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Centre number

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Candidate number

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Surname StemUp Model Solution

Forename(s) _____

Candidate signature _____

I declare this is my own work.

INTERNATIONAL AS ECONOMICS

UNIT 2 THE NATIONAL ECONOMY IN A GLOBAL ENVIRONMENT

Monday 10 January 2022 7.00am GMT Time allowed: 1 hour 45 minutes

Materials

For this paper you must have:

- the source booklet, provided as an insert (enclosed)
- a calculator, which you are expected to use where appropriate.

Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do **not** write outside the box around each page or on blank pages.
- Do **not** write in the source booklet.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- All working must be shown.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- You may use a bilingual dictionary for this exam.
- You may **not** use an English dictionary.

For Examiner's Use	
Question	Mark
1–15	
16	
17	
18	
19	
20	
21	
TOTAL	



J A N 2 2 E C O 2 0 1

Section A

Answer **all** questions in the spaces provided.

Only **one** answer per question is allowed.

For each question completely fill in the circle alongside the appropriate answer.

CORRECT METHOD



WRONG METHODS



If you want to change your answer you must cross out your original answer as shown.



If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown.



0 1

An economy's boat-building sector is declining and its aerospace sector is growing.

If boat-building firms close as a result, this leads to which type of unemployment?

[1 mark]

A Cyclical



B Frictional



C Seasonal



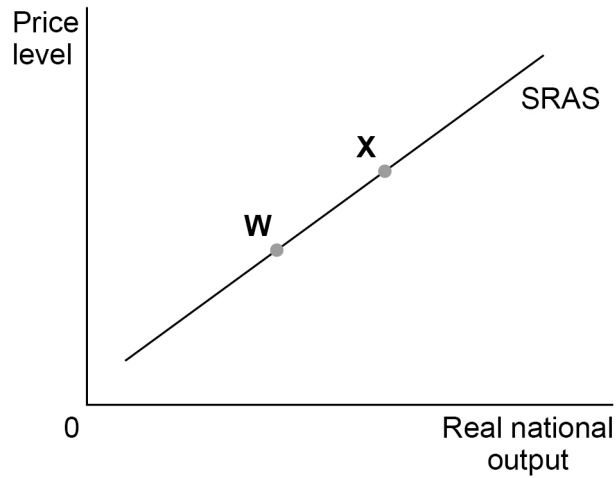
D Structural



0 2

Figure 1 shows the short-run aggregate supply curve for an economy.

Figure 1



The movement from point **W** to point **X** is most likely to have been caused by

[1 mark]

- A** a fall in real wage rates.
- B** a rise in household income.
- C** a rise in the value of imports.
- D** rising factor productivity.

☐
☒
☐
☐

0 3

If an economy experiences rising economic growth, then it is likely that the

[1 mark]

- A** budget balance will improve because of falling welfare payments.
- B** budget balance will worsen because of rising spending on infrastructure.
- C** current account balance will improve because of rising tax revenue.
- D** current account balance will worsen because of rising exports.

☒
☐
☐
☐

Turn over ►



0 4

A government injects \$180m into the economy, causing a final change in national income of \$720m.

What is the economy's marginal propensity to consume (MPC)?

[1 mark]**A** 0.25☐**B** 0.75☒**C** 3.0☐**D** 4.0☐**0 5**

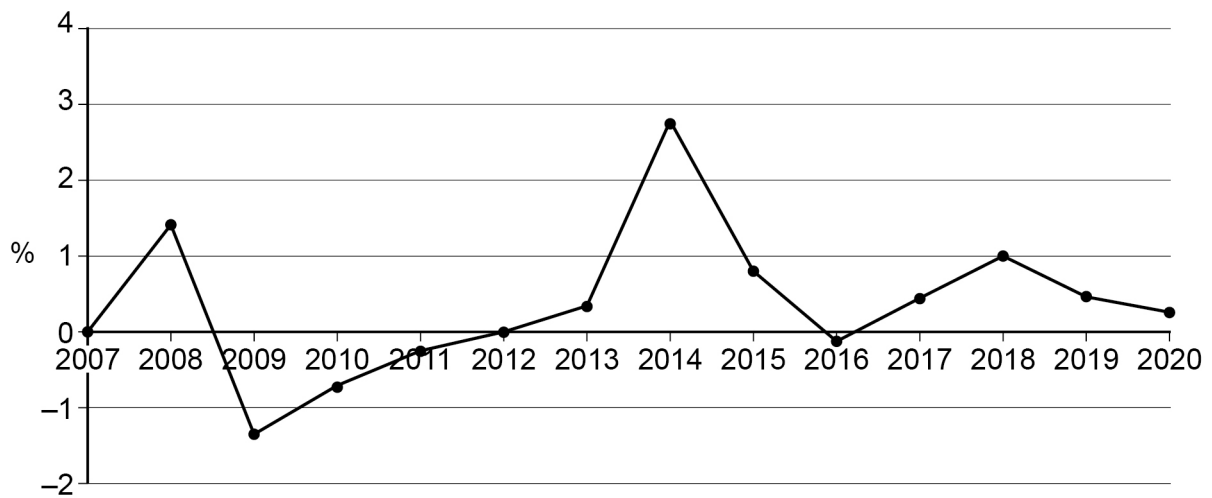
According to the circular flow of income, when measuring an economy's GDP, it is known that

[1 mark]**A** exports = government spending = investment☐**B** income = output = expenditure☒**C** investment = savings = output☐**D** savings = tax = imports☐

0 6

Figure 2 shows the annual inflation rate (%) for an economy from 2007 to 2020.

Figure 2



Which one of the following can be concluded from the data?

[1 mark]

A The price level was at its highest in 2014.

☐

B There was deflation from 2018 to 2020.

☐

C There was disinflation from 2014 to 2015.

☒

D There was inflation from 2009 to 2012.

☐

0 7

Each scenario below would cause an increase in an economy's productive potential.

Which one of the following is **not** a supply-side policy?

[1 mark]

A More government spending on high-speed broadband infrastructure throughout the economy.

☐

B The government reducing the amount of paperwork required to set up a new business.

☐

C The introduction of tax-relief for private sector firms carrying out research and development.

☐

D The invention of new software making it easier for people to work from home.

☒

Turn over ►



0 8

In 2018, the average price of a barrel of oil was \$69.78. In 2019, the average price of a barrel of oil was \$64.05. Over the same time period, the global inflation rate was 3.4%.

Using 2018 prices, what was the real price of a barrel of oil in 2019?

[1 mark]

A \$61.94

☒

B \$63.02

☐

C \$66.23

☐

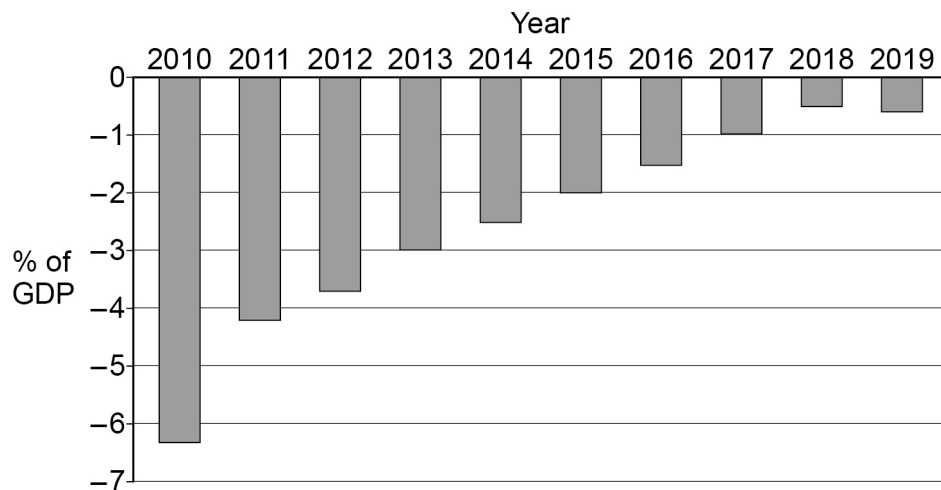
D \$67.49

☐

0 9

Figure 3 shows the average government budget balance, as a percentage of GDP, for economies in the euro area, from 2010 to 2019.

Figure 3



It can be concluded from the data that

[1 mark]

A governments in the euro area have increased tax rates.

☐

B spending by governments in the euro area has increased every year.

☐

C the annual cost of borrowing in the euro area has fallen every year.

☐

D the total national debt of governments in the euro area has increased.

☒

1 0

Table 1 provides data on the income tax paid (as a percentage of earnings) by an individual person in four countries in 2019.

Table 1

	Person earning 67% of average wage	Person earning the average wage	Person earning 167% of the average wage
Australia	18.1	23.6	30.5
Denmark	32.8	35.6	41.1
Hungary	15.0	15.0	15.0
Mexico	3.7	9.5	14.0

Which one of the following can be concluded from the data?

[1 mark]

- A** Australia's income tax system is progressive.
- B** In Hungary, everyone pays the same total amount of tax.
- C** In Mexico, the highest earners pay about four times more tax in total than the lowest earners.
- D** People in Denmark pay the most amount of money in tax.

☒☐☐☐

Turn over for the next question

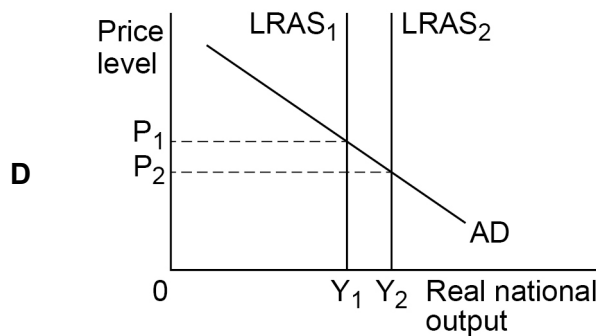
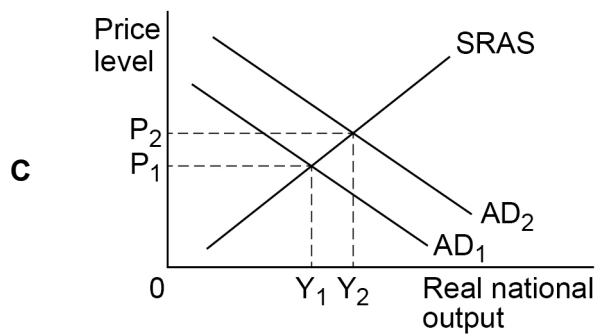
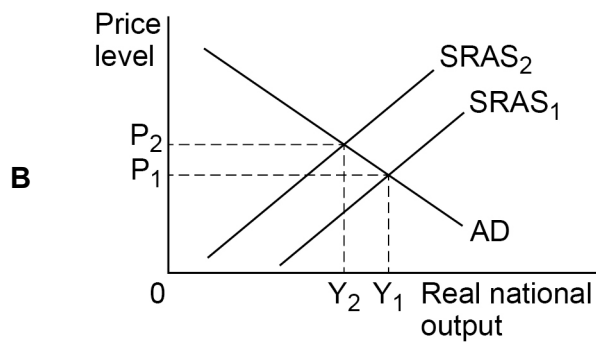
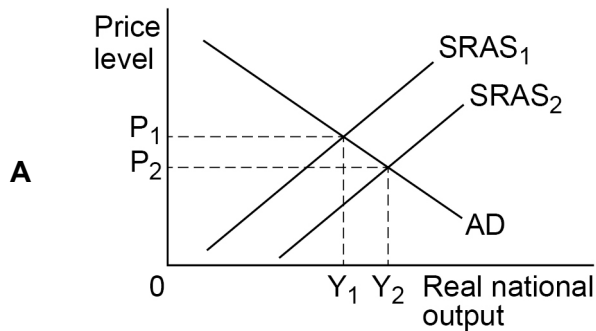
Turn over ►



1 1

The diagrams below show aggregate demand (AD) and aggregate supply (AS) curves for an economy. This economy experiences a fall in money wage rates. Which one of the following diagrams best illustrates this situation?

[1 mark]



1 2

Real GDP per capita is one way in which economists measure living standards in an economy.

One advantage of using GDP per capita in this way is that it

[1 mark]

A allows economists to assess income distribution and inequality.

☐

B can easily be compared between countries and over time.

☒

C shows which economies have the highest total output.

☐

D shows which households have the highest wealth.

☐
1 3

Table 2 provides information on a productivity index for four economies in different years. Productivity has been measured as GDP per hour worked (2010 = 100).

Table 2

	2001	2010	2019
Germany	94.0	100.0	108.8
New Zealand	90.9	100.0	108.0
South Korea	63.9	100.0	123.0
United States	82.4	100.0	104.7

Based on the information provided, which one of the following is true?

[1 mark]

A All economies had the same productivity in 2010.

☐

B Germany had the highest productivity in 2001.

☐

C South Korea experienced a 92% increase in productivity over the period shown.

☒

D The United States' productivity increased by 22.3% over the period shown.

☐
Turn over ►

1 4

Which one of the following statements about investment is true?

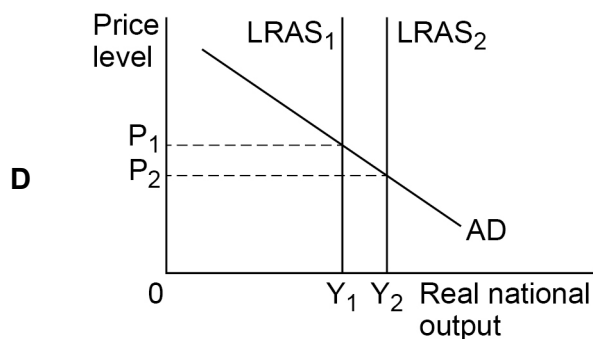
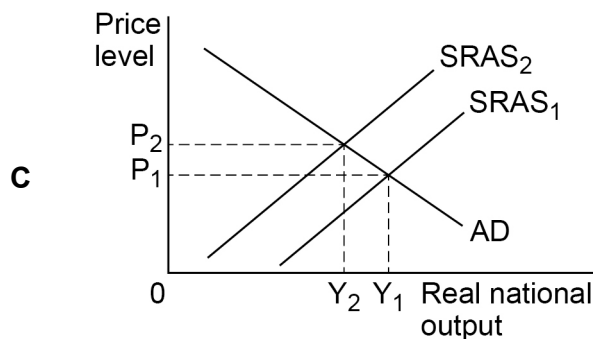
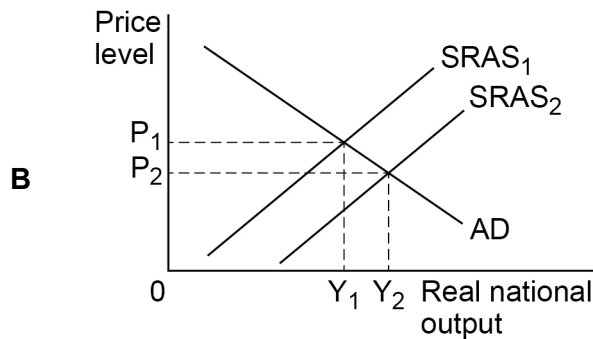
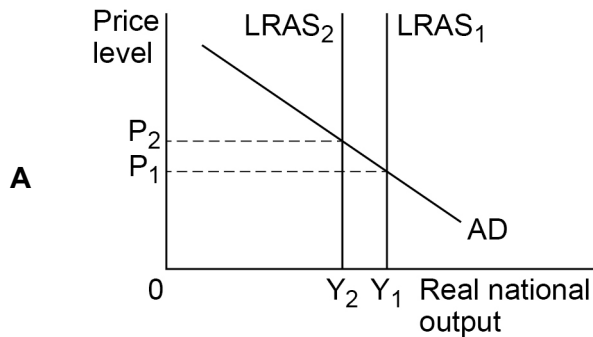
[1 mark]

- A** Investment increases aggregate demand but has no impact on aggregate supply.
- B** Investment is a leakage from the circular flow of income.
- C** Net investment occurs when households save money in banks.
- D** Rising net investment increases an economy's stock of capital.

☐☐☐☒

1 5

The diagrams below show aggregate demand (AD) and aggregate supply (AS) curves for an oil-importing economy. This economy experiences a significant depreciation in its exchange rate. All other things being equal, which one of the following diagrams represents the most likely impact of this event on aggregate supply?

[1 mark]**15****Turn over ►**

Section B

Look at the source booklet and answer **all** questions in the spaces provided.

Do **not** write in the source booklet.

1 6 . 1 Define 'consumption' (**Extract C**, line 4).

[3 marks]

Consumption is the total spending by households on final goods and services, such as food, clothing and cars, for their own use in a given time period. It is the largest component of aggregate demand ($AD = C + I + G + X - M$).

1 6 . 2 Define 'monetary policy' (**Extract C**, line 22).

[3 marks]

Monetary policy is the macroeconomic policy carried out by the central bank (monetary authority) that manipulates interest rates, the money supply and liquidity (for example quantitative easing) and/or the exchange rate in order to achieve macroeconomic objectives such as price stability.



1 7**Extract A** shows selected macroeconomic data for three economies.

You are advised to show your working for the calculations below.

1 7 . 1Calculate, to **one** decimal place, the median annual GDP growth rate in the United States as a percentage of the median annual GDP growth rate in Singapore.**[3 marks]***USA in order: -2.54, 2.25, 2.86, 2.88, 2.90, so the median = 2.86%**Singapore in order: 0.12, 2.89, 3.14, 4.45, 9.01, so the median = 3.14%* *$(2.86 \div 3.14) \times 100 = 91.08\ldots\%$* *Answer = 91.1%***1 7 . 2**

Venezuela's GDP at the end of 2018 was \$98 437m.

Calculate the value of Venezuela's GDP at the end of 2017.

Give your answer to the nearest **million**.**[3 marks]***In 2018 real GDP fell by 19.62%, so GDP in 2018 = 80.38% of GDP in 2017* *$GDP \text{ in } 2017 = (98\,437 \times 100) \div (100 - 19.62) = 9\,843\,700 \div 80.38$* *$= \$122\,464.54m$* *Answer = \$122 465m*

1 8

Extract B (lines 1–2) states: ‘Countries experiencing rising exports tend to have greater economic growth.’

1 8 . 1

Explain why rising exports can cause economic growth.

[6 marks]

Exports are goods and services produced domestically and sold to foreign residents, and economic growth is an increase in real GDP: in the short run this is growth in actual output, in the long run an increase in productive potential (a rightward shift of LRAS).

Exports (X) are a component of aggregate demand, $AD = C + I + G + (X - M)$, and an injection into the circular flow of income. Ceteris paribus, rising exports increase AD, shifting AD to the right. Exporting firms respond by raising output, so real GDP rises in the short run. They hire more workers, whose extra incomes are spent on other domestic goods, so through the multiplier effect national income rises by more than the initial increase in exports.

Rising exports can also cause long-run growth. Higher revenue and profits give exporting firms both the funds and the confidence to invest in new capital and in research and development, leading to innovation. Selling to larger world markets lets firms exploit economies of scale and competition with foreign rivals pushes up efficiency. This raises productivity and the quantity and quality of factors of production, shifting LRAS to the right, so productive potential grows.



1 8 . 2

To what extent do the data suggest that rising exports cause economic growth?

Use the data in **Extract A** to help support your answer.

[6 marks]

Singapore gives some support: when exports fell from 228% to 191% of GDP between 2006 and 2009, growth fell from 9.01% to 0.12%, and 2006 had both the highest exports (228%) and the highest growth (9.01%). With exports at 178% to 228% of GDP, they are likely the largest component of AD. However, the changes are not proportionate, and the lowest exports (178% in 2015 and 2018) did not coincide with the lowest growth (0.12% in 2009).

In the US the picture is inconsistent: exports were 11% of GDP in both 2006 and 2009, yet growth was 2.86% in 2006 and -2.54% in 2009, and exports were constant at 12% in 2015 and 2018 while growth rose slightly from 2.88% to 2.90%. Exports are only 11% to 14% of GDP. In Venezuela, exports fell from 37% to 18% of GDP (2006 to 2009) and growth fell from 9.87% to -3.2%, then rose to 26% with growth of 5.63% in 2012. But in 2018 exports rose to 34% from 11% while growth worsened from -6.22% to -19.62%.

Exports are shown as a % of GDP, which changes when GDP changes, the data are 3-yearly and cover only three countries. Overall there is some evidence, mainly for Singapore, but it varies and correlation is not causation.

12

Turn over for the next question

Turn over ►

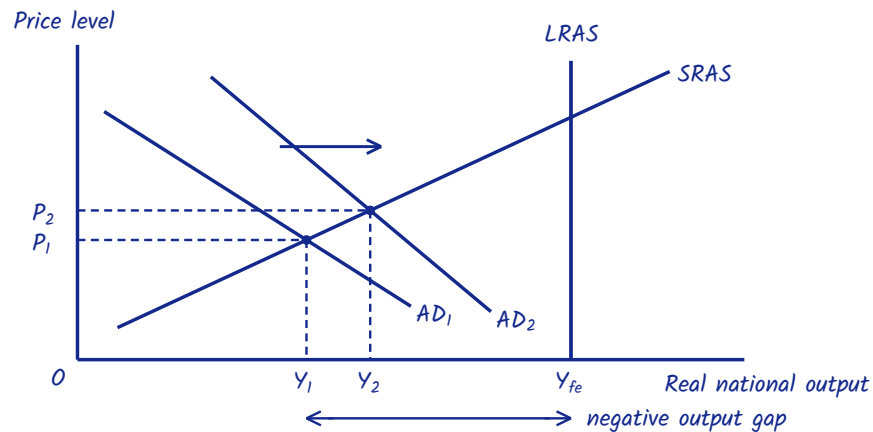


1 9

Extract C (lines 9–11) states: ‘The Federal Reserve (US central bank) cut the base rate of interest to 0.25%, and carried out large-scale quantitative easing to reduce the widening negative output gap in the US economy.’

With the help of a diagram, explain how cutting a country’s base rate of interest can help to reduce a negative output gap.

[9 marks]



A negative output gap occurs when actual real GDP is below the economy's potential (full employment) level of output, so there are unemployed resources and spare capacity, as in the US economy where the gap was widening (Extract C). The base rate of interest is the rate the central bank charges on loans to commercial banks, which influences all other interest rates, the cost of borrowing and the reward for saving. When the central bank cuts the base rate, as the Federal Reserve did to 0.25%, commercial banks cut their rates. Saving becomes less rewarding, so households save less and spend more of their income. Borrowing becomes cheaper, so consumers take out more loans for durable goods such as cars and houses, and those with variable rate mortgages have lower repayments and more disposable income. Firms find more investment projects profitable because the cost of borrowing is below their expected

Extra space return.

Lower rates also raise asset prices such as shares and houses, and this wealth effect boosts confidence and consumption. In addition, lower rates reduce hot money inflows, so the currency depreciates; exports become cheaper abroad and imports dearer, so net exports ($X - M$) rise.



As C , I and $(X - M)$ are components of AD , AD shifts right from AD_1 to AD_2 in the diagram. Real output rises from Y_1 towards the full employment level Y_{fe} , and the multiplier means the final rise in national income is greater than the initial rise in spending, while the accelerator adds further investment as output grows. The negative output gap $(Y_{fe} - Y_1)$ is reduced to $(Y_{fe} - Y_2)$, and could be fully closed if the cut is large enough. Because there is spare capacity the price level rises only slightly from P_1 to P_2 , though the size of the effect depends on confidence and time lags.

9

2 0

Extract B (line 8) states: 'In an open economy trade can benefit everyone.'

Analyse reasons, other than causing economic growth, why an economy may benefit from international trade.

[12 marks]

International trade is the exchange of goods and services across national borders, through exports and imports. An economy benefits if trade improves living standards, for example by raising real incomes, lowering inflation or increasing employment, although not everyone gains equally.

First, trade allows countries to specialise according to comparative advantage, producing the goods they can make at the lowest opportunity cost and trading for the rest. World output rises, so each country can consume a combination of goods beyond its own production possibility frontier. Consumers also gain greater choice and variety, including goods that cannot be produced at home, such as tropical fruit in cold countries or oil in economies without reserves.

Second, trade lowers inflationary pressure. Imports are often cheaper than domestic goods, and foreign competition forces domestic firms to cut costs and prices and to improve quality. Lower prices raise the real incomes of consumers, especially lower income households who spend a large share of income on traded goods, and help the government meet its inflation target.

Turn over ►



Third, trade improves access to raw materials, components and capital goods. Firms can buy the cheapest or most advanced inputs from anywhere in the world, which lowers their average costs and raises productivity. Lower costs shift SRAS to the right, reducing the price level further and making exports more competitive.

Fourth, firms selling to world markets gain economies of scale: larger output lowers long-run average cost, so prices can fall and profits rise. Competition and contact with foreign firms also spread new technology and ideas, encouraging innovation and the efficient allocation of resources, as inefficient firms must improve or leave the market.

Fifth, trade creates jobs. Rising demand for exports raises the derived demand for labour

Extra space in export industries such as manufacturing and tourism, reducing unemployment and raising wages, while imported inputs support jobs in firms that process them. The government gains too: higher incomes and profits raise tax revenue, and lower unemployment cuts spending on welfare benefits, improving the budget balance. Export earnings also bring in foreign currency, improving the current account. However, the gains are not shared by everyone. Workers and firms in industries that cannot compete with imports may lose jobs and profits, so there may be structural unemployment, and the benefits depend on the terms of trade and on resources being mobile enough to move into new industries. Overall, the economy as a whole gains because the gains to consumers and exporters usually outweigh the losses.



2 1

Extract C (lines 4–6) states: ‘countries would need to work together to increase consumption, restore previous trade levels and experience strong economic recovery. This would require fiscal, monetary and trade policies to all work in the same direction.’

Use the extracts and your knowledge of economics to discuss the effectiveness of fiscal policy in raising an economy’s long-run growth rate.

[20 marks]

Fiscal policy is the use of government spending, taxation and borrowing to influence the economy. An economy's long-run growth rate is the rate at which its productive potential increases over time, shown by a rightward shift of the LRAS curve or an outward shift of the PPF, rather than short-run growth caused by using up spare capacity.

Fiscal policy can raise long-run growth directly through supply-side spending. Capital spending on infrastructure, such as roads, ports and high-speed broadband, reduces firms' transport and communication costs and raises productivity. Spending on education and training raises the skills and productivity of the labour force, and spending on healthcare reduces days lost to illness. Grants and tax relief for research and development encourage innovation. Each increases the quantity or quality of the factors of production, so LRAS shifts right from $LRAS_1$ to $LRAS_2$, as in the diagram below, raising potential output from Y_1 to Y_2 without inflationary pressure.

Taxation can also be used. Cutting income tax increases the incentive to work, raising the size of the labour force and the hours worked, while cutting corporation tax leaves firms with more retained profit to invest and attracts foreign direct investment, increasing the capital stock. Investment allowances make new capital cheaper. Extract C suggests countries needed to increase consumption and restore trade after the downturn, and fiscal policy can help with both.

Fiscal policy can also raise the long-run growth rate indirectly. Expansionary fiscal policy increases AD and so reduces the negative output gap. When firms are confident that demand will keep rising, the accelerator effect leads them to invest in new capital, and keeping workers employed prevents them losing skills (hysteresis), which protects

Turn over ►



productive potential. Government investment is also part of AD, so it boosts short-run growth through the multiplier at the same time as it increases capacity.

However, the effectiveness of fiscal policy depends on several factors. It depends on the type of spending: capital spending on infrastructure and education raises LRAS, but current spending on welfare benefits or public sector wages mainly affects AD and has little effect on potential output. It depends on the amount of spending and the strength of the multiplier: if households save much of any tax cut, or a large share leaks into imports in an open economy, the effect is small.

There are also long time lags. A new rail link or a better education system may take ten years or more to raise productivity, so politicians focused on the next election may prefer current spending. Spending may be wasted on projects with low returns, as governments lack the profit motive, and benefits may be local or regional rather than national.

Funding is a further problem. Higher spending or lower taxes increase the budget deficit and national debt. Government borrowing may push up interest rates and crowd out private investment, reducing long-run growth, and future tax rises to repay debt may reduce incentives. Countries that already have high debt after the downturn described in the extracts may have little room for expansion. Cutting income tax may not increase labour supply if workers prefer more leisure as incomes rise, and it may widen inequality.

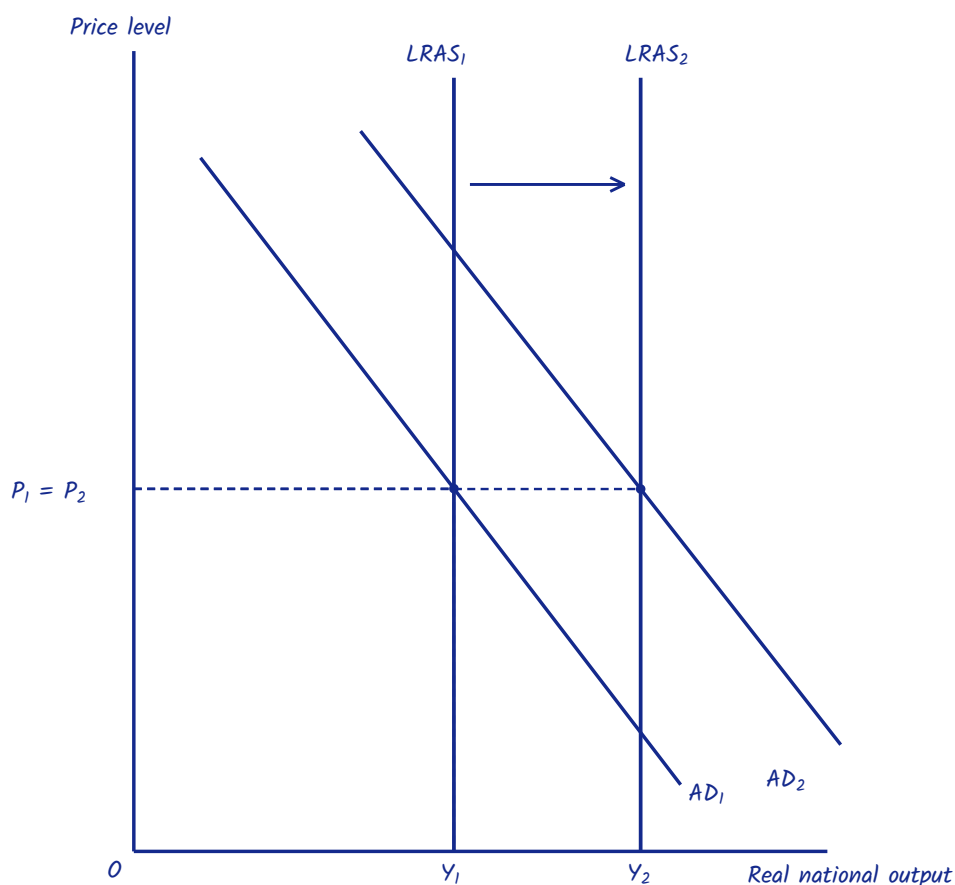
Fiscal policy is also only one option. Other supply-side policies, such as deregulation, privatisation and labour market reforms, may raise potential output at less cost. Extract C argues that fiscal, monetary and trade policies must all work in the same direction and that countries need to work together. If the central bank keeps interest rates low, as the Federal Reserve did at 0.25% with quantitative easing, borrowing is cheap and crowding out is limited, making fiscal policy more effective. If trading partners impose tariffs, exports and the investment linked to them will fall whatever the government



spends.

Finally, it depends on the economy. A developing economy with poor infrastructure may gain a great deal from public investment, while a developed economy near full capacity gains less, and priorities differ, since some governments put low inflation or a smaller debt first.

In conclusion, fiscal policy can be effective in raising the long-run growth rate, mainly through well-targeted capital spending on infrastructure, education and R&D and through incentive-based tax changes, rather than through current spending. Its effectiveness depends on the type and size of the measures, how they are financed, the time lags and the level of existing debt. It is most effective when coordinated with monetary and trade policies, as Extract C suggests, so on its own it is a useful but limited tool.



END OF QUESTIONS



There are no questions printed on this page

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[illegible]

