weak growth performance in export markets.
	+ COVID-19 has caused falling AD as lockdowns lower consumption and business losses and shutdowns have lowered investment.

**Putting together effects of SRAS and AD changes to reason why recession co-exists with inflation (the twin ills)**

* While falling AD lowers GPL, the leftward shift of SRAS raises GPL.
* The concurrence of recession and inflation suggests that the impact of higher costs on price level from the supply shock (leftwards shift of SRAS) is larger in extent than the fall in AD. Hence, inflation rate is still positive despite recession.
1. **Discuss the considerations governments may have in their choice of policies when faced with these two macroeconomic problems. [15]**

**Question analysis**

* Question is about the basis of decision making in policy design. Answers can pick on 2-3 factors/consideration and discuss with some depth how these factors influence policy choices.
* Note that this question is not about explaining and evaluating each possible policy per se, but giving the basis of decisions in choosing these policies. For example, if answer suggests expansionary fiscal policy, it must point out that this policy choice would mean that the government makes solving recession a priority instead of inflation (and justifying why).
* A sound evaluation will bring in the challenge of addressing both recession and inflation through demand management policies (expansionary demand policies will induce more inflation), before recommending that a mix of demand and supply side measures will be needed depending on the root causes of the problems.
* Answers can also select on factors such as the nature of the economy and the fiscal strength of the

country for evaluation with respect to appropriate policy choices.

**Suggested answer**

**Identifying a few factors which governments are likely to consider in their policy choices**

* Both recession and inflation lower standard of living (SOL). Recession leads to falling material SOL due to falling purchasing power and rising unemployment. If recession exists concurrently with inflation, SOL falls more due to rising cost of living.
* The concurrence of recession and cost-push inflation poses tension and complexity to governments because while recession is a major macroeconomic problem, solving recession will worsen inflation.
* In addressing both problems, governments will consider many factors, such as which problem to be prioritized, which root causes of the problem/s to be addressed and what policy instruments to adopt.
* Countries differ in their economic characteristics and policy capacities, hence the differences in policy choices governments make.

**Consideration 1: the root causes of the problems**

* If the problem is mainly cost-push inflation and spending sentiments on the demand side are reasonably firm, the government can focus on dealing with the supply shocks and as costs improve, national income can gradually increase. For example: if inflation is caused by shortages of food supply or raw materials, the government can find more sources or beef up production 🢥production goes back to more normal condition. Cost reductions will be shown by the rightward shift of SRAS curve in the diagram in part (a).
* **Evaluation:** However, if rising costs are also accompanied by weakening AD due to other factors such as falling exports and weak consumption and investment sentiments, solving the supply side problems will not be sufficient. The government will then need to adopt expansionary measures such as lower interest rate and deficit budget to stimulate AD and revive the economy. A delicate balance is needed between raising AD to revive the economy against preventing excessive inflation rate
* **Evaluation:** If rising costs are externally induced, e.g. due to higher energy prices, it will be even more difficult for the government to deal with the cost push inflation.

**Consideration 2: Which of the two problems to be prioritised?**

* Where a country is facing demand-induced inflation along with cost-induced inflation, the government may have to decide on which of these problems to be the primary policy focus and make do with the worsening of the other problem. For example, if the government feels that recession is of major concern to the population than inflation, it will adopt expansionary demand measures and accept higher rate of inflation.
* The choice of which policy to focus on can be guided by the severity of the two problems – the intensity of recession against rate of inflation. A country which has been facing high inflation may have higher tolerance to this problem and decides to solve recession first.
* **Evaluation**: However, the extent of stimulus or lowering of interest rate will still need to be considered against the projected rise in inflation because letting inflation to spiral higher will cause contractionary effects on AD, making growth recovery unsustainable.
* **Evaluation:** It will also be necessary for the government to adopts measures to improve the supply side conditions so that cost-sided inflationary pressures can be dampened, e.g. if costs have been rising due to high fuel prices, the government may have to adopt maximum price policy to prevent further rise in domestic energy price.

**Consideration 3: Which policy instruments to adopt?**

* Policy making also involves the choice of policy instruments to adopt, for example deciding between fiscal and monetary policy, or deciding between the use of interest rate or exchange rate instrument.
* Generally governments will adopt fiscal expansion through deficit budget to increase AD but the extent of this fiscal stimulus will depend on the country’s fiscal reserves and existing fiscal condition. Singapore is an example of a country with healthy reserves position hence the government can adopt large fiscal stimulus to deal with the recession from COVID-19. Countries with many years of deficit budget will have weaker ability for fiscal stimulus and need to rely more on lowering interest rate to induce private spending.
* In the implementation of monetary policy, the central bank will need to decide between interest rate or exchange rate. Singapore, very reliant on external demand and imports, and with very open financial markets, adopts exchange-rate centred monetary policy. Many large economies on the other hand adopt interest-rate centred monetary policy as their domestic demand make up a large proportion of their AD.
* **Evaluation:** Whether the government is using expansionary fiscal or monetary policy, the concurrence of cost-push inflation should still guide the extent of AD expansion targeted. While some increase in inflation can be necessary for recovery from recession, measures to address the sources of cost increases should be adopted to reduce the extent of inflation.

**Conclusion**

* COVID-19 has induced both recession and inflation due to both demand and supply shocks. Although inflation hurts national income and SOL, it is recession that has more visible effects on SOL, particularly with rising unemployment. **Governments will tend to therefore make solving recession of greater policy priority and inevitably accepting rising inflation. This however does not mean that the government will let inflation reins in at any rate, supply-side measures tackling the causes of cost increases will still be needed.**
* Should be noted too that **it will be challenging to raise consumption and investment when costs/prices are rising.** In this situation, budget deficit will be needed to keep the economy going until supply conditions can gradually improve.
* There will be **less tension between the two macroeconomic problems if the root cause of the concurrent of both problems is primarily cost-sided**. Governments can then focus on tackling the supply-side reasons for inflation and with improving inflation conditions, AD will improve and recession is reduced.

**Practices for Essay**

**Question 1**

Is deflation desirable or undesirable? (10)

Deflation is harmful to the economy. Identify and evaluate the policies the government can adopt to curb deflation in this situation. (15)

**Question 2**

Price competitiveness is the solution to global downturn, and this is the way to raise more economic activities that solve economic problems.

Discuss how the focus on price competitiveness would solve economic problems and assess how it can be in conflicts with other aims of government. (25)

**Question 3**

1. Interest rates remain low in most countries due to subdued economic growth and deflationary pressures. Some major central banks have resorted to unconventional policy measures, including a negative rate policy. Both the Eurozone and Japan have allowed rates to fall to slightly below zero.

Adapted from *The Reuters, September 2019*

* 1. Explain the factors influencing the effectiveness of low interest rates in addressing deflation. [10]
	2. Discuss the impacts of interest rate cuts in Japan and the Eurozone on the economic performance of other economies. [15]

Question 4

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**Question 5**

Economic growth in Gulf economies weakened in 2019, real GDP growth was at 0.8 percent, while consumer prices fell into deflation. The main export, oil, prices were muted with the ongoing slowdown in global trade. Fiscal and external balances deteriorated, debt levels continued to trend upwards across the Gulf economies. Governments have made substantial progress in implementing structural reform, especially in domestic business and foreign investment environments.

Source: World Bank, Dec 2019

* 1. Explain the internal and external factors that are likely to have contributed to deflation in an economy. [10]
	2. Given the size and openness of an economy, governments implement different policies to address deflation.

Assess the economic case for the different policy approaches. [15]

**Question 6**

Low and stable inflation is the overriding objective of monetary policy in Singapore.

* 1. Explain why a small and open economy such as Singapore is concerned about maintaining low and stable inflation. [10]

b) Discuss whether the nature of an economy is the main factor that affects the government’s choice of macroeconomic policies to achieve price stability in an economy.

Question 7

The Bank of Japan’s 2 percent annual inflation target remains elusive, despite the massive monetary stimulus by the central bank to end deflation. This is a result of a combination of factors, including, a poor global economic outlook, a shrinking and ageing population, and falling crude oil prices. In a bid to boost its growth and inflation rate, the Japanese government adopted measures to raise labour productivity.

* 1. Explain how the factors mentioned above might have contributed to deflation in Japan. [10]
	2. Assess the relative effectiveness of possible policies to boost growth and inflation rate in Japan. [15]

**Policies and Conflicting Aims**

Main source of conflicting Aims

How can the government resolve the problems of conflicting aims

Discuss if it is justifiable for the government to focus on economic growth

Discuss if the focus on price stability undermines the growth of the economy

Question

The focus of an economy is to attain low unemployment rate as it solves other economic problems faced by an economy.

Discuss how the aims of government can be conflicting when the government implement policies to achieve them. (15)

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| **(a)**  | Using AD-AS analysis, explain the key determinants of actual and potential growth.  |

Unemployment

- causes of unemployment

- is unemployment the result of internal and external demand for unemployment

- why the government keep a low rate of unemployment

- consider the significance of unemployment in Singapore

- explain and evaluate how the various policies can solve the types of unemployment in Singapore

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| In its December 2019 Recent Economic Developments Statement, the Monetary Authority of Singapore noted that unemployment was set to rise. This was mainly due to factors such as weaknesses in external demand and the acceleration in developing and deploying artificial intelligence (AI) solutions in Singapore.Adapted from: Recent Economic Developments in Singapore, MAS, 6 Dec 2019 |
| Explain how the above-mentioned factors may cause the rate of unemployment to rise in Singapore. [10]  |
| Discuss the effectiveness of existing macroeconomic policies designed to tackle unemployment in Singapore. [15]   |

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| (a) | Explain the various causes of unemployment. |
| (b) | A top IMF official on Friday warned that the global public debt is expected to exceed 100 per cent of the GDP in 2020-21, and the average overall fiscal deficit is expected to soar to 14 per cent of the GDP in 2020, pointing out that never have public debt and deficits risen so high and so fast.Source: The Economic Times, 10 July 2020In view of the unprecedented high level of government debt and fiscal deficit, discuss whether a government should adopt interest rate based monetary policy to address the high rate of unemployment in the country. |

Using the circular flow of income, explain how the effects of an increase in government expenditure on the equilibrium level of national income may differ between a small and open economy and a large and less open economy. [10]

Issue-based Discussion

To what extent is a country’s macroeconomic priority dependent on the openness of its economy. [15]

Discuss the factors that determine the severity of potential challenges that might arise when a country loses its competitiveness (15)

Prime Minister Lee Hsien Loong highlighted that Singapore must prepare for the impact of climate change, which can bring about food shortages and forced migration of displaced populations. As a low-lying island, Singapore is vulnerable to the destructive effects of rising sea levels, which may divert trade to other nations’ ports.

Source: National Day Rally PM Speech 2019

Explain the macroeconomic aims of the Singapore government and discuss the impact of climate change on these aims. [25]

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|  | **(b)** | Discuss whether the size and openness of Singapore’s economy would influence its choice of macroeconomic policies to counter the recession. [15] |

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|  | **(b)** | Assess whether monetary policy centred on exchange rate is considered to be the most appropriate policy in maintaining price stability in Singapore. [15]  |
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| **6** | COVID-19 has led to sharp fall in real GDP of many countries. Governments around the world have committed large amount of government spending to fight the negative effects of COVID-19. |
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|  | **(a)** | Explain the constraints that governments face in the use of expansionary fiscal policy. [10] |

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| **4** | In several developing economies, population growth has caused a rise in labour force that outstrips job opportunities. On the other hand, many developed economies are facing a different set of problems due to falling population levels. |
|  | 1. Explain the economic problems of these population changes to developing and developed economies.[10]
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|  |  |
|  | 1. Discuss the policies that can be used to manage the economic problems brought about by the above population changes. [15]
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Using the circular flow of income, explain how the effects of an increase in exports on the equilibrium level of national income may differ between a small and open economy and a large and less open economy. [10]